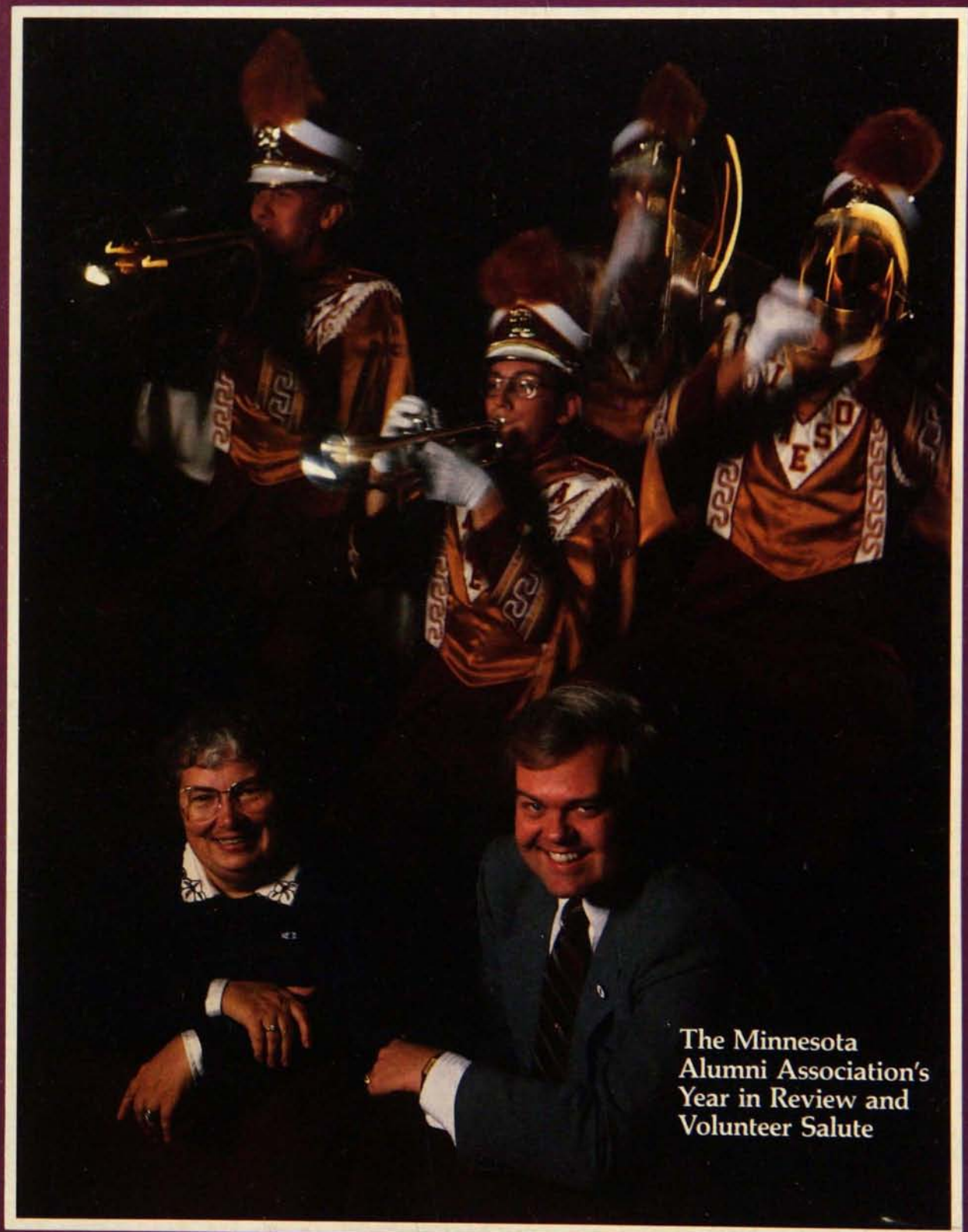
NOVEMBER•DECEMBER 1985

MINNESOTA

University of Minnesota Alumni Association



The Minnesota Alumni Association's Year in Review and Volunteer Salute

Priscilla Nauer and John Brant, 1985 Volunteers of the Year

monday tuesday wednesday **friday**

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MINNESOTA

University of Minnesota Alumni Association

NOVEMBER/DECEMBER 1985

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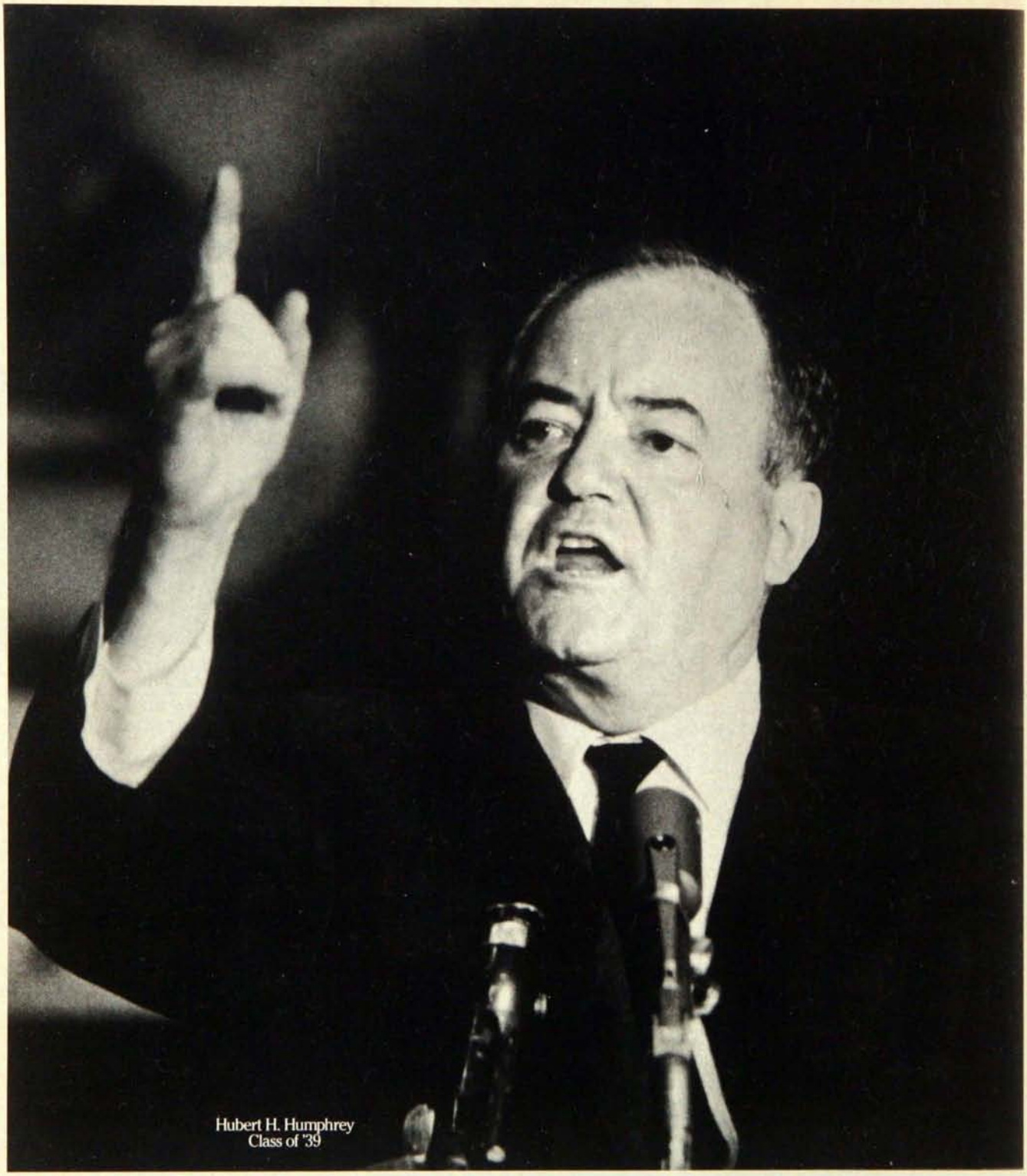
FEATURES

Cover photograph
by Tom Foley

COLUMNS

DEPARTMENTS



Hubert H. Humphrey
Class of '39

SOME OF OUR GRADUATES LIVE FOREVER.

It's one thing to make your mark. It's quite another to cut a lasting swath through the conscience of an entire people. But wherever a hand is offered in friendship, or a voice speaks out for justice, the words will forever carry the hope of Hubert H. Humphrey, class of '39.

Thousands of University of Minnesota alumni have made their marks in medicine, law, education, business, and the arts. Some have become internationally known; others have made their contributions more quietly. But whether they turned out to be Nobel laureates, politicians, movie stars, or football players, University of Minnesota graduates have made a big impact—not just on our community, but on our lives.

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THE UNIVERSITY OF MINNESOTA ALUMNI ASSOCIATION

EACH AND EVERY ONE OF WHOM WAS BROUGHT TO YOU BY THE UNIVERSITY OF MINNESOTA.

The Richest Legacy

We knew a University volunteer who was not a great orator, or a poet, or a philosopher, or an artist. We didn't trouble ourselves to construct a chart of his brain to locate the powers that made him effective in life. What he was and did interested us far more than the mental powers he had been given.

With marvelous judgment and common sense, he raised himself from an ordinary business executive to a statesman of everyday life. He read much and thought deeply, and from being a very diffident and ineffective speaker, he came to persuade his colleagues and friends of the causes he believed in.

He never went to the University, or to any university, yet no person placed a higher value upon such training or had higher ideals of what the educational stand of the University ought to be. He was a firm believer in the desirableness of university training as a preparation for a profession and for life. Unlike that of many self-made men, consciousness of his great natural powers did not lead him to despise study and culture. On the contrary, it made him feel, as a man of less intellect could not, how much he had missed and how much he could be strengthened by the training and discipline of a university education.

During his years as a University volunteer, there was never a measure for the advancement of the University for which he was not ready to work. And in addition to his University work, he aided many enterprises, made many donations to dozens of causes, and helped the young and helpless, the poor and struggling.

Throughout all his years of service, he retained his simple, childlike faith and enthusiasm, and we worked with him, counseled with him, rejoiced with him, and benefited from his presence far more than he from ours.

Such a life makes us think better of mankind and raises the standard of human living to a higher plane. The richest legacy anyone can leave to another is the memory of a life lived not alone for self, but for others as well.

Throughout the 81-year history of the Minnesota Alumni Association and the 134-year history of the University, that volunteer and others like him have come through our doors thousands of times.

John Sargent Pillsbury was governor of Minnesota when he came through the door to help the University. He stayed to serve on the Board of Regents, where he took responsibility for doing everything from purchasing University lands to approving all bills. He managed revenues, purchased coal, decided where to lay sidewalks and plant trees, appointed professors, instructors, janitors, and firemen, fought for funds from the state legislature; and when money for a science building failed to materialize, he paid $150,000 for the building himself.

When he died, University President Cyrus Northrop, who himself had been coaxed by Governor Pillsbury into the presidency, eulogized Pillsbury, honoring him as "Father of the University." The beginning of this column is a paraphrase of much of his eulogy.

Maxine Piper, '35, walked through our doors in 1978 to serve on the Washington, D.C., Alumni Chapter board of directors. Piper had served as a docent and researcher for the National Archives and as a member of the American Association of University Women's lobby corps, Capitol Hill Historical Society, and the Society of International Development.

As president of the Washington, D.C., chapter, Piper built one of the strongest chapters in the country. She was credited with always looking for new leaders, for covering diplomatic and political issues, for tireless fund-raising and scholarship building, and for work as basic as updating the chapter's mailing list. Last year she was named volunteer of the year by the Minnesota Alumni Association.

While the volunteer services of Governor Pillsbury and Maxine Piper have been recorded in past issues of University and Minnesota Alumni Association publications, it's unfortunate that the records of all those who have been of service to the University are not complete. The awards, certificates, honorary degrees, and titles of a few often have to serve as reminders of the University's appreciation to the thousands of individuals who volunteer their services each year.

In this issue we present a summary of the 1984-85 volunteer activities of the Minnesota Alumni Association and introduce the alumni chapter and constituent society presidents for 1985. We also salute those volunteers who have made the University what it is today. For their service and dedication, for living not for themselves alone but for others as well, we thank them.

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Lake Wobegon Footnotes

I was delighted by the fine photo of Garrison Keillor on the cover of the September/October issue of *Minnesota* magazine. At the same time, I was offended by the condescending tone of Roy Blount's article on one of the state's best-known and most-loved native sons.

Mr. Blount makes it clear that although Minnesotans *might* know Garrison through his weekly radio show, it requires a New Yorker to tell us that the man is also a talented writer. In a straight-forward manner, he says it is now time that Keillor "be read and acknowledged by Minnesotans."

If I weren't so shy and so mad, I would point out to Mr. Blount that we have been reading and listening to Garrison for years and are pleased that the rest of the country is finally finding out about him. I might even go into the history of "A Prairie Home Companion" and tell him about the halcyon days when we heard not only that show, but "A Prairie Home Morning Show" every day from 6 to 9 a.m.

Mr. Blount, dear soul, thanks for your concern about us, condescending though it was. We forgive you, because perhaps that is the way of New Yorkers as they gaze westward across the Hudson. We have known and loved Garrison Keillor for his many talents, including his writing, for well over a decade.

Steven Dale
St. Paul

Editor's Note: Roy Blount, Jr., is not a New Yorker. He was born in Georgia and lives in Massachusetts.

Minnesota's New Look

The drum beats faster for those who build a better mouse-trap.

As one who makes a living as a marketing manager, I spotted immediately the different format and the new editorial slant as you started to beat out a different tempo for my alma mater's alumni magazine. Congratulations!

I prize the July/August 1985 issue particularly because of

- Your interesting piece on the ski-u-mah enigma. Your column, I'm sure, was enjoyed and shared by many who have yelled that ski-u-mah/zis-boom-bah phrase and then traveled over to the Big Ten to remain semicomatose on 3.2 for a few more hours.
- *Main Street* book review by Jean Schwind. A good review. As a Sinclair Lewis devotee-romantic, I often wonder as I drive by those apartments on "K" or 16th in the District of Columbia, as to which one Carol Kennicott might have lived in, as S. L. fictionalized.
- The faculty profile on Malcolm Myers. His influence has bridged my undergraduate printmaking classes through his participation as an art faculty member on my Ph.D. oral prelims to my work today in marketing/designing.

Thank you for picking up the beat and building towards a direction of *market-driven academia* in an alumni magazine. And finally, I realize we still may be a few issues away from tip-ins, color screens, and alumni sweepstakes, but you've got my support as a super editor.

Edward J.P. Leary, '60, '66, '72
Chaselle, Inc.
Columbia, Maryland

FROM

U

TO

YOU

A compendium of holiday gifts from the University of Minnesota

COMPILED BY

Pamela LaVigne

It's Ornamental
More than 40 garden and herb societies turn the Minnesota Landscape Arboretum into a holiday wonderland, decorating trees with hand-made ornaments. Some ornaments from herbs and natural materials are on sale in the gift shop, beginning November 1. $1.25 to $4.50.

Flying Colors
Rah! Rah! Sis-boom-bah! goes better with a pennant in hand. Maroon felt with gold "MINNESOTA," $4.30 plus tax. Big nylon banner for porch, boat, tailgating, game. Gold *M* on maroon. $12.50 plus tax. Williamson bookstore.

Wall Flowers
Color-drenched posters pick up dreary spots, winter-weary spirits. Close-ups feature hot pink azalea, red-orange tulip, pink-white ladyslipper, all on black background. 23×25 unframed. Sold separately, compatible as set. $12 each plus tax. $1 mailing tube. Arboretum Gift Shop, 3675 Arboretum Drive, Box 39, Chanhassen MN 55317.

Gale-Force Writing
Hurricane Alice carries "cultural re-views" and interviews from a feminist point of view. A group of University women faculty started it two years ago and publish it quarterly as a 12-page tabloid. $9/yr, $7 for students, seniors, and low-income persons. Sustaining subscription: add $10. Hurricane Alice, 207 Lind Hall, 207 Church St. SE, Mpls MN 55455.

Built for Two
Golf umbrella has fiberglass shaft, wood handle (USA). Maroon/gold panels. $10.95 plus tax. Williamson bookstore.

Williamson Orders
Checks to: Gopher Gifts, University of Minnesota, 290 Williamson Hall, Minneapolis MN 55455. 6% sales tax for indicated items for Minnesota residents only. Postage/handling: Add $1.50 for orders under $10, $2 for orders $10 to $20, $2.50 for orders over $20. Free 12-page color catalog available at above address.

Tray Chic
Round serving plates with the regents seal make handsome pieces even when the food's all gone because they're armatel, a pewter look-alike without the upkeep effort (USA). Large with scalloped edge $22.95 plus tax. Small with smooth edge $19.95 plus tax. Williamson bookstore.

Seal of Approval
Pop your blazer buttons for solid brass ones with finely detailed regents seal (USA). Set of 7. $38.50 plus tax. Williamson bookstore.

Magnetic Appeal
The new Goldy Gopher sticks notes to 'fridge, dash, file cabinet. Hand-painted porcelain magnet (Mpls.). $2.50 plus tax. Williamson bookstore.

Lap of Luxury
No more cold knees to spoil the game with a wool lap robe (USA). 60×72. (Covers twin, double beds.) Maroon with gold piping, big gold *M*. $71.95 plus tax (virgin wool), $55 plus tax (wool). Williamson bookstore.

TOM FOLEY

Naturally Artistic
Wildlife artist Francis Lee Jaques designed and painted the habitat exhibits in the University's Bell Museum of Natural History. Two limited-edition prints of his work, "Golden Twilight" and the just-released "Prairie Spring," can now be ordered through the museum bookshop. Unframed, they cost $70. A free, full-color catalog of reproductions of more of Jaques' work—posters, scratchboard, note card sets, and postcards—also is available. Blue Heron Bookshop, Bell Museum of Natural History, 10 Church St. SE, Mpls MN 55455.

Take Me Out to the Movies
Become a University Film Society member and see what you get: two free passes, 50% discount Mon-Thurs for member and guest, 33% discount to Rivertown Film Festival, free sneak previews of first-run American films, 20-25% discount on four film magazine subscriptions. $18 student, $25 nonstudent. VISA, Mastercard, or check to: University Film Society, 114 TNA, 122 Pleasant St. SE, Mpls MN 55455. Or call 612/373-5381.

Straight to the Top
Put a lid on it with a painter's cap from Crowd Caps (Mpls.). Cotton. Maroon-gold combo. $4.25. Top off with a ski hat (Cloquet, Minn.). Acrylic. Gold, maroon bands and tassel, white "Minnesota." $6.95. Or plan ahead with a sunvisor (USA). Cotton with terry sweatband. Maroon, gold, white. $6.95. All at Williamson bookstore.

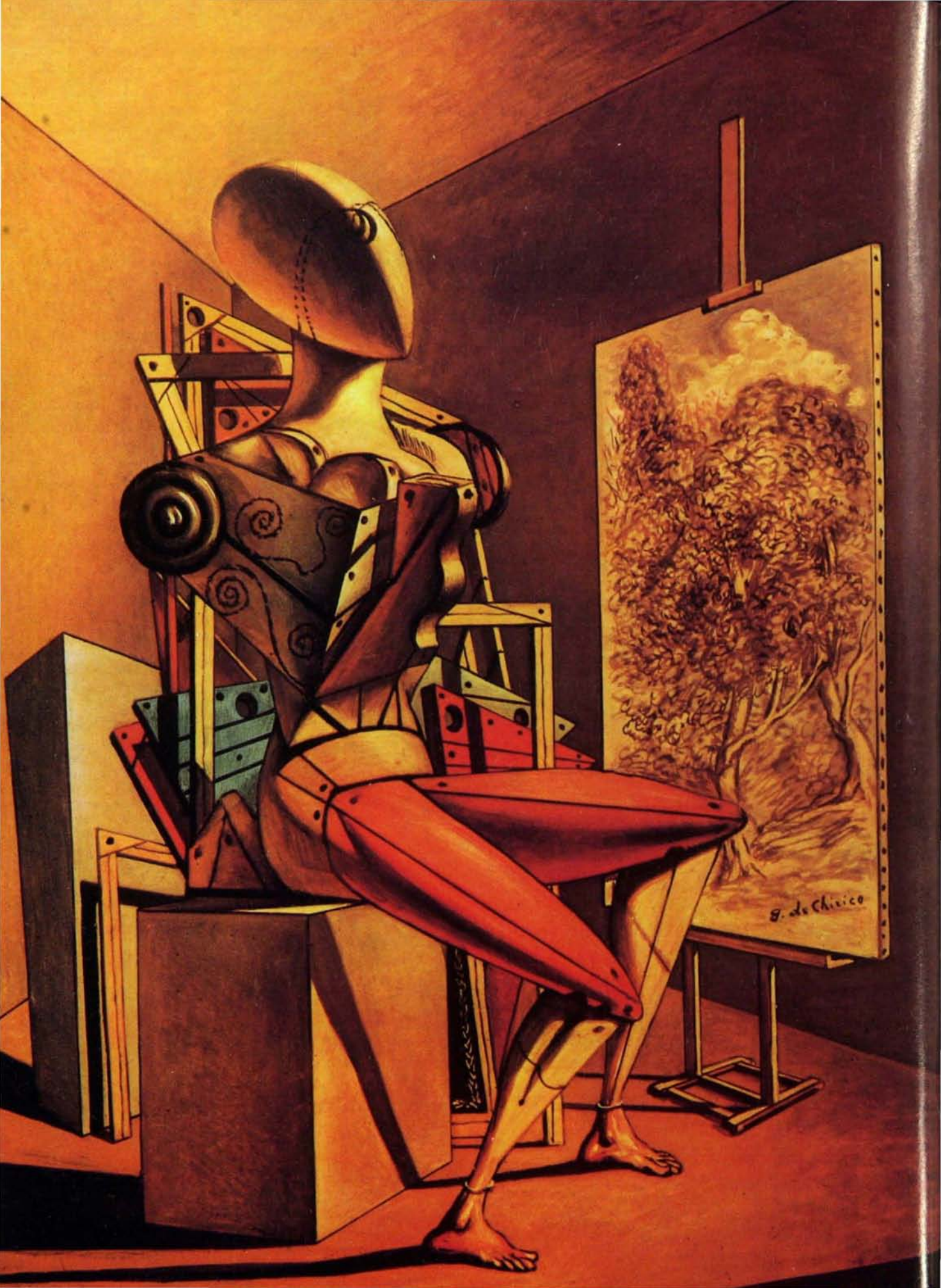
Send Your Parents Back to School
Winterhostel, for people 60 and older, offers college-level noncredit classes January 26–February 1 at Lyman Lodge YWCA on Lake Minnetonka. Classes include We Laugh, We Cry: Films That Touch Our Lives; From Scandinavia to Minnesota: The Promise of America in "Vesterheim"; and Events Small and Great Changed the World: You Were There! Cost is $195 for lodging, meals, class, and most extracurricular activities. For gift certificate, call 612/376-7389.

No Sweat, Kid
Get them into these togs before they start getting into everything. Acrylic fleece sweats (USA) have hooded, snap-front top with gopher patch, pull-on pants. Gold or maroon. 6 mos. to 4T. $14.95 at Minnesota Book Center, Williamson Hall.

Excuse Me, But Your Calendar is About to Stop
You won't miss a beat if you order the Alumni Association's 1986 weekly appointment calendar today. Wire bound with 52 full-color photos. $8.95, $7 MAA members (incl. postage). VISA, Mastercard, or check to: Minnesota Alumni Association, 100 Morrill Hall, 100 Church St. SE, Mpls MN 55455.

Booked for the Holidays
Carefully researched and beautifully photographed, *Wings of the North: A Gallery of Favorite Birds* would fit equally well at home or at the lake. Candace Savage describes some 60 familiar species, in an entertaining, readable, and scientifically accurate style. 100 stunning full-color photos. Approx. 200 pages, 8½×11, cloth. $35. VISA, Mastercard, or check to: University of Minnesota Press, 2037 University Ave. SE, Mpls MN 55414.

You've Got a Ticket to Northrop
You could dance the night away at a Northrop Dance Series concert, thrill to divas from the Metropolitan Opera, groove to a contemporary singer. Gift certificates available for any amount from Northrop Ticket Office, 105 Northrop Memorial Auditorium, 84 Church Street SE, Mpls MN 55455. Or call 612/373-2345.


G. de Chirico

A thoughtful inquiry into the state of being artificially intelligent. Will there ever be a computer that can think, feel pain, appreciate fine art?

THE Humonic Computer

By Paul Froiland

Ever since the dawn of computers, debate has raged about what it means to humanity for there to exist an independent mode of machine thinking. At the popular level, both dire and ecstatic prophecies have flourished unchecked. People wondered if human thought and human functions would be superceded by impersonal, mechanical computers and robots; if these devices could develop a will and a purpose that might ultimately see them usurp control of human affairs and cause human beings to become obsolete, left behind in the wreckage of evolution.

Others saw machine intelligence and robot dexterity as the ultimate conveniences, the last turn of the wheel of the industrial revolution, which would propel human society into a utopia of leisurely pursuits, freeing people to achieve a nobler purpose than working for a living.

Even at the academic level, the debate persisted, although it was greatly refined and not at all hysterical. Frequently there arose a question of the definition of intelligence: Was intelligence a complex, intuitive human process, constituting a gestalt that was by nature irreducible; or was intelligence a process ultimately manifesting itself at the molecular level, in which the firing of neurons and the chemistry of DNA were sometimes observable and recordable at the stimulus-response level?

As early as 1971, Keith Gunderson, a University philosophy of science professor, in his book *Mentality and Machines,*

"The Landscape Painter" by Giorgio de Chirico. From Giorgio de Chirico © 1979 by Filipacchi Books. Published by U. E. M., Inc., 120 East 56th St., New York, NY 10022.

established a basic division in intelligence that still seems to have validity today: for the purposes of computer simulation, he distinguished two aspects of human intelligence characteristics that he called either "program-receptive" or "program-resistant." Program-receptive aspects of the mind were task-oriented and characterized procedurally by a step-by-step process that produced an intended result. The result tended to prove or disprove the process. Program-resistant aspects did not have results. Examples of program-resistant aspects were feeling pain and having anxiety, fairly passive states of being. So humans would *have* pain and emotions, but they would *do* complex thinking.

Gunderson concluded: "Insofar as program-resistant aspects of the mind absorb what we loosely call 'consciousness,' solving the problem of imparting consciousness to machines, or even the simulations thereof is not the problem of constructing ingenious programs on the basis of programs already known. It is the problem of adding new processes to machines, processes that we do not, at this moment, know how to add."

In an effort to assess the current state of thinking in the fields of artificial intelligence and robotics, *Minnesota* solicited the opinions of several practitioners and theorists in the field. Does Gunderson's 1971 conclusion still have currency? Have computers and robots fulfilled either the positive or negative prophecies? The answers were interesting.

Max Donath, an associate professor of mechanical engineering who deals with robotics, carefully qualifies his descriptions of the capabilities of artificially intelligent machines. "Intelligent machines," he says, "are very, very limited to specialized domains or functions. They work under very limited, constrained types of activity. There is certainly no capability of common sense, so to speak, of reasoning about day-to-day types of activities. What people have been able to do is build up fairly sophisticated programs that can do particular kinds of medical diagnoses, can make certain kinds of predictions, can reason about some very limited areas of expertise—only areas where there's no controversy, where everybody agrees that this is the approach to be taken, where you have clearly one expert who can sort of 'teach' the machine."

Maria Gini, an assistant professor of computer science also working in robotics, is more tentative on the question, asserting that the definition of intelligence is problematical. "If you look at the situation so far, computers are very, very far away from being intelligent. The problem is that it is unclear what it is we mean by intelligence. Does it make sense to design an intelligent computer? Would we ever be able to design a *real* intelligent computer? Some of the expert systems are able to perform tasks like medical diagnosis the same way a physician does, or even better, but I don't consider this real intelligence. There are so many things that are part of intelligence: we use a lot of perception and imagination. I don't know if it makes sense to put those things into a computer."

> ***"If we knew how the human mind worked, then we could go and tell the engineers how to build their machines. But the fact is that we know very little of how the mind does complicated things."***

Albert Yonas, a professor of child development studying visual perception, believes that to spend time debating whether intelligent machines have isolated and replicated many or any aspects of human consciousness is an unproductive enterprise. "It seems to me," he says," that it will be a very long time before we know enough about how thought works or how perception works to implement these processes on a machine. And if we *were* able to do that, when we were done, I'd wonder if we would have *parts* of intelligence, but would the computer *know* anything or *experience* anything?

"If you're able to buy that your thermostat has intentions and expectations when you set it at 68, because it will persist in playing with your furnace until it is [that temperature]; if you're willing to call that having an intention, then you could, if it makes you happy, say yes. I think computers are as intelligent as my Aunt May, but there's an aspect of intelligence, the experiencing side of it, that we don't know about. I won't *ever* know if a computer experiences anything; I kind of doubt it. But it's a very tough problem: I don't even know for sure if any other person *has* subjective experiences. I just keep making that inference. The only person that I know for certain that experiences anything is me."

Paul Johnson, a professor of management science and psychology, works a lot with computer simulations of intelligence, and compares human and machine intelligence this way: "We build theories of human intelligence," he says, "and the theories become so complex that the only way we can formalize and test them sometimes is by programming a computer to simulate them. So one test of whether we have developed a good theory is the comparison between the simulation and human reasoning. People are developing simulation models in various aspects of human thinking and testing them against human performance on a variety of tasks quite regularly. What happens is that people tend to pick very limited tasks for these comparisons, so it isn't the case that the accomplishments have been overwhelming by any means, but they are interesting and significant. It turns out to be the case quite typically that it is easier to develop successful simulation models of quite expert kinds of behavior than it is to develop successful models of common-sense reasoning. It's more difficult to simulate just people's common-sense understanding of the world than it is to simulate an engineer designing a particular piece of equipment or a physician doing a diagnosis.

"Another way of putting it is that human generativity is just extraordinarily difficult to replicate. You can program a computer to do something that it is going to be asked to do over and over again, but to be able to anticipate the unusual or the unforeseen, that's extraordinarily hard, and *people* do that quite regularly."

It is difficult to weigh equally the responses of these four professors in their fairly disparate endeavors, but Donath's and Johnson's "common sense," Gini's "perception and imagination," and Yonas's "experience," the factor each of them considered currently unprogrammable, fit relatively nicely under the umbrella of

Gunderson's "program-resistant" aspects of the human mind, especially if we consider "common sense" a function of human intuition and perception, rather than an elementary form of logic.

Johnson and Yonas go further in describing the uniqueness of the human mind and problems with its artificial replication. "One of the difficulties in the whole field of artificial intelligence," Johnson says, "is simply trying to get insight into what human beings know. One of the areas in which I work—kind of a subfield called expert systems—regularly struggles with the fact that these human beings who are quite expert in things, in areas where we typically would be successful in constructing a computer model, oftentimes have so little insight into what they know that getting the knowledge out, gaining an understanding of it, is an extraordinarily difficult task. There's almost a barrier, or a paradox of expertise there.

"Human beings have what's called a very limited short-term memory or attention: You can't think about too many things at one time, and as you become more expert in something, one way that you cope with the fact that you have a limited amount of intelligence is by automating the stuff that you're learning. You kind of file it away in a form that is much more efficient. The good news is that it takes up less space; the bad news is that you don't know what's there. Take driving a car. When you start out driving a car, it occupies almost all of your attention. When you become highly practiced, you do it without thinking; it's all automated. But once you automate it you have less access to it consciously. You can't report as much about it.

"So experts, the very people who have the information locked in their minds that we need in order to construct models of what they know, have very little insight into it. It's also a troubling aspect of teaching, because the very thing that students want to know, especially in professional schools, the expert can't tell them. They typically say things like this: 'What I do is not a science; it's an art. You can't understand it.' Or, 'I have no idea what it is that I'm doing.' If a student asks them, they'll say things like, 'I'm not sure. Just follow me around; watch what I do; listen to what I say; try to do what I do; try it, and I'll correct your behavior.' The whole notion of understanding another human mind that is at all practiced or accomplished is a very difficult problem."

This again seems to validate Gunderson's idea of program-resistant aspects of the human mind. Besides the experiential side of the issue, there is the question of human imprecision, the inability to think clearly enough procedurally so that a given subject could be replicated even by another human, much less a computer.

Yonas, who works in the field of perception and vision, simulating and replicating vision in machines, looks at the issue from the other side: becoming increasingly aware of the abilities and procedures of the human mind through the use of intelligent machines.

> ***"There isn't really any kind of machine that can duplicate the flexibility of the human arm. Human muscle is much more efficient on a power-to-weight ratio than any mechanical device."***

"I think the most interesting things going on in AI," he says, "are the advances it is making in [understanding] how the *human* mind works. If we *knew* how the human mind worked, then we could go and tell the engineers how to build their machines. But the fact is that we know very little of how the mind does complicated things. So there's a partnership here with the machine-vision people who know that biology has a system that works, and they hope to find out from biology how to make their system function, because the only existing general-purpose vision systems are the ones in animals. So you get from the computer-vision people explicit formal theories. Computer scientists don't wave their hands. They tend to say things with a lot of clarity; it makes it easy to test their ideas and prove whether they are right or wrong. You can get more rapid change than we're used to in psychology, where people tend to state their theories vaguely, and where it's harder to test them and prove or disprove them and make advances."

Johnson sums up the situation. "If a thing is understood pretty well," he says, "then it's oftentimes not so hard to get a computer to simulate it. The problem lies in what we don't understand. We don't understand very much at all about holistic [thinking]; we're much better at understanding the linear kind of reasoning, hence we can program computers to do it."

What other human functions can be replicated by intelligent machines? Yonas says that most work going on in the area of simulating or replicating human physical functions is in machine vision. After this, human touch has received a good deal of attention from robotics researchers. Human hearing is just beginning to be researched, and there has been very little done with the other human senses, according to Yonas.

Donath works in this area, dealing particularly with hands. "There are several different people around the country who are working with hands," he says. "We're exploring one particular area where we're looking at a three-fingered hand. The question is, we have three degrees of freedom per finger—three joints per finger—and we're trying to figure how you combine all those degrees of freedom to do useful tasks. What position, what velocity, what acceleration, what forces, what torques? How do they combine to do something useful so the fingers don't collide with each other and so they share some of the load? We're working on some of the mathematics of controlling these fingers and locating them in space."

Gini is currently engaged in trying to make robots smarter. This has required the perfecting of sensors. "For industrial applications," she says, "I think assembly is really a very important area. You have to be able to assemble components of many different sizes, and most of the time they come to the assembly station in random order or random positions, so you need sensors to find out exactly where your components are so you can pick them up and assemble them. And it's not simply that you go to one place and pick up the components and go to another place. You may have to hold two components at the same time or use more than

one robot at the same time."

Part of the difficulty in the creation of robots is the versatility of the human body. Robots can be programmed, says Donath, to work at higher speeds or to move greater loads than, say, the human arm, but they are very task-specific, and can usually only perform a limited number of movements well.

"If you look at the dexterity that humans have," Donath says, "the ability to thread the eye of a needle, those are unbelievably fine motor skills. Machines, if they are limited to one specific function, can do them without any problem, but to build a [robotic] arm that can both thread a needle and put together Lego blocks and perform surgery and fix a car and do bricklaying, you're talking about different loads, different levels of precision, different motions. There isn't really any kind of machine that can duplicate the flexibility of the human arm. Human muscle is also much more efficient on a power-to-weight ratio than any mechanical device to date. Human joints have fluids with incredibly low coefficients of friction."

Donath and Gini agree that the best applications for robotics are industrial ones, and the best jobs for robotic devices are those that are boring or dangerous. "Over the last fifteen years," Donath says, "I would say that there are a lot more industrial robots out there than there ever were before. Most people who use robots today look at them as being more consistent, more capable of doing repetitive tasks over and over again with some quality control. And some of those are really not operating much faster than the human arm, but certainly if you or I did a task over and over again, there would be a limit to how often we would do it the same way. We would just get bored, and machines can do those tasks very well without getting bored."

Besides arm and hand robots, there are also some mobile robots being developed, most of them, according to Gini, for military applications. "There are a lot of plans to use sort of semiautonomous vehicles either for exploration of unknown environments or on a battlefield. There are at least two different areas: One is building a mobile robot with wheels so that it can go on roads and be autonomous, having cameras and being able to look around and plan where to go, decide what's the best path to follow from one point to another.

"Another area is building robots with sort of legs, or ways of moving where there is no road, which will be [practical] for all terrains on which most of the time you can't really find a good surface. If you have a robot with two or four or six legs, it will be able to move around much better [in that environment]."

Since most of the research money in America comes from the military, Gini says, most research is being conducted for that application. She cites Japan, however, as a country that is beginning to research consumer applications for robots. One such area is housing, where builders

> ***"I won't ever know if a computer experiences anything. I kind of doubt it . . . I don't even know for sure if any other person has subjective experiences. I just keep making that inference."***

are trying to develop highly standardized floor plans for new dwellings so that eventually a robot could do much of the construction. Japan also has a robot reputedly capable of changing sheets on a bed. Researchers there are also working on robots that could help take care of sick or old people.

But the day doesn't seem to be coming in the foreseeable future when there will be a robot in every house. Two factors militate against it: cost effectiveness and the levels of complexity necessary for robots to be useful at more than a very few simple tasks.

Gini cites the fact that most robots wear out after four or five years, so that only the simplest robots are cost effective, and Donath says that the potential for people to have a personal robot in the same sense as a personal computer is far, far away.

"In fact," says Donath, "*Spectrum*, the magazine put out by the Institute of Electrical and Electronic Engineers, recently had a picture of the latest personal robots out there, and how much they cost. Now these are machines that have very trivial capabilities, and they charge $8,000 for them. You've got to be crazy! For a machine that hardly does *anything* for you, to pay that kind of money is ridiculous.

"I'll tell you something, though. If there's a machine out there that could change a kid's diapers, boy, there would be a market for that. Think about it: This machine would have to hold this fragile infant, which is squirming and yelling and screaming, and move its legs in a gentle fashion, remembering not to break any bones or leave any marks. Think of that kind of activity. We're nowhere near that! And for a personal robot to wash the dishes, answer the door, wash the windows, clean the floors, watch your kids—we're nowhere near that."

So the truth about the current state of computers and robots seems to be that there is continual incremental improvement in highly specific areas. Those aspects of the mind that are program-receptive are being replicated with ever greater precision by machines. Yonas, for example, is breaking down visual perception into sub-areas such as the recognition of shape constancy, size constancy, and orientation to a light source.

On the other hand, those aspects of the mind described by Gunderson as program-resistant continue to elude the possibility of artificial replication because of their very mysteriousness.

The same is true for robotic devices: There is increasing perfection of simple machines, and some success with more complex machines, but beyond a given point the variables become too many and they cost too much.

So it appears that the discussion and debate touched off with the invention of artificially intelligent machines was more hyperbolic—on the part of both advocates and detractors—than was merited. They are neither our bane nor our salvation, but they have saved us a lot of drudgery, allowed us to project our knowledge into many previously unknowable areas, and have taught us—and will continue to teach us—more about how our minds operate.

Paul Froiland is the managing editor of Twin Cities *magazine.*

TAMING WILD RICE

PHOTOGRAPHY COURTESY OF THE MINNESOTA HISTORICAL SOCIETY

By Pamela LaVigne

It takes 12,000 to 20,000 years to domesticate a plant. Research to improve the wild rice grass has come a long way in 30-odd years. Still, there are some things nature does better

The birchbark canoe glides silently through the shallows. Morning mist, lifting slowly off the lake, mutes the vivid green of the wild rice plants, heavy with harvest. A standing figure poles the canoe forward. A second person, kneeling near the back, bends each stalk with a thin stick and, with another, knocks the long grains into the canoe.

Smoke from shore wafts over the water. The previous day's harvest is being parched in a kettle over an open fire. Later the dried and browned kernels will be jigged, or hulled, by a person in moccasins walking back and forth over the rice in a round-bottomed pan. Separating husk from seed by hand winnowing comes last.

On Indian reservations and in natural stands in Minnesota's northern lakes and rivers, wild rice is harvested this way, as it has been harvested for centuries. But natural stands and traditional methods *don't* account for most of the wild rice grown today.

Minnesota produced more than two-thirds of the world's wild rice last year. That amounted to about 3.8 million pounds of processed rice; about 90 percent of that total came from cultivated fields.

Minnesota leads the wild rice industry—it virtually created the industry—because farmers, working with agricultural experts from the University, have learned how to "tame" wild rice. Their success, in fact, has created a different kind of challenge: competition from other states, especially California, that are growing wild rice using Minnesota technology.

Wild rice isn't really rice at all. It's a grass, genus *Zizania*, the only native North American cereal plant. It's closest to oats in food value: high in protein, low in fat.

Wild rice from lakes in the Upper Midwest was the mainstay for Chippewa and Menomini Indians. *Mano'mini*—good berry—is an Indian word for wild rice. According to Menomini myth, the half-god Manabush created the bear, who created the Indian, who became the leader of their people. Manabush gave the first Indian a river, all the fish in it, the sugar trees on its banks, and the rice in its shallows. He assured the Indian that he would always have these gifts. Since then, the Menomini have refused to seed wild rice by hand, believing that to do so

"Getting a plant domesticated involves 12,000 to 20,000 years of cultivation. We're dealing with a very primitive plant here. It's still wild."

would be a breach of faith.

Relying on the natural stands of wild rice was chancy. With traditional harvesting methods, as much as half of the grain was lost. But the delicious outcome, and the romantic appeal of the ritual it took to produce it, kept up interest in wild rice, not just as a wilderness staple but also as a gourmet delicacy.

Agronomists first suggested growing wild rice as a field crop in the 1850s, replanting seed taken from natural beds. No serious attempts to do this were made until the early 1950s, when James and Gerald Godward raised one acre near Bass Lake in northern Minnesota. Cultivating wild rice *could* be done.

Trying to domesticate wild rice was—still is—a little like trying to bring law and order to a frontier boomtown. Growers have to contend with all kinds of varmints, plus the natural tendencies of the plant itself.

In lake- and paddy-grown wild rice, shattering, or seed dropping off into the water before it is harvested, is a continual problem. University agronomist Paul Yagyu and graduate student Erwin Brooks were the first to tackle the problem. Walking through the paddies, they started simply by hand-selecting plants with seeds that stayed on the heads longer than usual. This work led to the creation of the first nonshattering variety of wild rice, named the Johnson variety, after the grower in whose fields the selection was made.

In 1965, Uncle Ben's began contracting acreage for wild rice. More farmers saw a reason to get into ricing, and they wanted growing methods and crop production they could count on. Special funding from the Minnesota legislature in 1971 established an interdisciplinary team of University researchers, including specialists in agronomy, soils, plant breeding and disease, agricultural engineers, even an ornithologist. (Blackbirds like "the caviar of grains" as much as people do.) That same year, cultivated fields of wild rice outproduced lake stands for the first time.

"Getting a plant domesticated involves 12,000 to 20,000 years of cultivation," says plant pathologist James Percich, one of three people currently conducting wild rice research at the University. Today's corn, for example, is vastly different from what was first found on this continent. "We're dealing with a very primitive plant here. It's still wild."

"We have domesticated it to a certain extent, but not to the extent of the other grains," says Ervin Oelke, agronomy researcher and extension agronomist to the state's wild rice farmers. "What we're trying to do is catch up to the other cereals, but we're trying to do it in a much shorter span of time. Instead of thousands of years, we're trying to get it down to 20 or 30 years."

So far, yield has improved tremendously. A lake stand produces about 50 pounds per acre of grain. Cultivated fields produce upwards of 1,000 pounds of unprocessed wild rice per acre.

"Wild rice, from a genetics point of

Wild rice isn't a rice at all; it's a grass. At right is a wild rice stand in Sand Lake, Itasca County, Minnesota. On the preceding page, wild rice is gathered near Cass Lake, Minnesota, in 1915.

view, is as exciting as anything I can think of to work on," says plant geneticist and breeder Robert Stucker.

Hardy plants, which shatter less and resist disease more, are a top priority. When grain falls off, it means that less rice is harvested and more seed is automatically planted. But too many plants choke growth and limit yield the next season.

Shorter plants and varieties that mature at different times alleviate a host of problems, too. Wild rice that is the height of wheat—Stucker gestures just over desk-high—has less greenery: less falling over, less plant debris left behind, there is less trouble adapting harvesting equipment to it.

Having varieties that are ready at different times "spreads the risk of harvest," Stucker says, for equipment and farmers alike. But deciding what is early and what is late isn't easy, he notes. This year harvesting began August 29. Two years ago it was over by that date.

Then there's seed size to consider. Field-grown wild rice tends to be smaller than lake-grown. American consumers think long-grained wild rice looks better. But large seeds suffer more injury during processing.

New varieties developed by University researchers offer growers a choice. Voyager is a nonshattering plant with an early flowering date; Stucker did the selection for this variety. Meter, a dwarf variety released in February of this year, produces plants one meter or shorter, has larger seeds, and reaches maturity three weeks earlier than other varieties.

Stucker is cautious about calling the new varieties successes, yet. "Plant breeding is a numbers game," he says philosophically. How will the just-released seed perform in the fields?

"Disease is the single, most-important, limiting factor to production," says pathologist Percich. "A field carrying 750 to 1,000 pounds of green wild rice can be reduced to 50 pounds in three weeks. At $2.70 per pound [processed], that's an incredible loss per acre."

Through his research last year, Percich found that a fungicide approved for emergency use controls the most-common fungus better than the previously used product. The new stuff wipes out the fungus; the old just helps protect the plant against it. What's more, in the experiments he conducted, the newly used fungicide didn't seem to affect yield, which it had done when used on wheat fields.

But finding a new fungicide is just a stop-gap action, says Percich. "Ideally we have got to develop a plant with a high degree of resistance." Clues to future research may lie in the natural stands. "I've never seen disease in any wild stand that would wipe out a stand. There's something inside a wild plant that seems to help it coexist with the pathogens in its environment. We have a wild plant that can cope. We have to learn more about the natural environment."

Oelke's research centers on production questions—actual growing practices in the fields. At the Northwest Experiment Station in Grand Rapids, Minnesota, he is growing wild rice in sloped-bottom paddies to see what effect, if any, water depth has on the rice. The information will translate directly into advice to growers when they flood their diked fields in the spring.

This year, for the first time, California will grow more wild rice than Minnesota.

When the bottom dropped out of the market for the white rice they were growing, California farmers converted their paddies and equipment to produce wild rice. There were lots of natural advantages, says Percich. "They double crop. They essentially grow disease-free plants. They don't have FBS [fungal brown spot] to contend with—that's our nemesis. So they don't have to spray. They can flood and drain quickly because they're not growing on a peat bed—they're growing on mineral soil—and there's not a high water table. They've lucked out."

Increased production from California will not damage Minnesota industry, but it could cause prices to fall dramatically. Competition, though, will cause Minnesota growers and researchers to keep striving for increased yield per acre and to become more efficient in growing wild rice, Oelke says.

He points to the considerable benefits Minnesota derives from wild rice, competition or no competition. Wild rice grows on land that can't be used for any other productive purpose, so it is a boon for agriculturally and economically depressed areas in the state. The fields provide wildfowl habitat and attest to the water quality in an area. Wild rice increases revenues—from the industry itself, from tourism, and from licensing fees assessed individuals who harvest from natural stands.

"Wild rice research is necessary if we want to sustain a cost-effective, money-generating agriculture in Minnesota," says Oelke. "Wild rice is it. This is the crop."

"Disease is the single, most-important, limiting factor to production. A field carrying 750 to 1,000 pounds of green wild rice can be reduced to 50 pounds in three weeks."

Pamela LaVigne is a University Relations writer and editor.

Tales of Judy and Lesser-Known Comets

BY EDWARD P. NEY

I came in with Halley's Comet in 1835. It is coming again next year, and I expect to go out with it. It will be the greatest disappointment of my life if I don't go out with Halley's Comet. The Almighty has said, no doubt, "Now here are those two unaccountable freaks; they came in together, they must go out together." Oh! I am looking forward to that.

Mark Twain, 1909

In 1682, when Edmund Halley was 26 years old, he saw a comet. Using Newton's laws, he concluded that comets observed in 1531 and 1607 had orbits similar to that of the comet he observed in 1682 and predicted that the comet would return in December of 1758. Halley died in 1743, but his comet was seen again on Christmas Day in 1758.

Comets are usually named for their discoverers, but periodic Comet Halley is unique because it is named not for its discoverer, but for the man who showed that Newton's laws of motion and gravitation apply to comets and proved that comets are inhabitants of the solar system.

The most famous of all comets, Comet Halley moves in an elliptical orbit with a period between 74 and 79 years. February 9, 1986, it will come closer to the sun than it has since April 20, 1910. Weather permitting, astronomers from the University of Minnesota will begin to measure it sometime in late November and continue until the comet reaches our southern horizon in April.

Halley's comet has sociological as well as astrophysical appeal. Its period averages 76.7 years, and that makes it usually a once-in-a-lifetime experience. Mark Twain was born in the year of the 1835 apparition and died in 1910, the next one. Loren Eiseley, in *The Invisible Pyramid*, tells of his father showing him the comet in 1910: "If you live to be an old man, you will see it again. Remember, I will be gone, but you will see it." Eiseley didn't make it. My friend, Regents' Professor Wallace Armstrong, who saw Halley as a child, hoped to see it again, and, when he knew he couldn't, made provisions for his biochemistry department to have a party in honor of the 1986 return.

Historical records show that Comet Halley was seen in 240 B.C. and that the 1986 perihelion passage will be its 30th recorded passage. The University astronomy department has designed a T-shirt that commemorates these dates.

Only Methuselah could live long enough to see Comet Ikeya, right, alias Comet Judy, more than once. It appeared February 15, 1963, and may be a comet with a period of about 900 years. Comet West, left, the brightest comet to appear in the last twenty years, fragmented into four pieces as it passed the sun and increased its brightness by about a factor of four. It is a beautiful example of a comet with ion and dust tails.

It is sobering to realize that when Halley was here last, Rutherford was fathering nuclear physics, Einstein was discovering relativity, and the Wright brothers had only recently succeeded with powered flight. The comet reached its greatest distance from the sun and turned around near the orbit of Pluto at the beginning of the nuclear age. Will we have a civilization that can appreciate it when it returns in 2061?

Scientifically, comets fascinate us because we believe they are made of the most pristine material in the solar system. When the solar system formed some 4.6 billion years ago, the comets were formed from ices and dust beyond the orbits of the outer planets. They number about a trillion and now reside in orbits out as far as 50,000 astronomical units (AU). (One AU is the distance from the sun to the earth; the radius of the orbit of the outermost planet, Pluto, is 40 AU.)

The total mass of comets is believed to be about one earth mass. The radius of the nucleus of a bright comet is about three miles. Comets are in a spherical shell called the Oort Cloud, named after the Dutch astronomer who first understood comets' geometry. The new comets, which originate in the Oort Cloud, are the only constituents of the solar system that arrive isotropically at the sun. This is because they reflect the spherical symmetry of the cloud that collapsed under gravity to form the solar system. As this cloud shrank, an equatorial plane developed. This is the "plane of the ecliptic" occupied by the planets, which grew by accumulating planetesimals.

When comets in the Oort Cloud are perturbed by passing stars, they plunge into the solar system in elliptical orbits with the sun as a focus. Comets close to the plane of the planets may have their orbits perturbed by Jupiter or Saturn, and may be thrown out of the solar system or captured to become periodic comets like Halley. There are about 100 known periodic comets, of which Comet Encke has the shortest period (3.3 years) and has been recorded most frequently (53 times).

All periodics *except* Halley are in direct orbits; that is, they go around the sun in the same sense as the planets, counterclockwise as viewed from the North Star. Because of Halley's retrograde motion, it becomes a difficult target for spacecraft. The grains in Halley's coma approach spacecraft at 50 miles per second, 200 times faster than a rifle bullet. Nevertheless, five spacecraft will rendezvous with the comet: two Japanese, two Russian, and one European. They will reach the comet in March 1986. The U.S. chose not to join the fleet but redirected a plasma-measuring probe to the vicinity of a gentler and less interesting comet, Giacob-

in-Zinner.

It is a real thrill to see a comet, and even more exciting to discover one. When I was in Australia on sabbatical in 1963, my daughter found a comet. I was coaching her to look at a fabulous globular cluster of stars called 47 Tucanae near the Small Magellanic Cloud. As she peered through the binoculars, she said, "But it isn't by the small cloud, Daddy, it is between the large and small clouds." Sure enough, I saw the fuzzy nebulosity as she did, and we quickly confirmed that it was not present on the star charts.

We stayed up all night to watch it move and in the morning reported our discovery, only to learn that it had been discovered by a famous comet hunter in Japan. It is known as Comet Ikeya 1963I, but it will always be Comet Judy to me.

Little did I know when we casually photographed Comet Judy that I would later develop a professional interest in the study of comets.

Comets come in two flavors: those like Comet Judy, which have a coma and an ion tail, and those like Comet West 1976VI, which have both ion and dust tails. The ion tail points straight away from the sun and is a kind of wind sock for the solar wind. The dust tail is gently curved, and its grains acquire orbits that are governed by solar gravity and the radiation pressure of sunlight.

In the late sixties, through the generosity of the O'Brien family, an observatory site was established near Marine-on-St. Croix, Minnesota. Support by NASA, the Space Science Center, and the Graduate School allowed us to develop infrared detectors and sophisticated electronic systems for a 30-inch telescope. With our telescope we can study the radiation from celestial objects at wavelengths from 0.5 microns to 20 microns. We have five octaves of wavelength instead of the one octave available to optical astronomers who photographed Halley in 1910.

One of the first discoveries at O'Brien was the existence of shells of silicate grains in the outer atmospheres of giant and supergiant stars. A silicate emission detectable in the radiation from these stars at a wavelength near ten microns indicated the presence of the shell.

That led us to believe that the interstellar medium is enriched in iron magnesium silicates as the stars blow their refractory condensates into interstellar space.

Shortly after the discovery of silicates in stars by Nick Woolf, who was chair of the astronomy department from 1967 to 1974, research associate Ray Maas and I searched for the silicate signature in the dust in Comet Bennett. It was there, and the cosmic cycle was completed.

Nucleosynthesis in stellar interiors, followed by condensation of refractory silicates in stellar atmospheres, produces silicates and carbon that are blown by stellar winds into the interstellar medium. Finally, the interstellar material collapses under gravity to form new stars and planets like those in the solar system.

Since our cosmology is dominated by hydrogen and helium, it was a relief to find a source of terrestrial materials in the stuff of stars. The Earth, Mercury, Venus, and Mars are largely composed of silicates. The sand in our earth is cosmic indeed.

Superstition states that comets may signify good as well as unpleasant things. My best friend, Ray Maas, and I discovered the silicate signature in the coma of Comet Bennett on the morning of April 4, 1970. He died that night of a heart attack.

Interest in observing Comet Halley in 1985 and 1986 is high. In mid-August, Comet Halley was in the asteroid belt at about the same distance from earth and sun as Comet Kohoutek was when it was discovered in 1973. It is also as bright as Kohoutek was at that time.

Although we astronomers can predict comet positions very well, we cannot anticipate the brightness of comets nearly as well. Witness Kohoutek! We won't really know how bright Halley will be until it reaches one and one-half AU and begins to sublime large quantities of frozen gaseous materials. This will happen in late November. Brian Marsden, one of the savants of cometology, says, "If you saw Kohoutek you will probably see Halley."

Halley will be brightest at perihelion on February 9, but it will be ten degrees from the sun. Although it will be bright enough to be detected easily by a telescope such as the O'Brien 30-inch at infrared wavelengths, it will probably not be as bright as Comet West, the brightest comet of the last twenty years.

There are three points that should be remembered when comparing the 1910 apparition with the 1986 return: in 1910 the skies were much less polluted by electric lights and particulates; the 1986 apparition has much less favorable geometry (Halley is on the other side of the sun this time); and, except for comet hunters and astronomers, we do not have the awe and excitement about natural phenomena that we had in 1910. We are spoiled by television.

It will be cold in December, and the binoculars will frost up. If you don't want to make an effort to get away from city lights and learn how to use binoculars for astronomy, perhaps the best bet is to stay indoors and watch the show on television.

The Comet Halley probes might even send back the first pictures of a comet nucleus! Eureka!

Edward P. Ney is a Regents' Professor of physics and astronomy.

The Lucy Factor

BY AMY WARD

Consider Lucy Ricardo and Ethel Mertz. They ate pies together, slept in sleeping cars together, trapped celebrities together, worked on the bon-bon assembly line together. They lived in the same building, their husbands worked together, they dined out together, and when they went off on vacation, they vacationed together.

Lucy and Ethel are symbolic of friendship in the 1950s, when women went from their best friends in high school to their best friends in marriage. Women friends lived in the same suburbs, had their first child at the same age, and raised them together.

In 1950, 31 percent of women fourteen and older were in the labor force. By 1984, over 50 percent of women sixteen and older were hard at work. And the number of women joining the labor force is growing.

Today, since a woman who works outside the home is still likely to do more housework and childcare than her working spouse, she's often short on the time and energy needed to fuel friendships with other women.

Patricia Faunce, professor of psychology and women's studies at the University of Minnesota, puts it simply enough: Working women who have friends are those who make a conscious effort to see them. As a single professional and mother of a college-age daughter, Faunce herself spends time pursuing friendships in settings that vary from tennis courts to jazz concerts.

And she has observed that women are learning to network for personal as well as professional reasons. If a woman must keep workplace relationships strictly on a business level, there are plenty of outlets after hours for making contact with other women. Political and other special interest groups, classes, and work-out spas all offer opportunities for women who share common interests to meet.

"Some women, when they marry, think that their husband will meet all of their needs," says Faunce, and so let their friendships slide. But marriage is no substitute for friendship, and "no one person in our lives can meet all of our needs. It's important to nourish those relationships with other women just as we nourish relationships with our children, lover, or spouse," says Faunce.

And there are different ways to be friends, she stresses. Some of her own friendships provide emotional support, some companionship. Not all friendships must fit the same mold.

PHOTOGRAPH COURTESY OF DESILU STUDIOS

Can two women friends ever be as close as Lucy Ricardo and Ethel Mertz were in the 1950s? They can, say the University's Patricia Faunce, Arvonne Fraser, Bonita Sindelir, and Kathy Merriam, if they work at it.

Faunce challenges the notion that a woman makes her lifelong friends in college when young and experiencing many new things. She says that emotionally mature people are better able to establish and maintain relationships. "As you mature, you begin to understand how important it is to have really good quality friendships. . . . You also realize that the years are getting shorter."

Arvonne Fraser, senior fellow at the Hubert H. Humphrey Institute of Public Affairs, also disputes the idea that women necessarily make their closest friends during college years. "I think you have to keep making them all the time. To keep young, you need some young friends as well as old friends and you need to make new friends all the time."

Since she has friends all over the world, Fraser takes time to see some of them during each trip away from home. And she stays in touch between trips. "I'm a great letter writer. I love to get mail. The secret to making and maintaining friendships," says Fraser, "is to find a common interest."

Kathy Merriam, president of the Faculty Women's Club and an active member of the League of Women Voters and other service organizations, has found much in common with other women who put in as much time and energy as volunteers as they would in full-time salaried positions. She cherishes friendships she has made through her volunteer work with women "with the same values and the same drive" as she has to do something for the community.

And while planning for her husband's retirement from the College of Forestry and their resettlement out west, she is renewing friendships that span a quarter of a century. But she and her husband have worked to keep channels of communication open with distant friends over the years through Christmas cards, letters, and occasional visits.

Bonita Sindelir is an associate University attorney who specializes in discrimination cases and intellectual property work such as copyrights. Sindelir has found that although having a career means less leisure time, having a child is a much bigger intrusion on her friendship with other women.

To solve that dilemma, she tries to

schedule activities with some of her friends that can include her son. Consequently, some of her friends have now become "his friends as well."

"I don't have 40 million friends," says Sindelir, who feels that a good test of a friendship is to see if it can be maintained when two friends no longer work in the same office or live in the same community. "When you have to put extra energy" into the relationship to keep it going, she says, you learn which ones are your strongest friendships. Sindelir herself spent a week this summer camping with friends from her high school days in an Iowa farming community.

And it seems that the high priority that University working women place on friendships is par for the course. Niki Scott, writer of the nationally syndicated column *Working Woman* and a divorced working mother, has found that no matter how busy she is with her work or her family, she needs to see her friends, too. "I'm a better mother if I have friends in my life," says Scott, "and a better writer, and a better person. Without a small circle of strong, loyal friends around me, I would operate in a process of diminishing returns."

Scott has found ways to stay in touch with distant friends from her home in Maine. "I gave myself permission to use the phone. I just decided that for the price of a sundress at an inexpensive store, I could talk to my dear friend (who's been my dear friend since I was eighteen and lives in Rochester, New York) for probably an hour on the phone at night."

And if Scott flies near a friend's hometown on business, she'll stop over ("even if I have to parachute in"). "If we meet at the airport for four hours between flights," says Scott, "that's four hours that nobody can ever take away from us, a four-hour visit that is as important as anything else I'm doing.

"When I was a housewife 150 years ago," jokes Scott, "it was easier to maintain friendships." For suburban Chicago housewives in the sixties, "our children were our jobs. They were portable. We could take them with us." Scott can't spend two or three hours with her friends in the middle of the morning while their kids play in the next room, but she can and does meet them for lunch.

How can a woman tell if she's putting enough energy into her friendships? "If I find myself missing someone and don't do something about that, then I need to check my priroities again," says Scott.

Rest assured, one thing Lucy Ricardo and Ethel Mertz invested in their friendship was energy—no matter what the year was.

Amy Ward is a Twin Cities free-lance writer.

Managing Internationalism

BY MIKE HUGHLETT

Pictures of Japanese pagodas grace the space above an old box radio. A colorful rendering of life in Kyoto beams out from the canvas above a filing cabinet. A Kabuki character grins menacingly at the well organized desk below. These are just a few of the souvenirs marketing professor Robert Holloway, a 35-year University veteran, has collected on his ten sojourns to Japan.

Holloway's travels reflect his trade. He's an international marketing specialist whose studies have taken him from the Soviet Union to Czechoslovakia to China. And, with his cosmopolitan background, he's injected a healthy dose of internationalism into the University's School of Management, according to his fellow professors.

"Holloway is at the center, he's the most visible aspect of our international program," says Raymond Willis, professor and chair of the school's department of strategic management and organization. Holloway is the school's sage on the Japanese, says Willis.

Holloway's colleagues in Japan appreciate his work, too. Last fall, he became the first American to receive a prestigious award from the Japan Management Association, one of Japan's premier business organizations. Holloway says he received the award, given annually for more than ten years, for his work in explaining American management styles to the association's business executives.

"Every time I've been over there, I've worked with them on some kind of project. Out of gratitude, they gave me this," Holloway says, pointing to the handsome trophy sandwiched between texts on a bookshelf. Holloway and his wife, Lois, were flown to Japan for the award ceremony by the association. "It was a very nice affair," he adds.

Before Holloway began observing Japanese business practices, he took a good look behind the Iron Curtain at the Soviet Union's economy. Traveling with a group of University professors from a variety of disciplines, Holloway visited the Soviet Union in 1958, before the statues of Stalin had come tumbling down. He returned in 1968 during the Russian seige of Czechoslovakia and again in 1978.

Holloway recalls when Russian authorities in 1968 discovered that he and his colleagues had somehow picked up news—the unofficial version—of the invasion of Czechoslovakia. "We got it, and we got it before the Russians did," Holloway says.

TIM RUMMELHOFF

Robert Holloway's international studies earned him one of Japan's top business awards last fall.

He and his roommate, professor William Howell, had dangled Howell's shortwave antenna out the window of their Moscow hotel and picked up an Indian radio broadcast. For the rest of the trip, the Russians dogged the professors' trail, checking phone calls, searching rooms, and hindering their access to the factories, stores, and universities they planned to visit.

In 1978 a snapshot spree in a Soviet marketplace gave Holloway and Regents' Professor of Political Science John Turner a taste of state security. "We were just getting ready to take some nice pictures when a big Russian in a black coat grabbed our arms and took us into an office," Holloway says. "He felt he'd caught us, but at what, we didn't know." After about ten phone calls and a flurry of questions, the Soviet official freed Holloway and Turner with their picture-taking privileges intact.

Moments later, a second Russian-in-black stepped in. "I could tell he wasn't just selling butter," says Holloway. Back to another office.

But this time Holloway and his companion were presented a bottle of brandy and a sack of apples. Never mind that it was 6:30 a.m.; this Russian wanted to celebrate old times. As a member of the Soviet army in World War II, the brandy-toting Russian had met American forces in a vanquished Germany. "He had gotten gloriously drunk with the American soldiers," Holloway says. "It was wonderful for him to meet Americans again."

Holloway's 1944 wartime stint in the Pacific sparked his interest in Japan. Since his first visit to Japan in 1972, he has studied the country and taught students at two Japanese universities. He returned to Japan for six months this fall as part of a year-long sabbatical.

In his studies of Japanese industry, Holloway finds the Japanese have accomplished a feat many American companies should heed: the Japanese keep consumers happy by making high-quality products. Unlike American companies, which emphasize profits, Japanese stress people, Holloway says. However, he says that Japanese management styles cannot simply be grafted onto American industry.

"Professor Holloway is interested in people," says W. Bruce Erickson, professor of strategic management and organization, who has known Holloway for eighteen years. "He's very conscious of the human element."

Holloway's travels have convinced him American businesses must understand and adjust to the cultures of the countries they operate in. "That really is the name of the game," he says.

"I've got this book called *Big Business Blunders* that is full of mistakes that companies make when they go abroad," he says, pointing to a well-worn volume nestled among the reference books on his desk. Among the examples he cites are a firm that tried to market white shoes in a South American country where white shoes are the trademark of bookmakers, and the companies that have gone to Japan to sell beds without knowing that most Japanese sleep on futons.

Business can't avoid the challenge of adapting to other cultures simply by hiding in the United States, Holloway says. "Today it is really impossible for any company to operate in the United States without being concerned about foreign competition."

A greater emphasis on internationalism in the business world, bolstered by a mandate of the American Association of Collegiate Schools of Business for more international course work, has led schools of management to adopt a more global

outlook. The University of Minnesota is no exception. Preston Townley, dean of the School of Management, says that adding an international element to the curriculum is one of his highest priorities.

To ride the international tide, the School of Management needs more professors with international expertise like Holloway's, says Townley, adding that less than 20 percent of the faculty have that "in-depth" international experience.

Holloway has helped develop much of the international-business course work at the University. "He was one of the first people to really do something about bringing international issues into the curriculum," says Jack Gray, an accounting professor who has known Holloway for 22 years and is currently working with him on a number of international-business case studies.

Holloway says he is skeptical about establishing an undergraduate degree in international business because business people fresh out of college are rarely able to jump into a position in an international firm. "Most international jobs open for individuals who've been with a company five or six years. They want to make sure they know you before they trust you with their assets [in a foreign country]."

Instead of specialized "international" business classes, Holloway would like to see a global component in all management classes. "Now we put students into a separate little box called 'international,' " he says. "So for one quarter they read that book, go to those lectures, and answer questions about international issues. But there's no assurance they carry over any of that knowledge with them in subsequent quarters. Ideally, [internationalism] would be integrated so you're hardly aware it's there."

Currently, Holloway is coordinating a team of management school professors who are constructing a series of case studies in international management. The case studies will be distributed to businesses and management schools around the country this fall. The studies should make business students better "internationalists" by getting them involved in the policy-making process of multinational corporate firms. "Suddenly, they'll assume the role of top managers, deciding whether or not to go into the People's Republic of China," says Holloway.

Perhaps the best way to get an international perspective is to go abroad.

"Do you feel international?" Holloway asks students.

Holloway says those who answer yes almost always get their cosmopolitan attitude from trekking across the globe, seeing places, and meeting people.

Mike Hughlett is a student in the School of Journalism and Mass Communications.

Fire and Ice: The Initiation of Doug Woog

BY JOHN KAISER

If the University of Minnesota's search committee for a new hockey coach had any questions remaining about Doug Woog's readiness to coach the Gophers after he left the interview, they weren't showing it. Woog had dazzled the committee with answers stressing commitment to academic as well as athletic excellence. He did not hesitate before answering questions and, most importantly, addressed the right issues with the right degree of emphasis. It was clear that Woog was ready to coach the Gophers.

In Woog's mind, this had always been the case. The problem was to convince others, including Minnesota Athletic Director Paul Giel—a task made more difficult by the indecision of coaching superstars Herb Brooks of 1980 Olympic fame and Mike Sertich, the mastermind who has entrenched the Minnesota-Duluth Bulldogs at or near the top of the Western Collegiate Hockey Association standings. Both were nominated for the job. Brooks wasn't interested; Sertich applied, but decided to stay in Duluth.

All the talk of Sertich and Brooks could have unnerved many potential candidates, but Woog held steadfast in his quest for the job. Woog had been there before. In 1979 he was considered a leading candidate for the position when Brooks left to coach the 1980 Olympic Team. However, Giel awarded the job to Brad Buetow, an assistant under Brooks, so Woog set out to sharpen his hockey coaching skills. He took his alma mater, South St. Paul, to two conference championships and to the state tournament four times. He brought the St. Paul Vulcans and Minneapolis Stars to the top of the United States Hockey League. He joined the Amateur Hockey Association of the United States (AHAUS) to experience first hand European hockey, and finally he was named assistant coach of the 1984 Olympic Team. By 1985, Woog was ready to coach the Gophers. When he met with Giel, an agreement was made, and Woog made the switch to college coaching.

Happy to have the entire process behind him, Woog is anxious to begin the season. "It was a matter of timing," he says. "You always wonder if you're going to get a shot at coaching at Minnesota. But worrying about it won't solve a thing. The entire process dragged on for months, so I'm relieved it's over and excited about playing hockey."

After a successful high school and amateur hockey coaching career, alumnus Doug Woog says he's ready to lead a faster, no-penalty Gopher hockey team to its next championship.

One of Woog's biggest transitions has been having two full-time assistants. Dean Talafous and Bill Butters, both former Gophers and North Star greats, assist Woog. Talafous with the offense and Butters with the defense. "The hiring of coaches was a process I didn't expect to take so long, but now we have an excellent staff," Woog says. "Now it is just a matter of getting to know the kids on the team. So far it has been a challenging, exciting process to put this group together."

Another change for Woog is a daily schedule that includes a large dose of promoting the Gophers and Golden Gopher athletics. Woog spent a Saturday in September at a local car dealership hyping Gopher hockey over the radio, conducting a media day with the full squad in Mariucci Arena, and meeting fans in a picture and autograph session.

Although these promotions are a major part of a major college hockey program, the real Doug Woog show begins on the ice. Because Woog has no collegiate coaching experience behind him, it is difficult to judge how his Gopher team is going to play. In the past, Woog's teams have started slowly and finished strong. Will that happen at Minnesota? "Starting off slowly has been traditionally true for my teams," Woog says. "But that is so for a number of variables. I play lots of players. I've found that playing a 5-4 pyramid sometimes has our best players off the ice. But I want our people to understand that individuals are only part of the puzzle, and when we all play together, our team will be more effective."

Woog's authority is evident. As players stroll through the halls of the Bierman Athletic Building, they can visualize a younger Woog flying across the ice in 1965, the year Woog was named All-American. He played 80 games at Minnesota under coach John Mariucci, scoring 48 goals and adding 53 assists. After graduating from the University in 1967 with a B.S. degree in education, Woog returned to South St. Paul high school, where he served as a teacher, counselor, dean of students, and soccer and hockey coach. He received his master's degree in guidance and counseling in 1973.

Woog's experience with young players and his counseling degree complement each other, and as a result he has a good relationship with the players. "I think Doug Woog is a good choice," says Pat Michelleti, the Gopher's most recent All-American. "He was an All-American here and will bring enthusiasm back to the University of Minnesota hockey program. Even though he hasn't coached at the college level, his record speaks for itself."

Says captain Tony Kellin, "He's got good experience and will bring a lot of good systems to our team."

In addition to generating excitement on the ice, Woog hopes to give the fans a better brand of hockey to follow. And Woog predicts that a good product will keep the fans coming back for more hockey. "Our team is going to play a faster brand of hockey than it has in the past, and for fans, this is good news. There are far too many high-sticks in college hockey. They will come down this year and so will the interruptions that have plagued the game."

Woog is not tipping his hand on the kind of hockey the Gophers will play, but he does hint at a European style. "It's safe to assume we'll incorporate some of those tactics. We'll take a look at the personnel and the situation. Sometimes you want to play aggressive and tight defensively, controlling the corners and the front of the net. Other times you want to play ideally and open the flow with movement and control of the puck," he says.

One thing is for certain: Doug Woog has returned home to Mariucci Arena, and Gopher fans hope another championship won't be far behind.

John Kaiser is an intern in the men's intercollegiate athletics department.

SCORES

Football

The Gophers opened the 1985-86 season with a come-from-behind 28-14 victory over Wichita State. Wichita State took a 14-0 lead early in the second quarter, but from that point, the Gophers dominated the game.

Sophomore quarterback Rickey Foggie carried the ball fifteen times for 140 yards and a 9.3 average. He also threw ten times and completed eight (his first seven in a row) for 157 more yards. In addition, he scored the first three Gopher touchdowns. Senior tailback Valdez Baylor gained 45 yards in seven carries, and sophomore flanker Gary Couch accounted for the other score. Junior split end Mel Anderson had three catches for 92 yards.

The Gophers overwhelmingly defeated the University of Montana Grizzlies 62-17 September 21, scoring their highest point total in 40 years. The Gophers amassed 502 yards in total offense and used sixteen ball carriers. The Gophers rushed for 368 yards, and Foggie completed 3 of 6 passes for 101 yards. Tailback Valdez Baylor scored in the first quarter; Foggie scored once in the second and hit Mel Anderson for 6 more points. In the third quarter Foggie ran for four touchdowns. In the fourth quarter, with Alan Holt as quarterback, tailback Ed Penn scored two touchdowns and freshman tailback Pudgy Abercrombie scored another. Running-back Warren Berry scored the final touchdown after linebacker Terry Hrycak recovered a Montana fumble.

Football's Golden Years Reviewed

Between 1932 and 1948, the Gopher football dynasty created by coach Bernie Bierman won five national championships, six Big Ten titles, and had five undefeated seasons. There were eighteen players on those teams that won All-American honors, one Heisman Trophy winner, and four players who, along with Bierman, were elected to the College Football Hall of Fame.

A year-by-year look at the Gopher teams and their games has been written by James P. Quirk, '48, a former professor of economics at Caltech in Pasadena, California. The book includes an appendix of team records and statistics and game charts of memorable games. To order, write Quirk at Rural Route 1, Box 381, Grantsburg, WI 54840. Cost is $12.

Some of Our Graduates Make Good Copy

September 9 the Minnesota Alumni Association launched what is believed to be the only major image advertising campaign for a public university in the country. The $225,000 campaign features prominent University of Minnesota graduates and was designed by a consortium of Twin Cities advertising and public relations firms, which donated their services to the University.

The campaign was conceived and directed by the Association's communications committee: L. Steven Goldstein, senior vice president of Carmichael Lynch Advertising, project coordinator; Jack Bolger, vice president of Bolger Publications; Jean LeVander King, president of Communi-King; Dave Mona, chair and chief executive officer of Mona & McGrath Public Relations; Don Picard, president of Creative Ink; Kris Zimmermann, director of marketing research, and Freddie Clary, manager of marketing research, of Land O'Lakes; and Liz Petrangelo, executive vice president of Creative Resource Center.

"I don't recall a time when so many resources representing so many different parts of the Twin Cities communications community have come together so smoothly to work on a project," says Goldstein, adding that work on the campaign started nearly a year ago. "The Alumni Association commissioned a study of alumni attitudes that correlated the quality of a student's experiences at the University with future involvement in the Association. We felt that a campaign to boost alumni pride in the University as one of the state's best-kept secrets was in order."

The campaign is aimed at increasing the visibility of the University and the Association, says James Day, associate director of the Association and communications committee liaison.

"As an association, we're looking to grow and exercise more influence and participation in University affairs," says Day. "The campaign is unique because it's aimed at promoting the whole University rather than a particular school or college.

"The University is sort of a combination of a lot of small communities, and traditionally people tend to identify with those smaller communities because of the way the University is organized. People are more likely to identify themselves as graduates of the School of Management or the Institute of Technology or the College of Home Economics than as graduates of the University.

A $225,000 advertising campaign saluting the University and its graduates was conceived by the Minnesota Alumni Association's communications committee and services were donated by a consortium of Twin Cities advertising and public relations firms. Two of the six print advertisements are pictured above.

"We believe very strongly that the strength of this University can be measured by the quality and diversity of its alumni, and we are grateful to our own communications alumni for the year of work and planning they donated to this project."

The series of six print advertisements features

- Donald "Deke" Slayton, one of the original seven astronauts of the U.S. space program and a 1949 graduate of the University. "Some of Our Graduates Turned Out to Be Space Cadets" is the headline on the ad, which features a large photo of the Mercury Seven astronauts, similar to the photo used to promote the recent movie, *The Right Stuff*.
- Roy Wilkins, civil rights leader and former executive director of the National Association for the Advancement of Colored People. Wilkins's advertisement reads "Some of Our Graduates Walked with Kings" and pictures Wilkins participating in a civil rights march through the streets of Washington, D.C.
- Former Vice President Hubert H. Humphrey. Humphrey is pictured with the headline "Some of Our Graduates Live Forever."
- Eric Sevareid, former CBS News anchor. Headlined "Some of Our Graduates Made the Evening News," the Sevareid advertisement pictures Sevareid, a 1935 graduate, on the CBS News set with Edward R. Murrow and Walter Cronkite.
- Television actress Linda Kelsey, '68. Kelsey, who starred in the CBS television series *The Lou Grant Show*, is pictured with the cast of the show. The advertisement is headlined "Some of Our Graduates Served with Grant."
- New York Yankees outfielder Dave Winfield. Winfield is shown catching a fly ball; copy is yet to be decided.

The concept and copy for the campaign were provided by Terry Bremer, vice president and creative supervisor at Campbell-Mithun Advertising, and Mike Murray, vice president and associate creative director at Bozell & Jacobs Advertising. Carmichael Lynch Advertising and Churchward Design provided keylining, and Carmichael Lynch also provided the media planning and implementation. Public relations for the project was directed by Mona & McGrath Public Relations.

The campaign will run in the *Minneapolis Star and Tribune*, the *St. Paul Pioneer Press and Dispatch*, *Twin Cities, Mpls/St. Paul*, and *Corporate Report* magazines, *CityBusiness*, and local editions of *Time*, *Newsweek*, and *U. S. News and World Report*.

IN BRIEF

The University has reduced its investments in companies doing business in South Africa by 26 percent since June. Holdings were divested in five companies that didn't rank in the top two categories of compliance with the Sullivan Principles, a 1976 set of guidelines for companies doing business in South Africa. The principles call for nonsegregation in the workplace and fair employment practices. According to University President Kenneth H. Keller, the University does not intend to hold stock in any company with more than 1 percent of its business in South Africa. In addition, the University divested bond holdings in four companies and instructed investment managers not to purchase any bonds in South African-related companies or banks.

Norman Borlaug, '30, principal architect of the "green revolution" and winner of the 1970 Nobel Peace Prize, attended the dedication of a building named for him on the University's St. Paul campus. Borlaug Hall will house faculty and facilities of the departments of agronomy and plant genetics, and soil science and plant pathology.

The University Board of Regents approved a civil-service salary plan that allows each collegiate or administrative unit to choose either a 4¼ percent general wage adjustment or a combination plan with a 2 percent across-the-board increase, with 2¼ percent available for merit raises.

The World Health Organization named laboratories at the University's department of pediatrics as one of two collaborating streptococcus laboratories in the world. Headed by pediatrics professor Edward Kaplan, the laboratory will be housed in the University's division of pediatrics and infectious diseases. It will serve as an international reference center on streptococcal diseases, standardize the methodology for diagnosis and treatment, participate in research, and train professionals and technical personnel from laboratories around the world.

University Hospitals and Clinics has acquired interest in Primary Care Network Management, Inc., a Minneapolis-based management company that is developing a health maintenance organization in Minnesota.

The University became the only academic institution in the United States with direct access to the Cray 2, considered the world's most advanced supercomputer. The Cray 2 system was installed this fall at Research Equipment, Inc., in Lauderdale, Minnesota, and will be connected to an existing campus network of powerful color-graphics workstations. University research on the Cray 2 will be carried out through the University's Supercomputer Institute.

William F. Dietrich, former head of the Green Giant Company, donated $750,000 to the Minnesota Medical Foundation for an endowed chair in basic sciences at the University Medical School. The money will be matched by funds from the Permanent University Fund, to create a $1.5 million chair for research in fundamental molecular and cell biology. Dietrich entered high school at age twelve and after graduating enrolled in business at the University.

Summer session enrollment at the University's five campuses declined slightly compared with last year. Total enrollment decreased from 24,804 students last year to 24,360 this summer. Enrollment at the Twin Cities campus was 20,193 during the two summer sessions, compared with 20,504 last year. Enrollment at three of the four coordinate campuses also decreased this summer. At the Morris campus, enrollment was 200, compared with 196 students last summer. At Duluth, enrollment decreased from 3,230 last year to 3,223. Enrollment at the Crookston campus was 207 students, a decrease from 335 last summer; Waseca's summer enrollment was 537, down by two students.

LIBERAL ARTS

The Midwest Looks East

It seemed appropriate that the tenth annual convention of the U.S.-China People's Friendship Association (USCPFA) should be held in Minnesota.

- Since the United States established diplomatic relations with the People's Republic of China in 1979, Minnesota has been a leader in advancing trade and communication between the two countries.
- The China Center, which coordinates all affairs between the University and China, has one of the country's five largest scholar exchange programs with China. According to Patricia Needle, the center's director, 250 Chinese scholars and graduate students have come to the University.
- The Shaanxi province of China is Minnesota's sister state. In fact, Gov. Rudy Perpich declared September Minnesota-Shaanxi Month.

The USCPFA was founded in 1974 as a nonpolitical, volunteer organization to develop and strengthen friendship between the people of the United States and China. The association held its convention in Minneapolis August 30 to September 2 and featured a variety of experts on China. Among them was Han Xu, the Chinese ambassador to the United States, and Harrison Salisbury, '30, former editor and correspondent for the *New York Times* whose latest book *The Long March: The Untold Story*, is about the 6,000-mile march of Mao Tse-tung and the Red Army to Shaanxi.

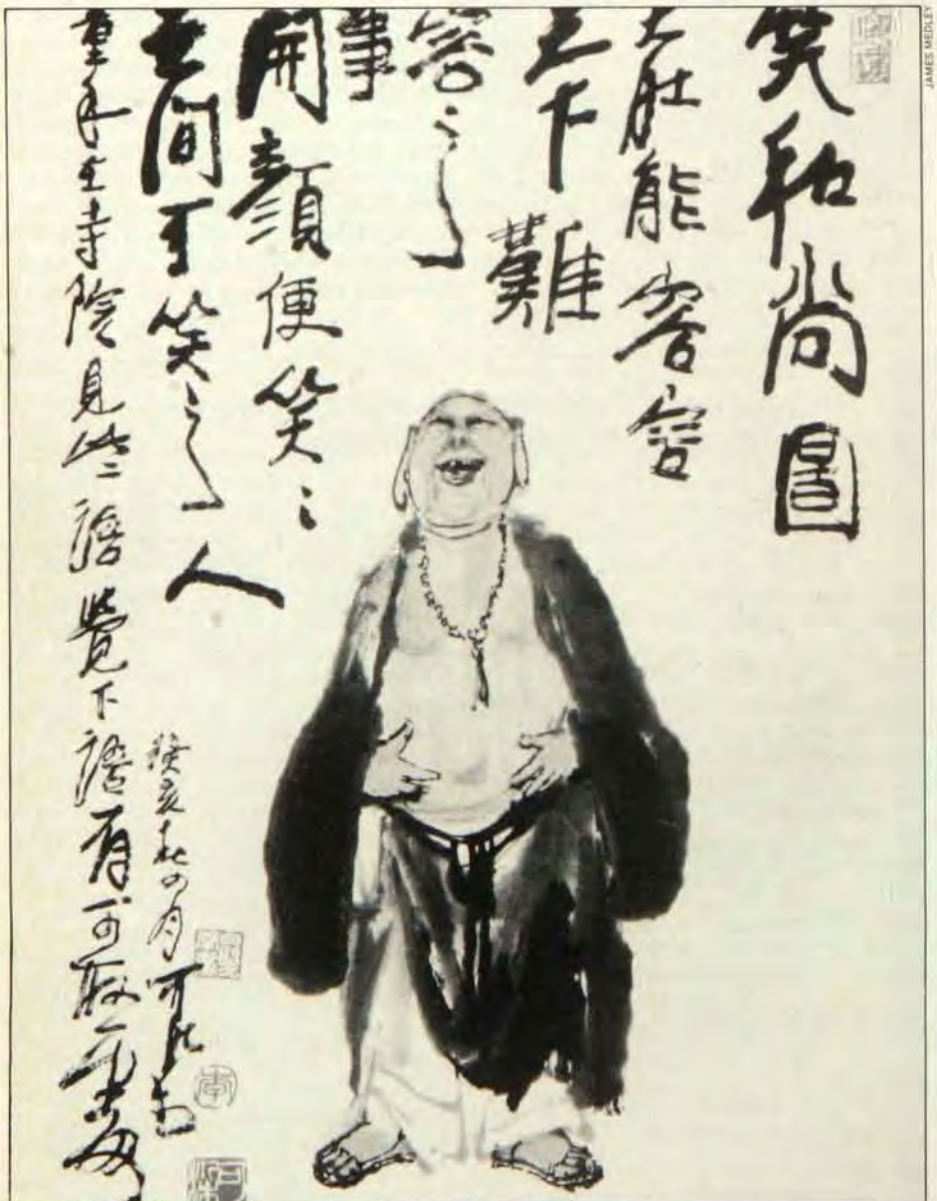
University professor Mei-ling Hsu, who came to the United States in the 1950s and has acted as a cultural liaison for Minnesota trade, spoke on the conflict between China's economic growth and population growth. She told her audience that because China plans to increase its economy four-fold, stabilizing the population at 1.2 billion by the year 2000 is crucial. A big population may mean a big labor force, but it also means draining the country's capital to educate a growing working-age population. She was optimistic that China would meet its population goals.

Other scheduled speakers were Zhang Yun, an English major, and Song Jianjian and Shen Pengnian, both engineering majors. All three are University of Minnesota visiting scholars from China.

Zhang Yun spoke of the need for more Chinese to study the social sciences here. "Social science helps communication and understanding," said Zhang. "History shows that many wars and contradictions are a result of lack of communication and understanding. Social scientists can help bridge the gap between nations."

Zhang also addressed the issue of old age, saying that the Chinese elderly, despite a lower standard of living, are happier and less lonely than their American counterparts. China's old are respected, working community members, and the law guarantees that children look after their parents and grandparents.

Other topics discussed at the convention included China's energy crisis, women of China, and post-Mao rural reforms.



JAMES MEDLEY

"Laughing Monk," by Li Keran, 1983, is part of the University Art Museum's current exhibition of Chinese works. In Minneapolis, Chinese experts gathered for the U.S.-China People's Friendship Association convention.

This department was compiled by Minnesota *interns Bjorn Sletto and Alia Yunis, University journalism students.*

EDUCATION

Enabling the Developmentally Disabled

The department of educational psychology has been granted $150,000 to help alleviate the problems of developmentally disabled Minnesotans—people with permanent and severe learning, vocational, and social handicaps formed during their developmental stages.

The grant from the U.S. Department of Health and Human Services will finance the University Affiliated Center (UAF Center) in Pattee Hall, administered by the department of educational psychology and the Gillette Children's Hospital in St. Paul. The new center is part of a national network of 35 facilities, located at major universities and in teaching hospitals, that exchange research results, ideas, and advice on the care of developmentally disabled persons.

Before filing the funding application last November, the department of educational psychology conducted a study to determine whether there was need for a UAF center in Minnesota. Researchers found that the most pressing problems concerned a lack of trained case managers—professionals working with developmentally disabled persons—services for very young and adult disabled persons, and a central system for dissemination of information about the care of disabled persons.

Says Martha Thrulow, assistant to the director for administration/evaluation at the Minnesota UAF, "We needed a central place where people could go."

Training of case managers is one of the main goals of the new UAF Center, according to Minnesota UAF Director Robert Bruininks. Case managers can tie together existing state services and create a broader base of support for disabled persons. The department offered two new courses this fall as one way of meeting this need.

Even though Minnesota ranks among the top ten in the nation in the quality of existing services in community institutions, says Bruininks, services can still be better. A task force is currently assessing ways to improve the available services. According to Patricia McAnally, training coordinator at the Minnesota UAF, the center is also advising federal and state agencies on trends in the care of developmentally disabled persons, and an advisory committee of representatives from state agencies and institutions has been appointed to improve coordination of services.

Says Bruininks, "We are a catalyst that can bring about change and solve problems."

Music students at last will study and practice together under one roof in Ferguson Hall, the School of Music's new headquarters, which opened in September.

MUSIC

Opening Notes on a New Building

The Minneapolis Sound began emanating from a new building September 16, with the opening of Ferguson Hall, the School of Music's new headquarters on the campus's west bank. Facilities in Ferguson Hall include an electronic studio with new sound equipment, a music library, a concert hall, a music therapy laboratory, a music education laboratory, student lounges, faculty areas, and three times as many practice rooms as there were in the school's former headquarters, Scott Hall.

Built in 1926, Scott Hall was considered outdated four years after its creation. "Scott Hall had become totally inadequate for our needs," says Lloyd Ultan, director of the school. "Consider that we had only twenty practice rooms for over 600 music majors. Lack of space often forced music students to study in twelve different buildings across campus. Some professors even taught classes in their living rooms."

School officials believe the building will be a big asset to the music program. "We will now be competing with the other Big Ten schools because of our new facility," says Reine Shiffman, public relations representative for the school. "Our outstanding faculty deserve that."

The state legislature approved the sale of bonds for the construction of the $16 million building in 1983. However, $5 million is still needed to complete the concert hall.

The building is named after Donald Ferguson, a University music professor from 1913 to 1951. Ferguson also wrote the program notes for the Minneapolis Symphony for 30 years, founded the Bach Society, was a composer, and authored ten books. Last fall, at the age of 102, he attended the building's groundbreaking ceremony. He died in Minneapolis a few months later.

DENTISTRY

Riding the Crest of Global Dentistry

The School of Dentistry's faculty and students travel the globe conducting research, teaching, and learning. And it's estimated that faculty and students from 47 countries have come here, making the school's exchange program one of the largest in the country.

"Dental disease is rather rampant in many other countries," says James Jensen, associate dean of academic affairs, who has just returned from Indonesia, where he was a visiting lecturer. "Since we have done so well in prevention, it's our obligation to extend ourselves."

Most University professors' trips overseas have been sponsored by international organizations such as the World Health Organization and Project Hope. Recently,

professors have visited Taiwan, Korea, Vietnam, Portugal, Peru, and North Africa. While time spent in foreign countries is generally short, John Look, an instructor in removable prosthodontics, spent most of the last twelve years providing dental care to citizens of the People's Republic of the Congo.

Several faculty members have been professors and curriculum coordinators at overseas universities. Prominent among the universities is King Saud University in Riyadh, Saudi Arabia.

Ramesh Kuba, an oral radiologist, recently spent a year there after a Saudi graduate student here approached him with the proposal. He says he was very impressed with the Saudi facilities, but found some cultural differences. "Traditional Islamic practices are strictly followed," says Kuba. "Male and female students are therefore taught in separate areas. This meant that all lectures had to be duplicated for the opposite sex, which, of course, resulted in duplication of all efforts."

Faculty members have also conducted research projects with other countries, particularly Scandinavia.

Typical of the school's commitment to internationalism is a special course offered last spring, called International Opportunities for Dentists. It was taught by Jensen, Michael Till, and Bashar Bakdash, chair of the public affairs committee. All three have traveled extensively in their professional capacities.

Course topics included the philosophy of international responsibility, case studies in international practice, and international exchange programs available to undergraduate students.

The school's faculty have been very receptive to international dentistry and have shown much personal initiative, says Jensen. "When we exchange, we get a better understanding of other cultures, and they get a better understanding of ours. The better we understand each other, the better we can get along."

AGRICULTURE

Kellogg Initiates the Telegrant

The University has received a $1.9 million grant from the Kellogg Foundation to establish a telecommunications development center. The five-year grant is the largest the foundation has ever given the University.

The money will be used to create a center within the University's Institute of Agriculture, Forestry, and Home Economics to train faculty and staff to plan, design, and deliver instructional programs that use telecommunications technologies such as radio, television, computers, and teleconferencing. The goal is to improve the University's ability to respond to the growing educational and information needs of rural and urban clients.

The program, headquartered in the Earle Brown Center on the St. Paul campus, will help faculty construct projects, learn the technology, and network ideas with other departments and Minnesota businesses and industries.

"Professors are reluctant to become novices again," says Gail McClure, acting associate director of Agriculture Extension Service, the unit most involved in the project's administration. "This gives them the incentive to learn to use the wealth of hardware now available.

"We don't want people to get hooked up on technology. We will handle it for them. We want to enhance the University and make it a leader," says McClure.

She adds that the grant will develop cooperation between the University and the public and private sectors. It will also help the state's residents have access to information, which, she feels, is a University obligation.

"Telecommunications is the means to help people," says McClure. "People don't want to drive miles in the snow for [knowledge]."

Marcia Hyatt, a telecommunications specialist and liaison for the grant, says about $250,000 will be used annually for five years to generate seven to ten projects at a time.

One project for this year is a series of television programs on legal assistance for farmers. It will be accompanied by a two-way video hook-up that will allow viewers to call in and question experts in the Twin Cities. Other possible projects include interactive pesticide-application training, teletext data banks operated in conjunction with the Public Broadcasting Service, and an all-day program on rural and farm income taxes with both national and state experts answering callers' questions.

The grant is not just for agriculture. "Kellogg stipulated only that someone in the institute be involved," says McClure. "We hope it will become a cross-University effort. You start with a real problem and then see what the University can bring to bear on it. There are zillions of departments that would have something to offer to one problem—small-business tourism, for instance," says McClure.

The University is the first school to try telecommunication extension education. The Kellogg Foundation, which has as its motto, "to help people help themselves," has always placed a strong emphasis on continuing adult education.

Plans call for the center to be self-sufficient after five years.

Computing Away Dyslexia

When given a writing assignment, most students wonder about what to write, not how to write. But *how* to write is a problem for the 15 percent of the University's population who are dysgraphic or dyslexic.

A remedy is now available for the problems faced by these students, half of whom are not diagnosed as dysgraphic or dyslexic when they enter college. The remedy is the microcomputer.

Terrence Collins, an associate professor of English in General College, has, thanks to a three-year grant from the federal government, put together the country's first project to break through learning disabilities by using computers.

"We think the computer bypasses these students' early history of pen and pencil writing, which they have come to associate with failure. It gives them a fresh start," says Collins.

The improvements not only represent a complete turnabout for these students, but they often occur after only a couple of sessions on the computer.

"Communication is the criterion by which we judge people," says Collins. "People would look at these students' writings as an indication that they were not thinking. But we know thinking was going on. It was just a transmission problem."

Teachers and others, says Collins, have long been guilty of the sin of omission. Because of few concerted efforts, crowded classrooms (especially in high schools), lack of resources, and ignorance about learning disabilities, these students go along in life undiagnosed, frustrated, and demeaned.

The federal grant of $77,000 enables the University to help 20 to 24 students each year. Students who have participated in the project speak freely of their experiences because they are proud of their accomplishments. In interviews, they talk about how they were labeled as retarded and were separated from their peers and about how they had to resort to cheating, lying, and borrowing papers to get through school.

Says Dana Dickerson, who has now moved into the business world, "The computer cannot say this is good or this is bad. It's not judging me. It's just me correcting myself." It used to take her days to write a paper; now she can write a paper in five hours.

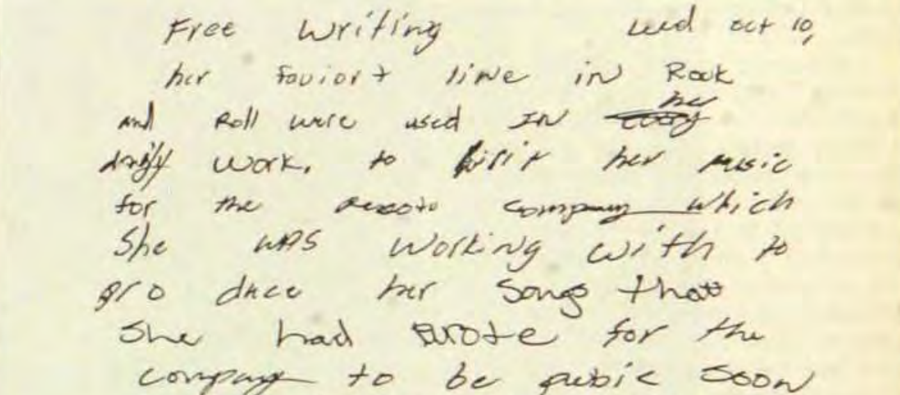
Pictured above right is a dyslexic student's pen-and-pencil essay; below is the same student's work completed on the computer.

Pat Beck, a sophomore, bought a Macintosh with a loan he received from the Education Alumni Society. Last spring, he earned one of two A's given in a College of Liberal Arts honors colloquium. He attributes his success directly to the computer.

Collins hopes the program can be expanded so that nonspecialists can teach students who are dyslexic or dysgraphic in classes with other students. That, he says, is something writing teachers across campus must learn to accept. "Program access is the next big battle," says Collins. "Unless classes become more flexible, [much] will go to waste."

Collins also believes that as offices become more computerized, students will gain confidence in the job market. "The federal government requires that we help with the transience to work. With office computers these students can function as employees. They can write sophisticated prose such as sales reports and planning documents," he says.

A business network to help dyslexic and dysgraphic students enter the job market has been established.



Small Town School Wins Championship

As a kid growing up in a small town, I spent my free time playing basketball after school. When I was in eighth grade, I tried out for the team. Making and playing on the basketball team meant a lot to a person in eighth grade playing basketball with kids that were in tenth, eleventh, and twelth grade of school. One day I got tripped on the court and took a hard fall on my right knee. At that time a frightening thought went through my mind. Was I going to get up and walk again? My coach stood over me as the pain shot down my leg to my knee. I tried to get up and walk so I could play, but instead I got helped off the court and was then taken to the hospital. I had my knee worked on and I was on crutches for a week.

Not being able to play for six weeks, I thought that I would never be able to go back again. I played the last four games of the season that year and our team went to the State High School Basketball Tournament and took second place. I played basketball when I was in ninth grade. I had a injury-free year, with very high-scoring games all year long. By the time the season was over with, our team again was going to the State High School Basketball Tournament. That year our team had a very good record in the win-loss column. Our team took first place at the State High School Basketball Tournament. To someone who was only in ninth grade, winning and receiving a medal meant some thing very special.

No Deco Is Good Deco?

BY MATHEWS HOLLINSHEAD

For some time now, frequent restaurant, hotel, and club patrons have been complaining: "Why has my favorite Naugahyde pool parlor decided to go mulberry and gray velour? What happened to the knotty-pine cafe where my parents used to treat us to pizza? It's all chrome railings and torchere lights. . . ."

You wonder whether you're in a time machine. Going out to eat or dance is like a cattle call on somebody's bad dream of a Busby Berkely set. At singles places, you cling desperately to the elevated, armless pedestal of your cocktail stool, perched high on a stepped overlook of the dance floor or dinner area, and try to find the orchestra or dance band in a maze of plateaus and streamlined conversation grottos. When you get called to dinner, you face the other extreme: flared and cushioned booths so luxuriant that you can't get airborne after that beef Bourguignon in pita or manicotti in white sauce. Maybe you're trying to get to the bathroom and get lost in a forest of giant vases filled with imitation ostrich feathers, or you can't find the real exit because it's endlessly reproduced in a set of full-height wall mirrors arranged to emulate the crown of the Chrysler building.

If that's not enough, one Monday you show up for work and Physical Planning has installed teal-blue tiles in the elevator foyer leading to the reception area. You're not in the habit of bringing sunglasses to work, so you quickly shut your eyes, but in the process stumble over the foot-wide arms of a cobalt, Deco-revival reproduction sofa that appeared, also over the weekend, where the Barcelona chairs used to be.

The University, bless its bureaucratic heart, can't respond to the latest trends in interior decorating that fast, but Deco (or as a friend calls it, "Dreco") is seemingly taking over the rest of our lives by storm. If you want to know just how serious it is, the next time you want to meet someone for a drink or you're coming to Minneapolis from out of town, try the Embassy Suites Hotel near the Lutheran Brotherhood Insurance building downtown. The elevator whisks you up several floors until, as if you've ascended through the bedrock of a magic mountain, the doors open onto a living fantasy of palm fronds and pillared patios, complete with waterfalls and garden trails.

Enough already! Is there no refuge from the pharaohs? What, we implore with thirst in our eyes, can we find to get the interior designers to turn off this monsoon of Art Deco?

Well, rest assured, there will be relief. It may not come until next year or the year after, but change is the only law of fashion.

The question is, change to what?

My own candidate, not of choice but as a prediction, is Atomic Modern. Atomic Modern is what eventually succeeded the original Art Deco and Streamlined styles of the Roaring Twenties, the Great Depression, and the 1940s. In an attempt to make the best of a gruesome new reality, designers of the 1950s started making all their angles obtuse or random, etching formica tabletops with stars, comets, rockets, helioid solar-system motifs, or subatomic electron-path diagrams. Science fiction or fairy-tale fantasy furniture and fixtures were in. Couches got way too low, and their bare, thin legs tapered into elegant brass or black aluminum sleeves at the ends.

Most of us thought all that was ugly and cheap as we were growing up with it, and so did our parents.

Our children think it's ugly and cheap, too, but they also know it's camp. Assuming they get through leather ties, Hawaiian shorts, pedal pushers, bobby socks, and various punk stuff, they may graduate to collecting as-yet-inexpensive Fabulous Fifties interiors. One day you might visit your daughter's dorm or apartment to find an elaborate imitation porcelain TV lamp, perhaps in a Treasure Island motif, in a position of honor atop her desk.

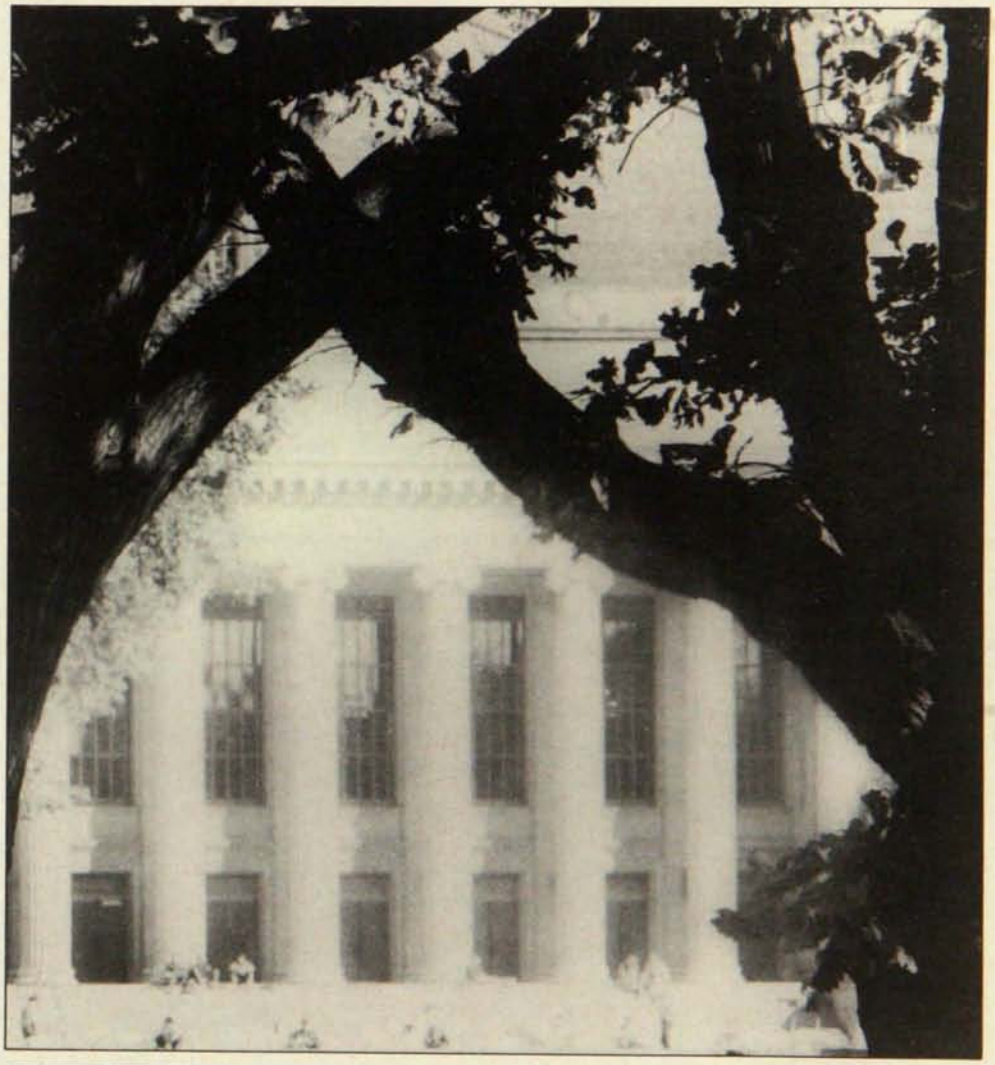
It's only a matter of time before the restaurants, hotels, stores, and dance bars pick it up. Those that don't go Laura Ashley in a complete rejection of urban styles will fall into line with Atomic Modern. I can see it now: whole dining rooms filled with imitation Danish Modern from the 1950s, right down to the tomato-red acrylic cushions on the chairs.

Chances are, though, that the University will once again be a safe haven from trend totalitarianism. Unlike original Art Deco/Moderne, which found expression in Coffman Union and the Bell Museum, original Fabulous Fifties Atomic Modern never set foot (or, in this case, nucleus) on campus. It probably won't this time around, either.

There's security in these hallowed malls, friends. Be grateful, and, if the 1950s do attempt to reintroduce tastelessness to the 1980s, come here to get away.

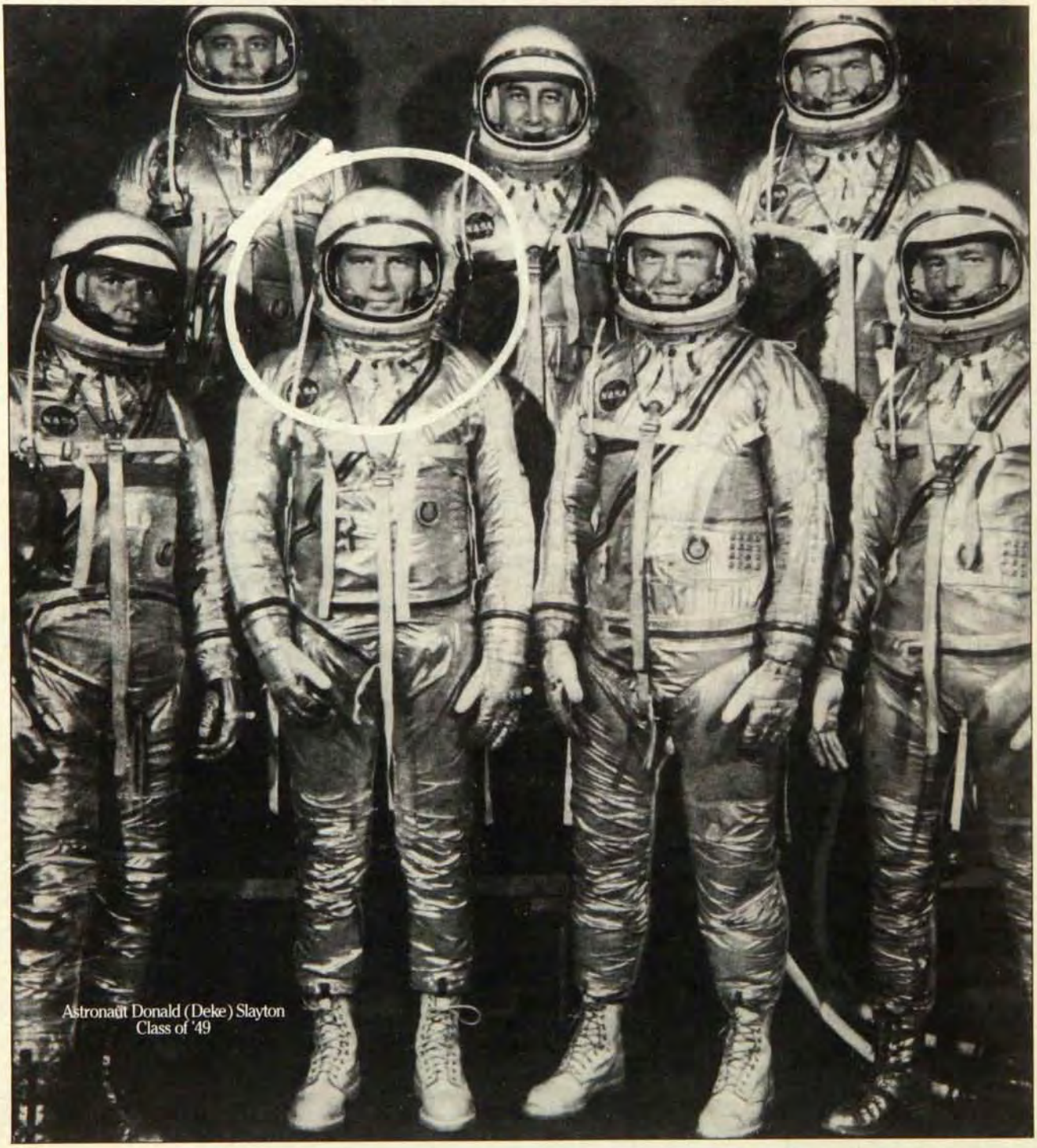
Mathews Hollinshead is the editor of Cornerstone, *the quarterly publication of the University of Minnesota Foundation.*

GIVING BACK TO THE FUTURE



A special section on Minnesota Alumni Association volunteers and volunteerism. A salute to those who looked back at their educations and forward to the future, gave what they could in time and effort, and made the University a better place

SOME OF OUR GRADUATES TURNED OUT TO BE SPACE CADETS.



Astronaut Donald (Deke) Slayton
Class of '49

Donald "Deke" Slayton was one of the original seven astronauts. He was also a University of Minnesota graduate. Class of '49, to be exact.

More importantly, however, he is just one of the 'U' graduates who turned out to have the right stuff.

Thousands of University of Minnesota alumni have made their marks in medicine, law, education, business, and the arts. Some have become internationally known; others have made their contributions more quietly. But whether they turned out to be Nobel laureates, politicians, movie stars, or football players, University of Minnesota graduates have made a big impact—not just on our community, but on our lives.

The University of Minnesota Alumni Association. Promoting the University and its graduates, offering services and information, and expanding both its opportunities and its fraternity. Call 373-2466 and join. You'll be surprised at what you might find.

THE UNIVERSITY OF MINNESOTA ALUMNI ASSOCIATION

EACH AND EVERY ONE OF WHOM WAS BROUGHT TO YOU BY THE UNIVERSITY OF MINNESOTA

Unsung Heroes

Margaret Sughrue Carlson

Margaret Sughrue Carlson, '82, is executive director of the Minnesota Alumni Association.

In these times when almost everything bears a price tag, individuals who donate their services for a cause—rather than a wage—are unsung heroes. Although their names don't appear on the Minnesota Alumni Association payroll, volunteers contribute countless hours of service each year and are the lifeblood of our organization. Whether it's planning a chapter meeting in Washington, D.C., recruiting a high-ability student in St. Paul, or lobbying a state legislator in Duluth, each of our volunteers plays a unique role in advancing the work of the Alumni Association and the University.

In return for their dedication, volunteers gain a sense of satisfaction that can't be measured in monetary terms. When asked about the root of this satisfaction, volunteers give answers that are amazingly similar. Whether they just graduated in 1985 or are seasoned alumni, volunteers answer by referring to repayment of an indirect debt, and their responses can be summed up this way: "The University was so important in exposing me to the world at large during my formative years that I have a responsibility to give something back to it. There's great satisfaction in saying 'thank you' to the University by giving my time, energy, and money."

At the Minnesota Alumni Association, we think that satisfaction shouldn't be a volunteer's only reward. It's time to spotlight some very special members of the Alumni Association volunteer team.

In this issue of *Minnesota*, we publicly recognize some of those who have made a difference to our association and the University in 1984-85. John Brant, '75, and Priscilla Nauer, '51, our corecipients of the Volunteer of the Year Award, are featured on page 40, but let me introduce you to five other candidates for this award.

Helen Arnott, '35, is a mainstay of the Sun City, Arizona, Alumni Association Chapter. For ten years she has served as historian and membership chair. Her efficiency in preparing the annual membership directory and meeting notices has resulted in some of the best-attended association chapter events in the country. More than 150 alumni gathered for their annual meeting last year. She also led the efforts to organize the chapter's tenth-anniversary celebration.

In New Ulm, Minnesota, Tim Olcott, '70, provides leadership for the Brown-Nicollet Counties Alumni Chapter. In addition to serving as chair for four years, he has been instrumental in organizing the University's information and student recruitment program in New Ulm. Last year 21 high school students and their parents attended the event.

As member of the Nursing Alumni Society board, Brenda Canedy, '74, '82, edited *Remembering Things Past: A Heritage of Excellence* in honor of the School of Nursing's 75th anniversary. The 180-page book of newspaper clippings, photographs, and bibliographical sketches chronicles the history and growth of the school and of the nursing profession. Canedy has been involved with the nursing alumni board for ten years and has held most major offices, including president and newsletter editor. Canedy also found time to serve on the Minneapolis Heritage Preservation Commission.

Nancy Anderson began serving on the Home Economics Alumni Society board in the spring of 1983, and her colleagues say she is the kind of volunteer you can always count on. She took a leadership role in organizing an alumni luncheon held in conjunction with the Agricultural Extension-sponsored "Day on Campus," and was instrumental in organizing the first-ever College of Home Economics Recognition Assembly.

During the last two years, Alan Shapiro, '71, has been the driving force behind the M Club's Industry Days, a program that encourages local companies to purchase blocks of football tickets for their employees. He personally has raised almost $80,000. Shapiro's fund-raising abilities extend to the M Club Raffle, which he heads. Last year $50,000 was raised for the men's intercollegiate athletics program.

As you read these vignettes, you will note that our volunteers have chosen small areas of volunteer activity that fit their interests, time, and circumstances—and in so doing have contributed much to the overall needs of the University. That's what grassroots volunteerism is all about—and it's essential to our association.

We depend on volunteers, and it is our hope that we can make the Minnesota Alumni Association an even more volunteer-intensive organization.

Organizations move through an evolutionary process. They are begun by a small band of volunteers, then add a few staff members, until eventually they become fully staffed.

It's easy to let a staff, especially an excellent staff like ours, run an organization, but when that happens something is lost. And what is lost is the spirit of the organization, its personality, the good ideas that diversity brings, the depth and mission that a large body of dedicated individuals provides.

In an ideal organization, the staff are the facilitators; the volunteers are the inspiration and the activators. The benefits of expanding alumni volunteerism in the Association is mathematically exciting. If a staff of twenty each works with 25 volunteers, and they in turn get 40 others involved at the grassroots level, we will have 20,000 actively involved committed members: 20,000 minds, 40,000 eyes, 40,000 hands, and 20,000 pocketbooks.

Our need for volunteers is continuous. Some tasks require a few hours to complete; others necessitate continuing volunteer commitment.

There are numerous ways you can lend a hand: by contacting prospective students, assisting with chapter or constituent society events, donating printing for a membership mailing, contributing to the annual-giving drive. We invite you to join us and become a part of the larger cause the University represents.

We know we couldn't get along without you. And for all your unsung efforts, time, caring, and commitment, we thank you. We welcome you to the ranks of the University volunteers, a large and prestigious group. And in this issue of *Minnesota*, we sing your praises.

BY SARA SAETRE

VOLUNTEERING

The University senior in a maroon-and-gold T-shirt and gold sweatpants was yelling at the top of his lungs: "Let's go, Gophers!" David Gross and about 70 of his friends had gone to see the Minnesota football team defeat the Indiana Hoosiers. They'd dressed identically in those distinctive Minnesota colors and stood together most of the game, clapping and leading the crowd in synchronized yells. Somebody decided to focus the video cameras on the group and splashed their faces across the scoreboard again and again. "We were a sight to see," Gross remembers.

Today David Gross, '85, thinks of his relationship with the University as extending beyond his youth. "I'm a member of the Minnesota Alumni Association," he explains. "I plan to be actively involved in the Association for the rest of my life."

Gross founded the University Student Alumni Association (USAA) just a year-and-a-half ago to foster a similar long-term commitment in other students. It was members of the USAA who attended the Gopher game with him.

Gross developed the idea for the new organization while serving on the Alumni Association's student board. The Association had conducted an attitude survey that found that a student's experience in school was critical to later membership and support of the Alumni Association. The more a student enjoyed his or her college years, the more he or she participated as an alumnus.

So Gross decided to help strengthen alumni involvement—by serving students. "The USAA's main thrust is to better the student experience," he says.

Sporting events, picnics, and dances bring the 500 members of the USAA together regularly. An offshoot organization, the USAA Team, provides opportunities for members to serve as leaders and help with various campus jobs and events such as a USAA-sponsored campus information and assistance program.

While Gross helps develop a good relationship between students and the University before students become alumni, other volunteers help maintain a strong relationship later.

What stands out about Alumni Association volunteers is not their nostalgia for the past, although they feel that. Instead, it is their commitment to the future. Their lives have changed, sometimes dramatically, since they were University seniors. They are making the Alumni Association work for them to meet the new needs of their evolving lives. In turn, they contribute significantly to a changing University.

Ruth Wirt graduated more than half a century before David Gross, earning a degree in home economics in 1934. She was a member of the first alumni board organized for her college in 1957. Wirt's commitment to the future is evident in her priority to serve as a current member of that board. Recruiting home economics students, particularly high-ability students, is especially important to her. "We're trying to further interest in the field of home economics," she says. Last year, she helped arrange a career open house that attracted nearly 400 prospective students. "It was probably the biggest one ever," she says. She knows the importance of education and professionalism in her field: she worked from 1966 to 1970 as food service manager at Sanford Hall on the Minneapolis campus, and from 1970 to 1983 as head of all food service on the St. Paul campus.

James Aamot knew he could tap the enthusiasm of alumni for Minnesota sports when he started an Alumni Association chapter in Denver three years ago. Aamot graduated in 1964 with a degree in management. Since then, he's lived in Tucson, Arizona, and in Sioux Falls, South Dakota, where there were no active alumni chapters. After moving to Denver, he discovered that a once-active chapter had become defunct. Together with fellow alumnus Ward Horton, '67, he decided to revitalize it.

"We found out that the Gopher hockey team was a drawing card," he says. "There is a high number of Minnesota graduates in Colorado. We have 1,200 to 1,500 on our mailing list."

Aamot's approach to chapter activities reflects his own interests: he's an ardent sports fan. "I was delirious when they hired Lou Holtz," he says. And it reflects the possibilities of his area, where Minnesota teams travel to compete. He's organized hockey parties and this year organized a Gopher homecoming party.

Aamot, regional vice president for the Robert A. McNeil Corporation, has used his administrative skills to combine alumni's loyalty to Minnesota sports with their desire to continue a relationship with the University. "We wanted to develop something that would flow back to the University," he says, pointing out that the chapter's scholarship program is one effective way to do that. "The chapter allows us to keep in touch with the University, which I feel a certain loyalty to."

In Washington, D.C., Minnesota alumni gather not in a sports arena but on Capitol Hill. They focus on political issues and figures important to them today. At the same time, they are able to actively aid the University, which prepared them for their roles in the nation's capital.

"This is a political town," says Maxine Piper, '35, "and we plan programs accordingly." Piper spent four years as president of the Washington, D.C., Alumni Chapter until August, when a new president took office. Piper's chapter sponsors one or two events a year that feature talks by congressmen or "others in the public arena." The chapter also cosponsors annually with the Minnesota State Society a "Minnesota Night on the Hill," attended by Minnesota congressmen and other prominent Washingtonians, including alumni U.S. Supreme Court Chief Justice Warren Burger, Justice Harry Blackmun, and L. Bruce Laingen, former U.S. envoy to Iran.

The events have educational and social value for area alumni. In addition, Piper believes, they help the University. "The more we can keep alumni involved, the more they'll respond to membership drives and contribution drives," she says, explaining that the chapter makes a special effort to keep the alumni office informed of address changes, once a year checking through a printout of more than 5,000 area alumni, verifying addresses with local phone books. "It's especially important in an area like this, where people are constantly moving."

For David Gilgenbach, '71, '75, involvement in the Alumni Association

Minnesota Scroungers, a new committee dedicated to obtaining in-kind donations of goods and services for the Alumni Association, toured the campus and downtown mall in a Jefferson Lines bus donated for the occasion. Members of the committee are, from left, cochair Sue Zelickson, Dave Cowley, Susan Lake, Bill Braasch, Judy Hentges, MAA President Penny Winton, cochair Harvey Mackay, Julie Halverson, MAA Executive Director Margaret Sughrue Carlson, Jim Ramstad, Gloria Ivey, Carole Erickson, John Benzian, Dale Erickson, and Joe Franzgrote. The Scroungers are looking for everything from computer equipment to pancake batter.

University President Kenneth H. Keller played a major role in both the Association's annual meeting and Leadership Day programs. At right, he presents the Outstanding Achievement Award, the highest award the University gives to alumni, to John Mooty, 1982-83 Association president.

Swedish Ambassador Wilhelm Wachtmeister hosted a reception for the Washington, D.C., Alumni Chapter to help raise money for the University's scholarship fund. In appreciation, the chapter presented him with a Minnesota Sparkler Crab tree. Pictured above, from left, are Fred Dickens, board member; Ambassador Wachtmeister; Deanna Peterson, president; and Nancy Esala, board member.

provides more than educational or social value. It's a professional necessity. A veterinarian, Gilgenbach owns the Elk River Veterinary Clinic in Elk River, Minnesota. He is also president of the Veterinary Medicine Alumni Society. Gilgenbach and his colleagues maintain a professional relationship with the University, referring sick animals to University specialists and hospitals, and relying on University laboratories for diagnostic test results. For Gilgenbach, good communication with the University is essential.

Like David Gross, Gilgenbach first became aware of the importance of that communication while he was a student. "I saw the need for better rapport both within the college and outside," he says. "I thought we needed to strengthen the level of communication."

Gilgenbach developed the veterinary medicine college relations program two years ago to meet that need. It was instituted after a statewide survey of veterinarians, both graduates of the University and of other schools of veterinary medicine, confirmed Gilgenbach's belief that better communication was needed.

"We wanted to get the word out that we wanted to make things better," says Gilgenbach, who toured the state to present the program, joined by a team of administration and faculty representatives from the University. "The support of the administration was vital to our credibility," he says.

"The goals of the program are to keep the lines of communication open between alumni and faculty, and to foster cooperation in an era of changing technology," he explains. Gilgenbach believes that working closely with the University will provide long-term benefits, not only for himself and his profession, but also for the University and for society. "Our obligation to the college isn't over as long as society has a need for veterinarians," he says.

The Association's constituent societies hosted more than 40 events during 1984-85, not including board meetings. Above, nursing alumni gathered for their 25th annual program, "Nursing 1985: Opportunity in Crisis."

Perhaps Carol Pine, who served as president of the Journalism Alumni Society in 1984-85, best sums up the Association's volunteer activities.

"The important thing about the Minnesota Alumni Association is that it tries not to lose sight of the fact that it's the University and students, not the Association, that we're working for.

"The other day I was at another campus while their marching band was practicing. They were playing the same music that the University marching band plays, but it was different somehow.

"There are other marching bands and football teams and pillars and malls, but the difference is they aren't mine.

"I grew up in Minnesota, and all my life I've been aware of how much public education means to the people of the state. We spend more on public education and more people of all ages take advantage of it. It's ironic that in a state with some of the top private colleges in the country we can still have one of the best universities.

"The opportunity is here for anyone to make it, not just as a business success but as a person, no matter how much money or influence you have.

"So I give to the University through the Alumni Association. Equally important as writing a check to the University or my school is that personal gift of time and energy that I volunteer.

"I try to give back something to the University, to build for the future."

Sara Saetre is a graduate student in the School of Journalism and Mass Communications.

The USAA annually sponsors a "U Ask Me" program, left, to help new students become acquainted with campus. The organization was founded to help foster a better student campus experience and now has more than 500 members.

Winners of the 1985 Student Leadership Award are, from left, Beth Emanuelson, David Gross, Jackie Jodl, Shelly Sippl, Donna Bergstrom, Barb McCarthy, Lisa Podoll, Karen Larson, and Doris Mold. Not pictured is Stephen Plunkett.

The University of Minnesota Alumni Association presents:

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For more information about any of these University of Minnesota Alumni Association tours, simply check the box adjacent to the trip(s) you are interested in and fill in your name and address.

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December 18, 1986—January 2, 1987

Yuletide in Germany and Austria . . . bells ring out atop medieval churches, carolers serenade you with *O Tannenbaum,* sleepy Alpine villages glisten under a blanket of fresh-fallen snow. A delightful holiday travel offering, the *Yuletide Passage* takes you to Munich for four nights, three nights in Salzburg, three nights in Graz and winds up with four nights in Vienna. What a charming way to ring in the New Year!

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BY KIMBERLY YAMAN

STARS 1985

Minnesota Alumni Association's Volunteers of the Year

John Brant
Priscilla Nauer

John Brant, '75, and Priscilla Nauer, '51, have graduated from the University and the University student band, but they continue to demonstrate their interest in music and their loyalty to the University through the Minnesota Alumni Association's Band Alumni Society. Their commitment and efforts have earned them the honor of Volunteer of the Year.

"This award is a feather in the cap of the whole Band Alumni Society. It's exciting for each and every one of our members because we're proud of our group."

"The one thing the entire world has in common is music," says John Brant, corecipient of the 1985 Volunteer of the Year Award of the Minnesota Alumni Association (MAA). "It transcends all political barriers and language barriers. It's something you can easily share with anybody else."

It was music that bonded Brant to the University of Minnesota. Playing trombone in the University student band for five years, he developed a pride in the University, he says, a "maroon-and-gold, *Minnesota Rouser* spirit." And that spirit carries over to a pride in the institution and its community. "Even after I graduated from the University, I felt very close to it. In fact, I guess I never left."

Brant means it when he says he "never left" the University. Immediately after obtaining his bachelor's degree in art history and humanities in 1975, he took a part-time job at the University. He is now manager of the men's intercollegiate athletics ticket office. He also does volunteer work for the University through the Band Alumni Society—often ten hours a week, and sometimes more.

"It just seems right to volunteer whatever service I can to the Alumni Association and to the band society," says Brant. "I love having the opportunity to give something back to the university that's given me a lot."

Brant was thrilled to learn that he and Nauer would receive the award but thinks of himself and Nauer as only two of several hundred recipients of this year's volunteer award. "This award is a feather in the cap of the whole Band Alumni Society. It's exciting for each and every one of our members because we're proud of our group."

Pam Burkley, constituent society program director for the Alumni Association, says the group's pride—and Brant's recognition—is well earned. "The band alumni group does something for the University that no other group does. It reflects a fun, spirited nature of the University often ignored by the newspapers and the press releases and the research papers."

Burkley wasn't surprised by the choice of Brant and Nauer for this year's MAA volunteer award. "Their commitment is so deeply personal and emotional. You just can't find better examples of alumni spirit."

She lauds Brant's performance as president of the Band Alumni Society in 1984-85, his ability to keep all of the scheduled performances and to provide at those performances well-rounded groups of musicians who represent the University in a professional yet festive manner.

While Brant works hard at any job he undertakes, he gave extra efforts this year, when he directed the April celebration of Frank Bencriscutto's 25th anniversary as band director. Hundreds of University band alumni from across the nation came to the three-day event that featured reunions, a jazz festival, a wind-ensemble concert, and the third annual Friends of the University Band concert.

Brant coordinated these events and organized special reunions for groups who toured the Soviet Union with the band in 1969, toured Europe in 1974, and other tour groups—groups, he says, that "identify with each other even more closely by having shared the experience of waiting in Salzburg for a bus that never came or seeing the plaster come off the walls in Florence."

Burkley is impressed by Brant's commitment to the planning of the event. "I've never been so moved by any University program as I was by the 25th anniversary program," says Burkley. "Every detail was planned as an expression of personal gratitude to Dr. Ben and to the whole band program. Even the floral arrangements were gifts to Dr. Ben; every centerpiece was built around a little saxophone—Dr. Ben's own instrument."

The success of the event was Brant's reward for his hard work. "People came back home to the University—people who hadn't been back on campus in ten or twenty years," says Brant. "One woman said that as soon as she got news of the upcoming reunion she told her husband, 'I don't care what it takes, I've got to go back to Minneapolis for this.' She hadn't been back since she graduated ten years ago. She was in tears virtually the whole weekend. And that was what it was all about."

As president of the Band Alumni Society, Brant worked to balance service to the band alumni and the University band program. The alumni band, in addition to playing at community events like the annual Minneapolis Aquatennial parade and before Gopher football games at the Hubert H. Humphrey Metrodome, sends band alumni on some the of student band's trips, providing whatever alumni networking and coordination possible. "We could do a lot more," says Brant. "It's just a matter of coordination. It's an important connection, the connection between the alumni band and the student band. We are both musical expressions of the University. We interpret the University of Minnesota—at football games, at commencement, at the University president's inauguration, and at this year's baseball All-Star game—through music, which is a festive and uncontroversial medium.

"One experience I had this summer tells me just why I work so hard for the Band Alumni Society: We were marching in the Aquatennial parade, and I noticed an older gentleman sitting in a wheelchair on the sidelines. When we started to play, this man struggled to stand up for the *Minnesota Rouser*. Now that really meant a lot to me. It says that this is the way people feel about the University. And that's the way I feel."

"When you're committed to programs you believe in, you want to do more than just belong. You want to do honor to the organization and give it the best of your efforts."

For Priscilla Nauer, involvement as a student in the University band bonded her not only to the University but to other band alumni of all ages. "There's a real camaraderie built up during your work in the band, and that camaraderie extends as well across the years as it does across your peer group. The excitement of being in the band as it marches into the Dome or down University Avenue never changes—whether you were in the band in 1925 or 1985."

Priscilla Nauer joined the Band Alumni Society in 1951, just after the alumni group was formed. "I paid my $3 and got the notices that said, 'Come to homecoming,' and that was about it." But she "made the plunge," she says, twenty years later, when her oldest son began to attend the University of Minnesota and got involved in the University Band.

"He begged me, 'Mom, you've got to come back and join the alumni band so you can march at homecoming.' "

Nauer played her clarinet in the concert band, but she was never allowed to march with the band during her University years. Although women marched in the band during World War II, permission was suspended when the men returned from war.

Nauer was excited about going back to campus and marching with the band at homecoming, and she continued marching for a couple of years. Then she became more involved in the Band Alumni Society and agreed to serve as the council's secretary, "and I just went on from there."

She served as uniform chair and also helped plan many of the alumni band's performances and social events. In 1983 she became band alumni president.

"Everybody wonders at the time I spend volunteering," says Nauer. "I tell them that's my hobby: attending meetings, socializing with the groups, making phone calls, writing letters, and raising funds. That's where I get my fun."

Nauer spent a lot of her time as president of the Band Alumni Society working on the Friends of the University Band endowment program, which awarded its first freshman scholarship this year. The fund was initiated in 1982, when Frank Bencriscutto was given a gift of money and turned it over to the Band Alumni Society, asking that the group use it to start an endowment fund.

The band alumni began working with the University of Minnesota Foundation and quickly organized fund-raising events to raise $10,000 needed for full endowment status. Nauer called, wrote, and met with band alumni and others interested in the University band program who might donate to the fund. The group created the annual Friends of the University Band concert, which made its third performance at Bencriscutto's 25th anniversary celebration. The alumni band stepped up its performance schedule and donated money it earned from those performances. In less than two years, the fund reached full endowment status—solely on the basis of individual gifts and proceeds from performances.

Nauer, even after her term as president, continued as chair of the endowment fund, which is now at approximately $17,000. The proceeds from the endowment will be used to buy instruments and uniforms and to assist with staffing and graduate assistant needs for the University band, in addition to the annual scholarship award.

"It was a thrill to realize our fund-raising goals so quickly," says Nauer. "It says a lot for the commitment of the band alumni to the University band program. There wasn't really a very strong working relationship between the alumni group and the University band program until three or four years ago, and this was our chance to demonstrate our commitment to the University band, to Dr. Ben, and to the University."

Chris Mayr, assistant director for the Alumni Association's constituent society program, compliments Nauer on her commitment to the alumni group. "From assisting at an alumni chapter function in Florida to standing out in the cold October drizzle at a homecoming 10K race, Nauer lives the philosophy of volunteerism," says Mayr. "She has been extraordinarily active in the alumni group's endowment program efforts and has created a committee to assist in recruiting outstanding students. It's difficult to find enthusiastic volunteers like this who can accomplish so much, and we're delighted she's being recognized for her work."

Nauer isn't the only member of her family playing in the alumni band. Her two sons, both former University band members, march with the band; and her husband, although not a University graduate, plays tuba for the band. "If only my daughter—who chose to attend a university other than *the* University—would join," Nauer laments, "we could rename the group 'The Nauer Family Band.' "

Besides working for the Band Alumni Society, Nauer, a radiologic technologist with Diagnostic Radiologists of St. Paul, has been active for many years in the Girl Scouts of America and has served on her regional church council and represented the council nationally. This year, which seems to be the year for recognition of her volunteer efforts, Nauer was named one of the outstanding women in the nation by the United Church of Christ.

"When you're committed to programs you believe in, you want to do more than just belong," says Nauer. "You want to do honor to the organization and give it the best of your efforts. Where does the time for this come from?" She shrugs. "If you are really interested, you just sort of make the time," she says.

Kimberly Yaman is editorial assistant of Minnesota *magazine.*

1985-1986

HONOR ROLL

Being president of a Minnesota Alumni Association chapter or constituent society means that you have authority—authority to see that meetings are scheduled, start on time, and run smoothly. It means being able to assign the duties and chores of the organization to somebody else. It means working with deans and college officers, the association staff, and University administration. It means planning programs that will inspire alumni to meet the enormous challenges of the University. It means working side by side with impressive professionals and developing some of the best friendships of a lifetime.

It also means finding meeting places and sorting out dozens of schedules to hit upon an agreeable date. It means cajoling volunteers to fold, lick, and stamp another envelope by setting a good example and doing it yourself. It means trying to grasp the needs of a college, with new challenges surfacing weekly. It means feeling helpless after having a program invitation declined by yet another speaker. It means calling upon that friend and alumni colleague you know will always take on another task, even though you know she needs a break. It means writing thank-you notes, dealing with caterers or restaurant managers, coping with computers.

In short, being a president means having enormous responsibilities and the respect and admiration of your alumni colleagues. We salute the constituent society and chapter presidents who are generously giving time and talent to represent their fellow alumni. They, and all the other presidents who have preceded them, set an example for alumni involvement and commitment essential to building a stronger University of Minnesota.

NATIONAL ALUMNI CHAPTER PRESIDENTS

BOSTON
Jessie Hansen
'60, BS, Medical School
'73, MS, Graduate School

Hansen is a senior scientist at Instrumentation Laboratory, Inc., in Lexington, Massachusetts. She has been active in the Boston chapter since 1981. From 1977 to 1980 she served on the board of directors of the medical technology alumni group.

CHICAGO
Jeffrey Schmitz
'74, BA, College of Liberal Arts

Schmitz is employed at ACLI International in Chicago, Illinois.

DAYTON
Lynn N. Hokenson
'44, BME, Institute of Technology

Hokenson is a self-employed real-estate agent. He and his wife, Shirley, live in Springfield, Ohio.

DENVER
Charles LeMaire
'81, BA, College of Liberal Arts

LeMaire is an account executive with Merrill Lynch Pierce Fenner & Smith. He and his wife, Mary Ann, live in Denver.

DETROIT
Peggy Geraduzzi
'61, BS, College of Education

Geraduzzi and her husband, David, live in Birmingham, Michigan.

NORTH TEXAS
Dick Kampa
'61, BSB, School of Business

Kampa is an area sales manager for Motorola Communications in Dallas, Texas.

PHOENIX
Budd Peabody

Peabody is president and chief executive officer of Liberty Bank in Glendale, Arizona. He and his wife, Ann Rae, live in Paradise Valley, Arizona.

SUN CITY
Paul Cartwright
'37, '49, BEE, MSEE, Institute of Technology

Cartwright is a former Professor Emeritus and assistant dean of the Institute of Technology. Now retired, Cartwright and his wife, Elizabeth, live in Sun City West, Arizona.

SUNCOAST
Donald Enzmann
'46, BBA, University College

Enzmann is president of Medee Enterprises, Blairsville, Georgia. He and his wife, Muriel, live in Dunedin, Florida.

WASHINGTON, D.C.
Deanna Peterson
'64, BA, College of Liberal Arts

Peterson is a legal secretary and office manager of Peterson, Engberg & Peterson in Washington, D.C. She is married to Neal Peterson.

MINNESOTA ALUMNI CHAPTER PRESIDENTS

FARGO-MOORHEAD
Patrick Mulligan
'57, BA, College of Liberal Arts

Mulligan is president of Steve's Package Store in Fargo, North Dakota.

LYON COUNTY
Willard Isfeld
'40, BME, Institute of Technology

Isfeld is the retired director of the physical plant at Southwest State University in Marshall, Minnesota. He and his wife, Mary Elizabeth, live in Marshall.

MARTIN COUNTY
Floyd Bellin
'51, BS, College of Agriculture

Employed by Martin County and the University of Minnesota, Bellin is a county extension agent and agriculture and county extension director in Fairmont, Minnesota.

REDWOOD-RENVILLE COUNTIES
James Schug
'71, BA, College of Liberal Arts

Schug is welfare director of Redwood County Welfare in Redwood Falls, Minnesota.

WADENA
Jeffrey Pederson
'82, JD, Law School

Pederson is a member of the Kennedy & Nervig law firm in Wadena, Minnesota.

WRIGHT COUNTY
Mary Wehmann
'54, BA, College of Liberal Arts

Wehmann is the owner and manager of four suntanning studios named Back Yard.

ALUMNI CONSTITUENT SOCIETY CHAPTER PRESIDENTS

AGRICULTURE
Craig Sallstrom
'77, BS, College of Agriculture

Sallstrom is executive director of the Minnesota Plant Food and Chemicals Association and a member of the University's Institute of Agriculture, Forestry, and Home Economics advisory council.

ALUMNAE
Marianne Anderson
'57, BS, College of Home Economics

Anderson is a financial planner at FSA, Inc., of Minneapolis and is on the board of the Minnesota Women Entrepreneur Foundation. She and her husband, Lawrence, live in Minneapolis.

BAND
Connie Therens
'75, B.Math, Institute of Technology

Therens is a systems analyst at NCR Comten in Roseville, Minnesota. She lives in Shoreview, Minnesota.

BIOLOGICAL SCIENCES
David Eckholm
'73, BS, College of Biological Sciences
'81, PhD, Graduate School

BLACK ALUMNI
Joseph Sizer
'51, '57, BS, MS, Agriculture

Sizer is director of the intergovernmental division of the Minnesota State Planning Agency in St. Paul. He and his wife, Fronzena, live in Roseville, Minnesota.

DENTISTRY
Oliver W. Johnson
'50, DDS, School of Dentistry

A dentist in St. Paul, Johnson is past president and treasurer of the St. Paul District Dental Society and past trustee of the Minnesota Dental Association. He and his wife, Betty, live in North Oaks, Minnesota.

EDUCATION
Bradley Johnson
'75, '81, BS, MED, Education

Johnson is a teacher at Fred Moore Junior High School in Anoka, Minnesota.

FORESTRY
Frederick Rengel
'77, BS, College of Forestry

Rengel is commodities manager for Fullerton Lumber Company in Minneapolis. He and his wife, Annette, live in Maplewood, Minnesota.

GENERAL COLLEGE
Sharon Rein
'77, BS, General College

Rein is a principal financial worker for the Hennepin County Department of Economic Assistance, Adult/Medical Division, at Ramar-Intake in Minneapolis. She lives in St. Louis Park, Minnesota.

GOLD CLUB
JeNelle Johnson
'83, BSB, School of Business

Johnson is an internal auditor at Dayton Hudson in Minneapolis. She curently serves on the University assembly committee on intercollegiate athletics. A former University tennis cocaptain, she is a member of the University of Minnesota Tennis Hall of Fame. She lives in Minneapolis.

HOME ECONOMICS
Maureen Meier
'75, BA/BS, College of Home Economics

Meier is a consumer response analyst at the Pillsbury Company in Minneapolis. She is District 11 secretary of the Minnesota Home Economics Association and resides in Minneapolis.

INDUSTRIAL RELATIONS
Joseph Mucha
'74, MAIR, School of Management

Mucha is a group personnel director at General Mills in Minneapolis. He is a member of the Good Shepherd school board and of the Twin Cities International Personnel Association. He and his wife, Kathleen, live in Golden Valley.

INSTITUTE OF TECHNOLOGY
Gregg Vandesteeg
'76, PhD, Graduate School

Vandesteeg is laboratory manager of the dental products division of 3M in St. Paul and is a member of the American Chemical Society. He and his wife, Marcia, live in Roseville, Minnesota.

JOURNALISM
Judith Zerby
'78, BES, College of Liberal Arts

Zerby is a free-lance journalist. She and her husband, D. Michael, live in Fridley, Minnesota, where she is a District 14 school board director.

LAW
Terrence Doyle
'61, JD, Law School

LIBERAL ARTS
Scott Whelan
'76, BA, College of Liberal Arts

M CLUB
Steven Eriksson
'73, BA, College of Liberal Arts

Eriksson is president of First Industrial Real Estate of Edina, Minnesota. A member of the University's 1968 Big Ten championship track team, Eriksson is a member of the board of control of the Minnesota Board of Realtors. He and his wife, Susan, live in Minnetonka, Minnesota.

MEDICAL
George Tani
'50, MD, Medical School

Tani is an opthalmologist and clinical professor at the University and has a private practice in St. Paul. He is past president of the Mayo Eye Alumni. He and his wife, Yoshi, live in St. Paul.

MEDICAL TECHNOLOGY
Stella Cook
'52, BS, Medical School

Cook is a senior technologist at the University. She is a board member and past president of Minneapolis Birthright. She and her husband, Marvin, live in Golden Valley, Minnesota.

MILITARY SCIENCE
Richard Firtko
'56, BBA, School of Management

Firtko is a manager at the IBM Job Training Center in Minneapolis. He is a colonel in the U.S. Army Reserve and a member of the Reserve Officer's Association and the Christian Business Men's Committee. He and his wife, Leila, live in Maple Grove, Minnesota.

MORTUARY SCIENCE
Kay Sperry
'70, AA, Mortuary Science

Sperry is a mortician at the Albin Funeral Chapel in Minneapolis. She and her husband, Richard, live in Richfield, Minnesota.

NURSE ANESTHETISTS
Joanne Fletcher
'81, BSNA, Medical School

Fletcher is a certified registered nurse anesthetist at Hennepin County Medical Center. She is pursuing a master's degree in adult education at the University and is the clinical coordinator for the Minneapolis School of Anesthesia.

NURSING
Marlene Wuethrich
'78, BSN, School of Nursing

Wuethrich is a staff nurse in newborn intensive care at Hennepin County Medical Center.

PHARMACY
Thomas Gaylord
'65, '75, BS, MS, College of Pharmacy

Gaylord is assistant director of health-care programs for the Minnesota Department of Human Services in St. Paul. He and his wife, Patricia, live in St. Paul.

PUBLIC HEALTH
Karl Mohr
'65, Graduate School

VETERINARY MEDICINE
David Gilgenbach
'71, BA/BS, College of Agriculture
'75, DVM, College of Veterinary Medicine

Gilgenbach is a veterinarian in private practice at the Elk River Veterinary Clinic in Elk River, Minnesota. He resides in Elk River.

1984-85 HONOR CHAPTERS

Each year the Minnesota Alumni Association's Honor Chapter Program recognizes outstanding chapters that have met criteria regarding chapter activities and events. The following chapters have met the requirements and have been named honor chapters:

Boston
Chicago
Denver
Detroit
North Texas
Sun City
Suncoast
Washington, D.C.
Wadena

GUEST SPEAKERS

The Minnesota Alumni Association would like to give special thanks to the following men and women who participated in alumni programs and events during 1984-85 as featured guest speakers.

Norman Aaseng, peat ecologist, Minnesota Department of Natural Resources; College of Biological Sciences (CBS) Itasca Weekend

Sharon Anderson, associate director, reflective leadership program, Hubert H. Humphrey Institute of Public Affairs, Denver chapter meeting

Gilbert Banker, dean, College of Pharmacy; Pharmacy Alumni Society annual meeting

Frank Bencriscutto, professor, band director, School of Music; Band Alumni Society celebration of Dr. Bencriscutto's 25th anniversary

Erich Bloch, director, National Science Foundation; Institute of Technology (IT) Alumni Society annual meeting

Morris Bornstein, professor of economics, University of Michigan; College of Liberal Arts (CLA) Spectrum '85 program

John Brand, assistant professor, department of oral diagnosis and radiology, School of Dentistry; Dentistry Alumni Society annual meeting

Winston Brill, vice president, director of research, Agacetus, Madison, Wisconsin; CBS Biology '85 Career Fair and CBS Alumni Society annual meeting

David Brown, dean, Medical School; Medical Alumni Society annual meeting, Washington, D.C., and Boston chapter meetings

Brad Buetow, Gopher hockey coach; Denver chapter post-game reception

Robert F. Byrnes, Distinguished Professor of History, Indiana University; Spectrum '85 program

Julieann Carson, associate dean, College of Liberal Arts, and project director, University student recruitment; Leadership Day

Joe Deden, director, Southeastern Minnesota Forest Resource Center; Forestry Alumni Society fall banquet

Thomas Dobbe, certified registered nurse anesthetist, Mayo Clinic; Nurse Anesthetists Alumni Society Reception

Barbara Hall Dunn, associate professor of nursing, Virginia Commonwealth University; Nursing Alumni Society annual meeting

Jerry Hough, Brookings Institute Fellow, and professor, Duke University; CLA Spectrum '85 program

Jo Eleanor Eliott, director, division of nursing, and chair, National Advisory Council on Nursing Training, Bureau of Health Professionals, U.S. Public Health Service; Nursing Alumni Society annual meeting

Helen Halgren, associate professor, division of medical technology, department of laboratory medicine and pathology; Medical Technology Alumni Society annual meeting

Henry Hansen, Professor Emeritus, department of forest resources, College of Forestry; CBS Itasca Weekend

Sally Howard, director, Health Sciences Public Relations; Wadena chapter meeting, Leadership Day

Karen Hoyle, associate professor, curator, Kerlan Collection; Education Alumni Society meeting, Wright County chapter meeting

Ettore Infante, dean, IT; IT Alumni Society dean's reception

James R. Jensen, Sr., associate dean for academic affairs, and professor and chair, department of endodontics, School of Dentistry; Dentistry Alumni Society annual meeting

Karen Karni, assistant professor, acting director, division of medical technology, department of laboratory medicine and pathology; Medical Technology Alumni Society annual meeting and fall program

Stanley Kegler, vice president, Office of Institutional Relations; Legislative Day

Kenneth H. Keller, interim University president; Legislative Day, MAA annual meeting

F. Gerald Kline, director, School of Journalism and Mass Communications; Chicago and Washington, D.C., chapter meetings

Lauris Krenik, chair, University Board of Regents; Leadership Day

Gary Larson, executive director, Minnesota Funeral Directors Association; Mortuary Science Alumni Society fall event

Robert Lennon, assistant professor of anesthesiology, Mayo Medical School; Nurse Anesthetists Alumni Society reception

Karal Ann Marling, professor, department of art history; Suncoast chapter meeting

Robert Megard, associate professor, ecology and behavioral biology; CBS Itasca Weekend

Gerald O'Dell, assistant to the athletic director; Martin County, Redwood-Renville Counties, and Lyon County chapter meetings

Michael O'Donnell, special adviser to the governor of Minnesota for the state's bio-medical and health systems program; Boston and Washington, D.C., chapter meetings

George Robb, associate vice president, Office of Institutional Relations; Legislative Day

William Rogers, consultant, Minnesota International Center-World Affairs Center; CLA Spectrum '85 program

Stephen Roszell, associate vice president, Office of Development and Alumni Relations; Leadership Day

Sharon Satterfield, assistant professor, division of human sexuality, department of family practice and community health; Fargo-Moorhead and Phoenix chapter meetings

Richard Sauer, deputy vice president, Institute of Agriculture, Forestry, and Home Economics, and director, Agriculture Experiment Station; North Texas chapter meeting, Forestry Alumni banquet

Mark Simmons, assistant professor, department of health ecology, and director, general practice residency program, School of Dentistry; Dentistry Alumni Society annual meeting

Richard Skok, dean, College of Forestry; Forestry Alumni Society banquet

Ellen Stekert, professor, department of English; CBS Itasca Weekend

Milton Terris, editor, *Journal of Public Health Policy*; Public Health Alumni Society annual meeting

John Wallace, assistant vice president, Office of Academic Affairs, and chair, task force on the student experience; Leadership Day

May K. Y. Yue, Financial Associates, Inc.; Alumnae Society seminar

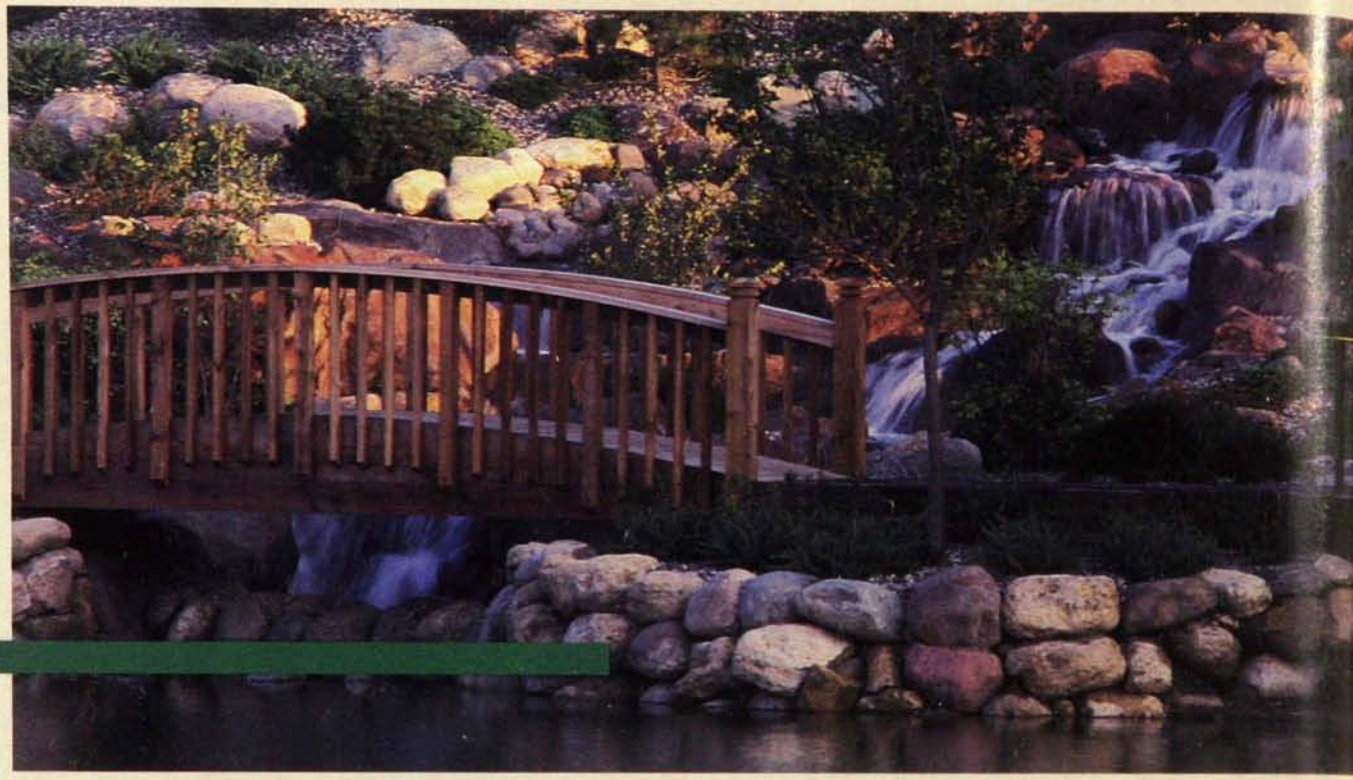
1984-85 CONSTITUENT SOCIETY AWARDS

MODEL PROGRAM EFFORT
Medical Technology Alumni Society

BEST OVERALL PROGRAM
Journalism Alumni Society

1985-86 UNIVERSITY STUDENT ALUMNI ASSOCIATION BOARD OF GOVERNORS OFFICERS

Mary Breidenstein, president
Natalie Brobin, vice president of personnel
Michael Casey, vice president of events
Teresa Wulf, communications coordinator
Nancy Hajlo, treasurer
Christopher Pryce, budget committee chair



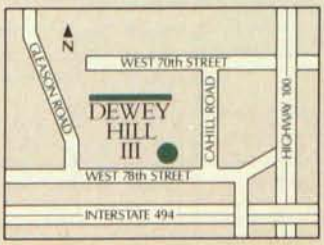
Imagination at Work: From May to November

Dewey Hill III is fast becoming the most talked-about new neighborhood in Edina. The imaginative waterfall pictured above is only one of many special features which have been designed into the outdoor environment and the homes themselves. There is a four acre pond, a lighted fountain, footbridge and a walking path with gazebos and seating areas. Interior design features include vaulted and skylighted ceilings, spacious bay windows and decks, special interior lighting and leaded glass panels among others.

Dewey Hill III follows in the tradition established by Larry Laukka in the first two phases of Dewey Hill where most of the homes are valued at well over $500,000. Dewey Hill III has received recognition for being one of the finest townhome neighborhoods in the Twin Cities. Visit it soon especially if you are considering a move to maintenance-free living.

Each townhome will be custom designed with one to four bedrooms. All are on the pond. Prices: from the low $300,000 range. **Second and final phase now under construction.** Color brochure is available on site or at your request.

DEWEY HILL III



Display Models Open Daily
12-7 PM Weekdays
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Saturday and Sunday.

(612) 829-0105

Townhomes in Edina by Laukka

CONSTITUENT SOCIETY EVENTS

NOVEMBER

3 **Marching Band Concert**
3 p.m., Northrop Memorial Auditorium, Minneapolis campus.

7 **Education Alumni Society Board Meeting**
5 p.m., Campus Club, Coffman Memorial Union, Minneapolis campus.

8 **Travel Reunion Party**
5-7 p.m., Radisson University Hotel, 615 Washington Avenue SE, Minneapolis.

9 **Pregame Dinner**
4:30-6:30 p.m., Alumni Club, 50th Floor, IDS Tower, Minneapolis. Alumni Club members only.

10 **Marching Band Concert**
3 p.m., Northrop Memorial Auditorium, Minneapolis campus.

12 **Nursing Alumni Society Board Meeting**
5-6 p.m., Campus Club, Coffman Memorial Union, Minneapolis campus.

13 **Medical Technology Alumni Society Fall Program**
"The Future for Medical Technologists," workshop and discussion. 5-9 p.m., Campus Club, Coffman Memorial Union, Minneapolis campus.

14 **Alumnae Theater Benefit**
Molly Bailey's Traveling Family Circus. 7 p.m., Rarig Center, Minneapolis west bank campus. Cost is $15 ($10 tax deductible); proceeds will go to Alumnae Society scholarship fund.

15 **Dentistry Alumni Day and Annual Meeting**
All-day event. Mayo Auditorium, Minneapolis campus.

17 **Marching Band Concert**
3 p.m., Northrop Memorial Auditorium, Minneapolis campus.

20 **Department of Women's Intercollegiate Athletics Ten-year Gala Dinner**
Reception and dinner to celebrate the tenth anniversary of the creation of the department of women's intercollegiate athletics. Program will include induction of the first University of Minnesota Women's Athletic Department's Hall of Famers. 6-9 p.m., Radisson University Hotel, 615 Washington Avenue SE, Minneapolis.

24 **University Wind Ensemble Concert**
3 p.m., Northrop Memorial Auditorium, Minneapolis campus.

25 **Jazz Ensemble Concert**
8 p.m., Northrop Memorial Auditorium, Minneapolis campus.

26 **Concert Band II Concert**
8 p.m., Northrop Memorial Auditorium, Minneapolis campus.

DECEMBER

13 **Nursing Graduation Reception**
4-6 p.m., location to be determined.

JANUARY

7 **Nursing Alumni Society Board Meeting**
5-6 p.m., Campus Club, Coffman Memorial Union, Minneapolis campus.

9 **Education Alumni Society Board Meeting**
5 p.m., Campus Club, Coffman Memorial Union, Minneapolis campus.

CHAPTER EVENTS

NOVEMBER

7 **North Texas Chapter Big Ten Alumni Round-Up**
Barbecue and dance, 6:30 p.m., Circle R Ranch, 310 Highland Village Road, Lewisville, Texas. Contact Dick Kampa, chapter president, 214-245-4669 or 214-888-6703.

DECEMBER

7 **Denver Chapter Big Ten Alumni Christmas Party**
Contact Chuck LeMaire, 303-752-4245.

7 **Suncoast Chapter Christmas Party**
Contact Donald Enzmann, 813-736-6381.

JANUARY

17 **Boston Alumni Chapter Hockey Game and Reception**
Contact Bob Fagone, 617-485-0553 or 617-485-4900.

FEBRUARY

7 **Sun City Chapter Annual Meeting**
Speakers: University President Kenneth H. Keller and Minnesota Alumni Association Executive Director Margaret Sughrue Carlson. Contact Paul Cartwright, 602-584-2059.

15 **Suncoast Alumni Chapter Luncheon**
Speaker: Dr. Sharon Satterfield, medical director, Program in Human Sexuality. Contact Donald Enzmann, 813-736-6381.

SPECIAL EVENTS

At the Goldstein Gallery

October 27-January 10 the Goldstein Gallery is featuring "Alexander Girard Designs: Fabric and Furniture." Girard, an internationally renowned designer of wallpaper, fabric, and furniture, has been acclaimed for his interior design projects. Through its display of furniture pieces, fabric, and three-dimensional objects, the Goldstein Gallery's Girard exhibition reflects the playful atmosphere of Girard's Textiles and Objects Shop in New York during the 1960s.

Goldstein Gallery hours for this exhibit are 8:30 a.m.-4:30 p.m., Monday through Friday. For group tours and general information, call 612-373-1537.

INTERNATIONAL TOURS

Prices are based on double occupancy and are approximate until tour brochures are printed. For more information about any of our international tours, write to: Travel Director, Minnesota Alumni Assocation, 100 Morrill Hall, 100 Church Street SE, Minneapolis MN 55455.

Project Antarctica. January 4-18. On this luxury cruise to the last, most glorious frontier on earth, observe whales, seals, giant albatross, co[SOLD OUT] and rookeries of squawk[SOLD OUT]dling, remarkably social penguins. Splendid beyond description, compellingly beautiful. The cruise: $3,990-$9,625.

Cruising the Grenadines and Orinoco River. February 9-16. Cr[SOLD OUT] through 180 miles of jungle al[SOLD OUT]rinoco River, visit the tin[SOLD OUT]mes, and call on the sophisticated French island of Martinique. $1,095-$1,850, from Barbados.

Palace of the Popes, Avignon, France

Passage of the Mayas. March 1-9. This program focuses on the history and cultural impact of the Mayan civilization and features Merida and Cancun. Includes all sightseeing of Mayan archaeological sites on Mexico's Yucatan Peninsula. $1,850, from Chicago.

Golden Ring of Russia. Visit some of the most historic and colorful lands of Russia that have ever been seen by Americans. Three nights in Moscow are followed by a four-day Volga River cruise and visits to several medieval towns. Includes three nights in Leningrad and two nights in Copenhagen. $2,785, from Chicago.

Cotes du Rhone Passage. August 11-24. Travel from Paris to Lyon by the TGV high-speed train, then spend seven days on the scenic Rhone River. Dine at the restaurant of renowned chef Paul Bocuse. Trip concludes in Cannes, the sparkling jewel of the Cote d'Azur. $2,795, from Chicago.

Passage of the Moors. September 12-26. Follow the path of the Moorish caliphs from Morocco to Spain, and discover the cultural riches developed over 700 years along this passage. Starts in Rabat, concludes in Madrid. $2,575, from Chicago.

Yuletide Passage. December 18-January 2, 1986. Spend the holidays in Germany and Austria, the land of Christmas traditions. Tour begins in Munich, the "Happy Heart" of Bavaria, and ends with a magnificent New Year's Eve gala in Vienna. Visit Salzburg and Graz, and the "Christkindl Market" in Nuremberg. $2,895, from Chicago.

ADVENTURE TRAVEL

Minnesota Alumni Association (MAA) members can travel with ECHO: The Wilderness Company on any of the trips listed below at a 10 percent discount; groups of ten or more receive an additional 5 percent discount. Prices listed are approximate projections for 1986; ask about youth rates. Proof of MAA membership is required to qualify for these discounts. Direct all inquiries to: ECHO: The Wilderness Company, 6259 Telegraph Avenue, Oakland CA 94609. 415-642-1600.

IDAHO

The Main Salmon. Some come to the Main Salmon River for the adventure; others come simply for the beauty. Whatever your reason, it will be an experience to treasure. $748. MAA members: $673.

Middle Fork. The classic mountain whitewater run in America. Big rapids, sheer walls, hot springs, and crystal-clear water. $829. MAA members: $746.

Snake/Hell's Canyon. A dramatic experience. The side hikes here are the best in Idaho; the wildlife is varied and abundant. $526. MAA members: $473.

Snake/Birds of Prey. Entirely without whitewater, this trip features the highest density of nesting raptors in North America. $545. MAA members: $490.

OREGON

Rogue. The rapids, the charm of the canyon, and the long, warm days bring people back again and again. Three-, four-, and five-day trips: $309, $397, $476. MAA members: $278, $357, $428.

Granada-Alhambra, Spain

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California Salmon. A very classy river. Cold, clear, fast, and surrounded by steep canyon walls of evergreens. Two- and three-day trips. $91, $182. MAA members: $82, $163.

Merced. Whitewater is the name of the game. A great trip to combine with a vacation in Yosemite or a tour of the Gold Country. One- and two-day trips: $91, $182. MAA members: $82, $163.

Tuolumne. Mile for mile, no river in America can claim better rapids or a better river experience than the Tuolumne. Even its lesser rapids would be major challenges on most rivers. One-, two-, and three-day trips: $103 to $342. MAA members: $93 to $308.

An Association of Substance

In 1984-85 the Minnesota Alumni Association, through a wide variety of programs and services, strived to inform alumni about University issues and events and to provide the University with an identified group of supporters and advocates.

As the organization representing the University's largest, most diverse audience—more than 200,000 past students and graduates—the Association worked to increase membership and ended the school year with nearly 32,800 members. That marked another year of continued growth for the organization, with membership increasing more than 40 percent during the last five years.

Led by its volunteer board of directors, the Association attempted to actively involve as many members as possible in meaningful programs of assistance to the University. With the goal of promoting public awareness of the University's role as one of the state's most important institutions, the Association initiated a broadly based public affairs program, both encouraging and representing alumni views. Hundreds of members supported the University's budget request to the state legislature with successful results. The Association also gathered alumni opinions about the Gopher football team's move to the Hubert H. Humphrey Metrodome in downtown Minneapolis, the University's investments in companies doing business in South Africa, and the process by which regents are selected.

A blue-ribbon committee of alumni in the public relations, advertising, marketing, and publishing professions assisted the Association all year long to improve efforts to tell the University's story to a broad audience. The committee's work resulted in the publication of a special issue of *Minnesota* magazine for 213,000 alumni, faculty, and friends introducing Kenneth H. Keller, the University's twelfth president, and exploring what is in store for the University under his leadership. The committee also proposed a dramatic advertising campaign featuring outstanding alumni to demonstrate the University's contributions to the community, state, and nation.

The campaign featured alumni such as Donald "Deke" Slayton, one of the original seven astronauts; television commentator and author Eric Sevareid; civil rights activist Roy Wilkins; former Vice President Hubert H. Humphrey; New York Yankees outfielder Dave Winfield; and television actress Linda Kelsey. It is believed to be the first such campaign undertaken by a public university. Committee members donated all the creative work for the advertisements, which the Association launched in September 1985.

University President Kenneth H. Keller helped set the agenda for the University—and the Alumni Association—with his plan to refocus the University's mission and make it one of the top five public universities in the country. During 1984-85 the Association moved to a more active, involved role in alumni and University affairs, instituting a public affairs agenda and launching a media campaign.

Alumni volunteers also helped the University with two of its most important priorities—recruitment of high-ability students and improvement of campus experiences of current students. During 1984-85 the Association supported 50 student recruitment and student enrichment programs. Hundreds of Association members contacted more than 1,000 high school students, their parents, and guidance counselors in Minnesota, Wisconsin, and Illinois. Through their efforts, an unprecedented number of National Merit and Presidential Scholar awards were presented to top freshmen enrolling in 1985.

Other Association members participated in college-based mentoring programs, provided funds for scholarships, sponsored receptions for graduating students, and advocated improved campus services.

More than 500 students joined the Association-sponsored University Student Alumni Association (USAA) during the first year of the program, helping students feel connected to campus and generating a sense of community and school spirit.

The following are brief highlights from the 1984-85 year.

• Margaret Sughrue Carlson, '82, former executive director of the Minnesota chapter of the Cystic Fibrosis Foundation, was appointed executive director of the Minnesota Alumni Association. Carlson received a Ph.D. in education administration and public policy and had served as assistant to the dean of the College of Home Economics.

• The Minnesota Alumni Club, on the 50th floor of the IDS Tower in Minneapolis, reopened January 21 after an extensive five-month renovation. The club's facilities include the Regents dining room and four private dining/conference rooms.

• Thirty-six University faculty were recognized and honored for their contributions to improving the student experience by the Minnesota Student Alumni Association at a reception at the Campus Club February 20.

• Mary Breidenstein, a junior majoring in business, was elected president of the 1985-86 board of governors of the USAA.

• University President Kenneth H. Keller was the featured speaker at the Minnesota Alumni Association's annual meeting on June 17, 1985.

• The Band Alumni Society celebrated Frank Bencriscutto's 25th anniversary as director of the University bands with a giant reunion that included dinner, dancing, and concerts featuring alumni composers, conductors, soloists, and a massed band.

PRESERVE THE *Tradition!*

Paul Giel and Lou Holtz, introducing the first in a series of collector's plates commemorating the **Gopher Gridiron Greats.**

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A Wild Fund-raiser

BY PAMELA LAVIGNE

When the University-affiliated Detroit Area Women's Club started selling wild rice as a fund-raiser, its contribution to University scholarship funds increased from $100 to $1,000. Marian Costello was chair of the fund-raising committee four years ago when she suggested that the group make the switch to wild rice. Funny thing is, she isn't even a University graduate.

The Detroit club is unique among University alumni groups because many of its 53 members *aren't* University graduates. Originally it was an auxiliary for wives whose husbands belonged to the University alumni club. That group fizzled during World War II but the women's club "continued and prospered," Costello explains.

Any family connection to the University—children, parents, husband, brothers, sisters—is a ticket to joining the group. Meetings give members a chance to "talk Minnesota," says Costello. Her husband, John, graduated from the University in 1940; she graduated from "an enemy camp"—the University of Iowa.

Along with socializing, raising money for scholarships has always been one of the club's purposes, she says. Their gift at first went into a revolving scholarship loan fund established in the mid-thirties in memory of a founding member of the club. The University would choose a needy senior woman to receive the loan, which she would repay during her first year after graduation. In 1942 the club's donation went instead into University scholarship funds and was given, not lent, to a woman student.

"We've had some interesting fund-raisers, but they've been rather traditional," says Linda Jacobs, director of special events and advertising for the Minnesota Alumni Association. "This is really the most innovative and creative."

Money raised by the chapter's wild rice sales helps fund the Association's Student Leadership Recognition Awards. Originating in 1981, the awards are presented to graduating seniors who have participated in various leadership roles as undergraduates at the University. Past recipients have used their funds to pay graduate school tuition or to get started in their new careers. One student even used his funds to help others as a Peace Corps volunteer in Kenya, Africa.

For years the women organized bake sales, white elephant sales, luncheons, theater evenings, card parties. The usual outcome for their efforts was a check for $100. When she took over as ways and means committee chair, Costello was ready to try another idea. She had been bringing wild rice back from Minnesota for years as a favor to friends. Could the group members get their friends interested in it, too?

They started small—ten one-pound packages of rice to each member—and kept the theater evening, too, just in case. They needn't have worried. Proceeds that first year were $1,000 from the sale of 1,300 pounds of wild rice. The next year the check was for $2,000, and last year for $2,500. "To date, the wild rice project is the easiest and most profitable of our many efforts," Costello says.

That first year the rice arrived in 100-pound sacks; now it comes in 300-pound lots. They used to stick a small maroon "Minnesota" pennant to each bag. Last year they began using a hand-drawn and -lettered label designed by Costello's daughter Elaine. It features loons and cattails, and explains that proceeds from the rice go to University scholarships. Along with a small recipe brochure from the Minnesota Wild Rice Council, buyers get about a dozen favorite recipes home-tested by members of the club.

They ship to a former club president who now lives in Sarasota, Florida, and have also sold to the dining room of the Hasty Pudding Club in Cambridge, Massachusetts.

The Costello laundry room is the supply depot. "We'd have to worry about mice in the garage," she says. Besides being distribution officer, Costello is also the group's top salesperson—almost 400 pounds last year. "That probably doesn't mean I'm the best salesperson," she says, stressing that she had already built up connections over the years, long before the group got into the wild rice business. Several members have pulled off 100-pound sales, she says.

Being prepared is part of her success, too. Costello is never without a pound or more of rice in her purse or suitcase, especially on a business trip with her husband. "When someone takes us out to dinner and we can't reciprocate, I've found that wild rice is a perfect hostess gift. Most people perceive it as a gourmet delicacy."

What was Costello's training for her wild rice sales-management career? Business? English and speech, replies Costello, "the background and springboard for everything."

To order wild rice from the Detroit Area Women's Club, call Virginia Merriott at 313-646-4651, Marian Costello at 313-646-1772, or Mary Cox at 313-792-8533.

Pamela LaVigne is a University Relations writer and editor.

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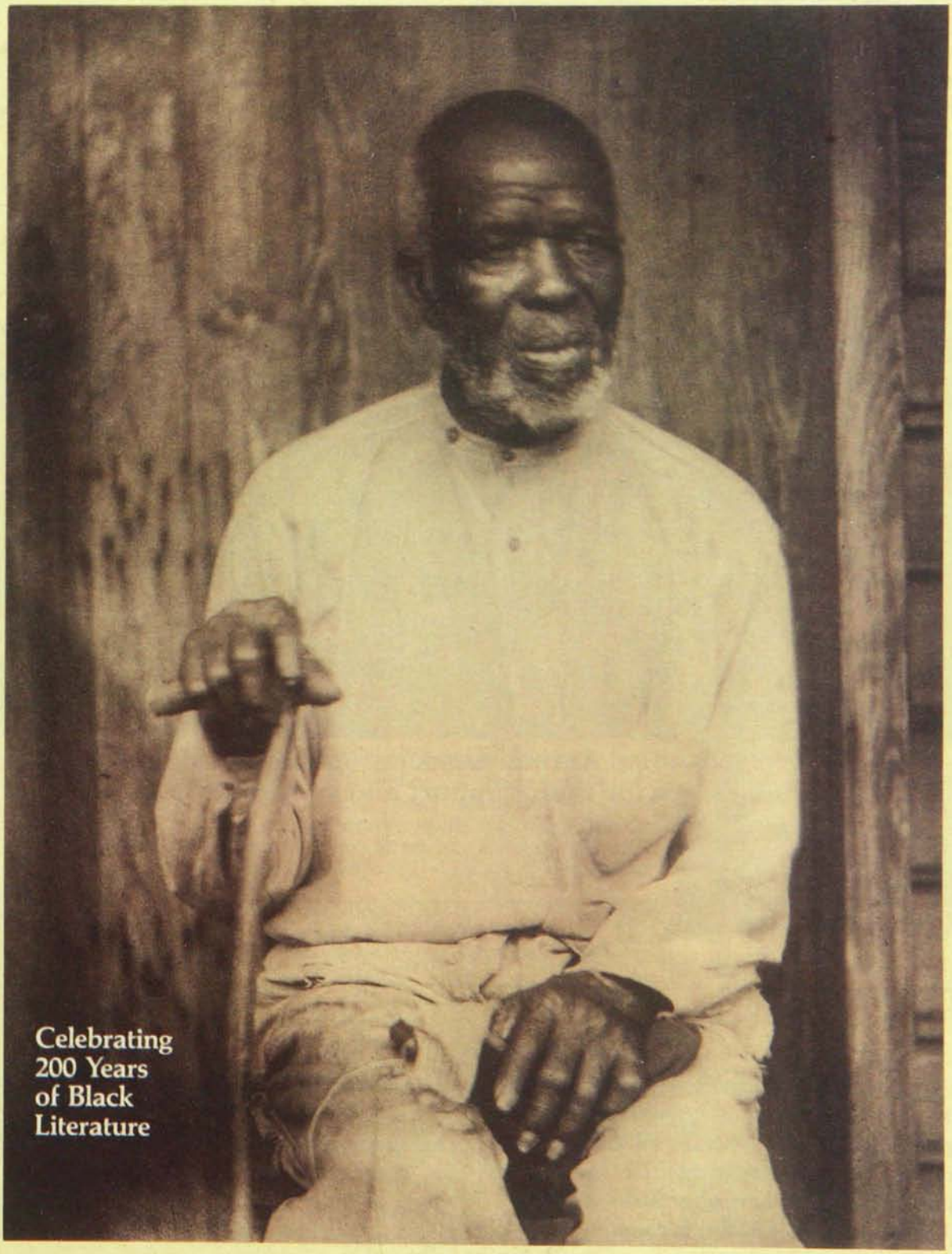

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- **Parent Day** — spring event for student's parents
- **Homecoming 5K Run**
- **Maroon and Gold Day**

MINNESOTA

University of Minnesota Alumni Association

JANUARY/FEBRUARY 1986

VOLUME 85, NUMBER 3

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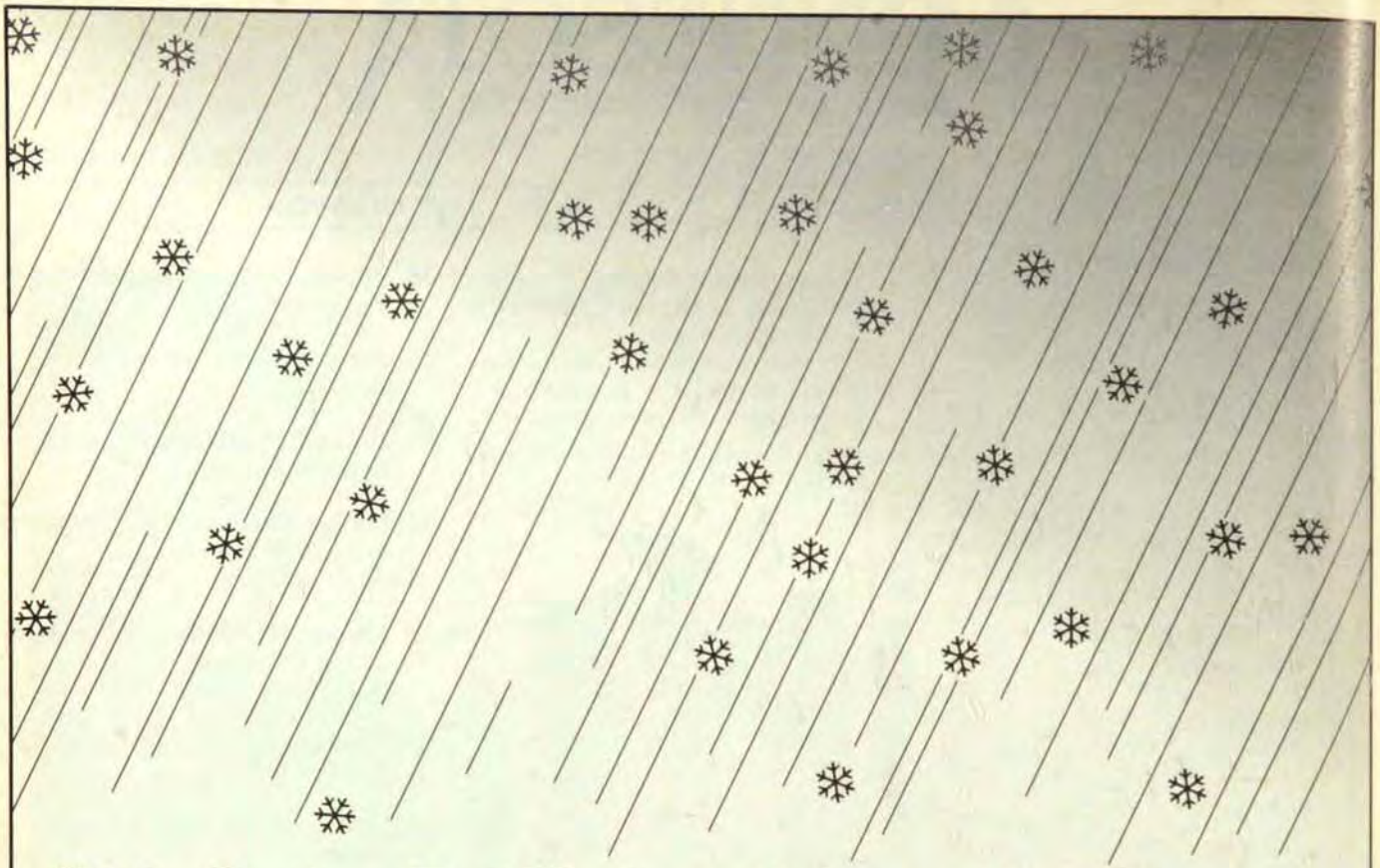
FEATURES

Cover photograph by Doris Ulman, from *Roll, Jordan, Roll*

COLUMNS

DEPARTMENTS



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New Beginnings

On November 15, 1985, workers in Armero, Colombia, struggled to rescue some 50,000 victims from the ravages of the explosion of the Nevado del Ruiz volcano. In Washington, D.C., President Ronald Reagan was preparing to depart for his first summit meeting with Soviet leader Mikhail Gorbachev in Geneva, Switzerland, the first such meeting between the heads of Russia and the United States in six years.

At the University, the Gopher football team was gearing up to meet the University of Michigan Wolverines. An announcement was made that an experimental vaccine for chicken pox, the most common serious childhood illness, had proved safe and effective. The study was directed by Henry Balfour of the University's Medical School.

And on this day, Kenneth H. Keller was inaugurated as the twelfth president of the University of Minnesota. Gov. Rudy Perpich, a color guard, and regents, faculty members, and visiting university dignitaries, dressed in their scholarly robes, escorted President Keller from Coffman Memorial Union to Northrop Auditorium, where 2,500 people listened to his inaugural address. Later, 3,000 people would attend a public reception in his honor at the Radisson University Hotel. On his way to Northrop, Keller was greeted by a handful of demonstrators protesting Keller's "Commitment to Focus," a plan to sharpen the University's mission and make it one of the top five universities in the nation.

During his inaugural address, President Keller talked about the first University presidential inauguration, when all nine of the University's faculty and most of its sixteen registered students attended the ceremonies. He talked of a time when there was no University tradition; he talked of beginnings.

Being excited by ideas and goals, rather than by personas and media images, is a rarity these days. But an excitement has been generated around the University by President Keller and his "Commitment to Focus." We went to the inauguration ceremonies to be a part of that excitement.

The occasion was particularly impressive because of the achievements, aspirations, and commitment of those present. So many had worked long and hard to earn their degrees, so many in one room were commited to higher education, to students, teaching, and the search for excellence. It's hard to forget tradition in a room filled with people like that, hard to forget the importance of education throughout history.

When we are about to begin a new project, a new career, a new job, it's fascinating to take a look at our predecessors and their times—to wonder what life was like then, to speculate on what it will be like during the course of our new task, to learn what we can from the past.

In October, when we began planning how to cover the inauguration, we decided to create for the University community of the future a printed time capsule of wishes and hopes that are representative of our time and President Keller's inauguration. We asked alumni, faculty, and friends of the University for their contributions to that capsule, and you can read them on page 19 of this issue of *Minnesota*.

Our cover story is also about achievement, inspiration, tradition, and leaving a legacy for the future. On page 25 is the story of the University's Black Studies Collection, some 3,000 volumes written by and about blacks. Compiled by Richard Hoffman, a professor and playwright who teaches at New York City Technical College in Brooklyn, New York, the collection is the most comprehensive compilation of black literature and life ever assembled privately. It includes Phillis Wheatley's *Poems*, the first book published by a black American, as well as books by other prominent black writers. The books in the collection represent a veritable college of black studies—a legacy of history, art, jazz, theater, education, political science, slavery, sports, sociology, and literature.

Because January marks the fifth anniversary of the hostage crisis in Iran—a crisis that marked the end of one presidency and the beginning of another, we asked L. Bruce Laingen to write a column for us. Laingen was the U.S. envoy to Iran and was held hostage along with 51 other Americans. In his column on page 52, Laingen looks to the past to find answers for the future.

Perhaps that is what this issue is all about: presidents, black writers, national heroes searching the past for answers for the future, challenging their colleagues to become excited, to search for excellence—and in the process, creating a tradition from new beginnings.

WHERE SCIENCE REIGNS:

A JOURNEY TO THE ICE CONTINENT

Perhaps the one place in the world where people from every corner of the globe forget country politics and cooperate freely, Antarctica is a land of ice, snow, birds, seals, and the scientists who come to study them

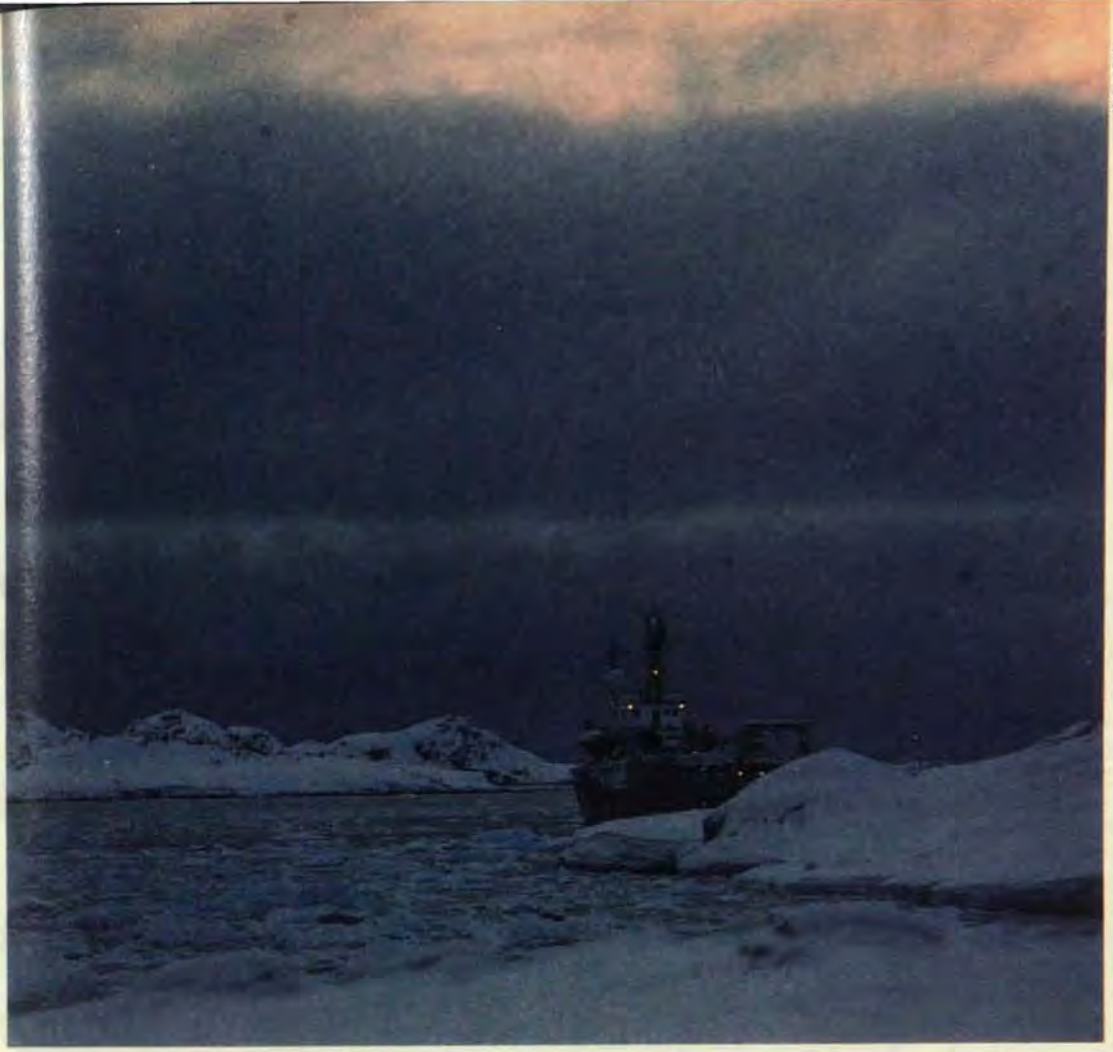
BY DEANE MORRISON

On a cold, starless night in mid-September, the research ship *Polar Duke* approached the jagged peaks of Deception Island, a volcanic crater jutting out from the sea near the tip of Antarctica. On board, Pam Pietz watched as the young captain steered toward Neptune's Bellows, the narrow and treacherous gate to the harbor that fills Deception's rocky ring. She knew it was his first trip through the Bellows, one he had chosen to make at night despite the submerged rocks that could tear open a ship's hull. But the captain had studied his charts well, and the ship sailed smoothly through, bringing Pietz to a safe port in her winter journey to the ice continent.

It was Pietz's third journey to Antarctica, her first during the southern winter. She had just completed graduate study with University ornithologist David Parmelee and was making the voyage to record the winter bird life along the Antarctic Peninsula and adjacent oceanic areas. The *Polar Duke*, under charter by the National Science Foundation, carried nearly a full load of scientists.

The peninsula is a starkly beautiful stretch of steep mountains curving up past the Antarctic Circle toward South America. It is the part of Antarctica most tourists visit to see penguins, seals, and the towering masses of ice that dominate the landscape.

The South Pole sits at the focal point of the continent, as does the U.S. outpost known as the Amundsen-Scott Station.



Michael Parfit

The Polar Duke *docked at Palmer Station, which is located on Anvers Island off the west coast of the Antarctic Peninsula. The ship carried a full load of scientists, including University researcher Pam Pietz.*

The United States maintains other stations, including McMurdo, the largest, on the shore of the Ross Sea; and Palmer, on Anvers Island off the west coast of the peninsula. Pietz spent her previous two trips, during the summers of 1979-80 and 1980-81, at Palmer, while McMurdo is a frequent destination for other University scientists, including geologist John Splettstoesser, who has made eleven trips there.

One and one-half times the size of the United States, Antarctica is much bigger than the tips peeking over the edges of most maps would indicate. Its great eastern plain holds an ice sheet averaging more than 2 kilometers thick that is 4.8 kilometers—nearly 3 miles—at its thickest point. Its total volume is 30 million cubic kilometers, which is enough ice to cover the entire United States with a sheet 3 kilometers deep. If all that ice were to melt, sea level would rise until the ocean lapped at the nose of the Statue of Liberty.

Without its ice sheet, Antarctica would look quite different. The ocean would flow between the Ross and Weddell seas over a strip of land that now lies below sea level. Flooding in other areas would leave the archipelago winding from the tip of the peninsula to McMurdo Station. But much of the eastern great plain, including the South Pole, would form a high, dry land mass about as big as Australia.

One challenge for antarctic travelers is learning the correct terminology for ice. For example, when a ship is so hemmed in by ice that no seawater can be seen, the proper reference for the ice cover is *eight octas;* half as much ice is *four octas.* Newly formed round sheets are called *pancake ice,* and the clear-blue jagged chunks that break off glaciers are known as *brash ice. Fast ice* is frozen seawater attached fast to land; it breaks up into chunks called *pack ice.* Pack ice is covered with pure, white snow but is colored red and brown on the underside from all the algae and other organisms that get trapped in it when the sea freezes. Typically, pack ice melts throughout the summer, releasing the organisms and providing birds with a rich food source.

Emperor penguins make a rather unique use of fast ice: they breed on it—in winter. The only penguins to lay their eggs on ice instead of land, emperor penguins keep their eggs warm by incubating them on top of their feet under a fold of abdominal skin. Emperors, along with gentoos, chinstraps, and Adélies, are the only species of penguins native to the continent.

"Adélies are the most common species, the only ones usually chosen as models for toys and cartoons," Pietz says. Parent Adélies fish for krill, a shrimplike crustacean, and when they return to land, regurgitate for their chicks. As the parents fish, the chicks stand on the shore and check out the adults emerging from the sea. When a chick meets one of its parents, it chases and harasses the parent relentlessly, waiting to be fed.

Another antarctic bird, the skua, is also aggressive. Resembling a large, brown gull with white wing patches and clawed, webbed feet, the skua will defend its nest against anything, including elephant seals and people. Parmelee found that out the hard way: A skua attacked him, briefly knocking him out. When he came to, he saw the bird a few feet off, shaking its head as if trying to reorient itself. In a moment it got up and hit him again.

Three kinds of skua live on the peninsula: brown, south polar, and hybrids of the two. The birds are strong enough to eat penguins as well as fish, but they head to warmer climes for the winter. The brown probably stay south of the equator in winter, but some south polars banded at Palmer have been found as far north as

Greenland. One fledgling was shot by an Eskimo three months after it was last seen at Palmer.

Pietz did not see any skuas during her cruise, but she counted plenty of other birds from South America to Marguerite Bay. She collected almost 80 birds and identified their stomach contents to determine their winter diets. Her records of bird counts and stomach contents were sent to David Ainley at the Point Reyes Bird Observatory in California, who has similar data on birds for summer. He wants to know what the birds are eating in different habitats, which he defines by the type of ice present. Parmelee is interested in their geographic distribution, plumage, stage of moult, and amount of body fat during the winter.

On board the *Polar Duke* with Pietz were sixteen biologists, who were specialists in fish, krill, phytoplankton, ice algae, and seals. Among the seal specialists was Ward Testa, a graduate student of University ecology professor Don Siniff. A twelve-person crew, two people from ITT Antarctic Services division, and journalist Michael Parfit, the author of a book about Antarctica, completed the party.

When the ship left Punta Arenas, it was late winter in Antarctica and quite dark. But daylight increased steadily throughout the month-long voyage, allowing Pietz to move from an 8:00-to-4:30 workday to a 6:00-to-6:00 one. By day, the ship sailed sheltered waters in search of birds and seals; by night, it ventured into open water to trawl for fish and krill. Scientists were always at work.

The weather proved to be the most formidable foe of the entire journey. The fish biologists sometimes waited weeks to trawl around an island, only to be forced back by bad weather. Pietz looked forward to a visit to Rothera, a British station on Marguerite Bay that boasted an island with an emperor penguin colony.

"When we radioed Rothera, they said Marguerite was ice free," she says. "Emperors are the only penguins that breed in winter, and that was the most northerly emperor colony on the peninsula. We hoped to see some young chicks—a very rare sight. As we talked to Rothera, we were in five to eight octas of cake ice and slowly chewing our way through. But a storm was pushing the ice south with us. The ice ended up in Marguerite Bay, blocking us out, so we never saw the emperors."

All the snow and ice make the trip sound bone chilling, but Pietz explains that the peninsula's temperatures rarely reach much below zero degrees Fahrenheit, even in winter. With the ocean's moderating influence, its climate is even milder than Minnesota's.

The cruise gave Pietz another glimpse of Litchfield Island, near Palmer Station, as she censused the penguins, blue-eyed shags, giant petrels, and other birds on neighboring islands. From the boat she could see the cliff on Litchfield where, banding giant petrel chicks in 1981, she slipped and fell 75 feet, crushing a vertebra. Not wanting to undergo a lengthy evacuation, and eager to finish her work, she stayed on at Palmer as planned. Upon her return home, she needed two operations to reset her spine.

Isolation is the enemy of the injured, but it can be a friend to ornithologists spending a winter in Antarctica. Other students of Parmelee have braved a winter at Palmer to find plenty of birds doing the same thing. And even the frigid Amundsen-Scott station at the South Pole offers its rewards during the long darkness.

"A friend of mine wintered there and told me that it was worthwhile for the atmospheric phenomena alone," says Pietz.

In winter, a visitor may see an aurora australia (southern lights) display, or a lucky viewer might catch a *green flash*—a green ball of light that sometimes appears momentarily above the sun at sunset. Splettstoesser glimpsed this strange optical effect last December while aboard ship in the Drake Passage, the stretch of ocean between South America and Antarctica.

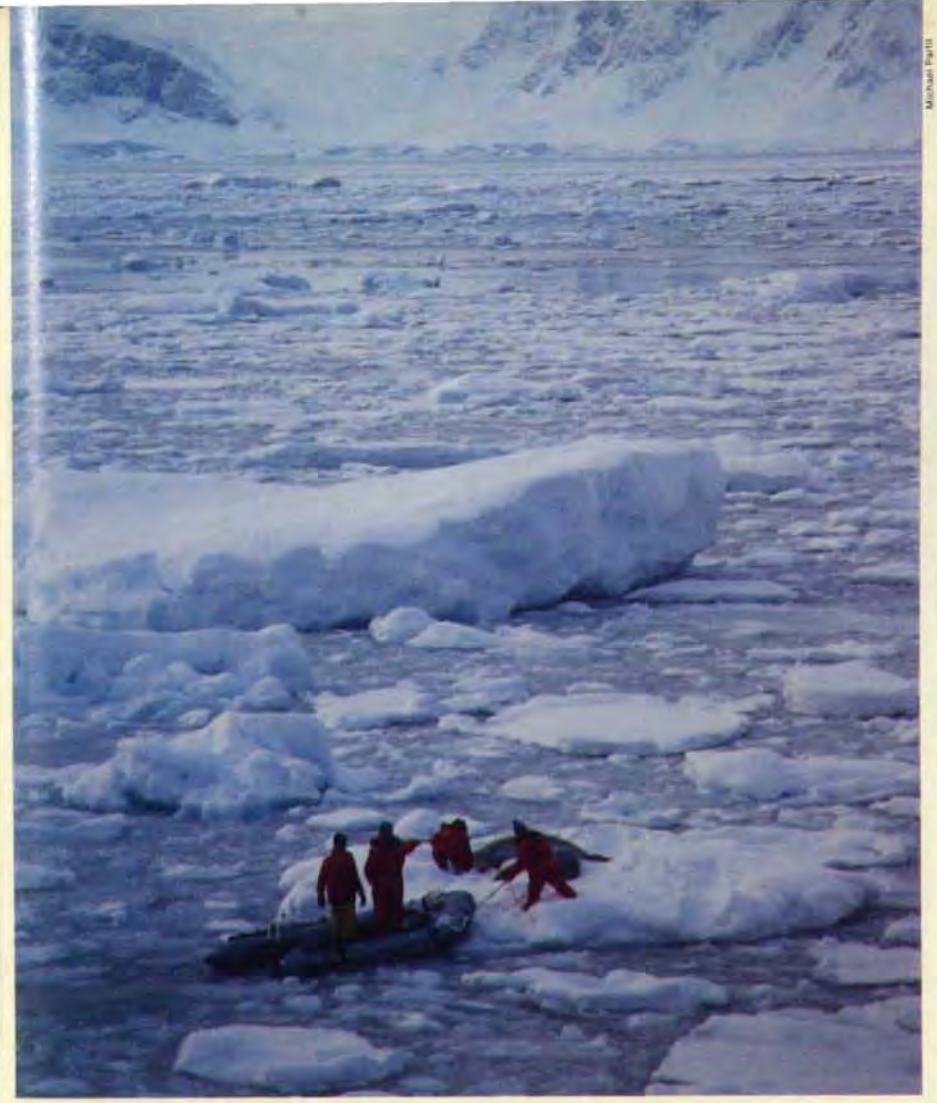
As a geologist, Splettstoesser has seen plenty of things stranger than green flashes. His work takes him wherever outcroppings of rock wait to be studied, often miles into the interior, far from the relatively moderate climate of the peninsula. These days he helicopters to remote areas where the fierce winds have sculpted the bare rock into eerie formations called ventifacts.

Many of the ventifacts are rocks worn smooth by the wind; others are pitted and furrowed like vegetable graters. The antarctic winds gust up to 200 MPH, hurling small rocks a couple of feet off the ground and multiplying the erosive power of sand and ice grains, which presents a real threat to anyone present. Ice crystals can chip away rock with no trouble in such high winds, and since ice is harder at colder temperatures, antarctic rocks take a worse beating in winter.

Splettstoesser is trying to calculate how many years it takes the wind to produce ventifacts, as an estimate of how long ago the ice receded and exposed the rocks. And, like other geologists, he would like to know whether the entire ice cap is thickening or thinning. Although local variations in ice movements make it hard

Donald B. Siniff

Emperor, gentoo, chinstrap, and Adélie penguins are the only species of penguins native to the continent. Adélies, the most common species, pictured here, are the model for Opus and other penguin cartoon characters and toys.



Michael Partil

Michael Partil

On her third trip to Antarctica, Pam Pietz, who had just completed graduate study with University ornithologist David Parmelee, recorded the winter bird life along the Antarctic Peninsula and adjacent ocean areas.

In Antarctica, life centers around ice: pancake ice, brash ice, fast ice, pack ice, and octas of ice. Here researchers venture out to study seals.

to see the big picture, in the past the cap has been at least 1,000 feet thicker.

Long ago there was no ice at all. Antarctica enjoyed a temperate climate, which faded as continental drift carried it to the polar zone. Antarctica comprises several plates, or movable sections of the earth's crust, one of which is sliding by the Antarctic Peninsula toward Africa. Where this plate pushes under the adjacent African plate, molten rock rises to the surface as volcanos. Along the border of the plate is an archipelago of volcanic islands curving from Tierra del Fuego and then back toward the Antarctic Peninsula. It includes South Georgia Island, a British possession that was once joined to Tierra del Fuego, and the South Orkney Islands, which are slowly receding from the peninsula.

Fossils tell of a vastly different Antarctica 200 million years ago, before it drifted to its chilly corner of the globe. The continent supported thick forests and a rich animal life that included amphibians and terrier-size dinosaurs. Remnants survive as coal beds, but these are not likely to be mined as long as there is no shortage of coal elsewhere.

The lush life is now gone from all but the peninsula and coastal areas of Antarctica. The peninsular rocks boast a brilliant assortment of orange and yellow lichens, along with bright green mosses and algae and two flowering plants. Rookeries of emperor and Adélie penguins ring the entire coast, while the gentoos and chinstraps seem to breed just on the peninsula. Much remains to be discovered about where the penguins spend the winter, but in summer they return to their own rookeries. Then the peninsula comes alive with hundreds of bird species, and the coastal waters teem with seals and killer whales.

The interior region is a different story. The only life—other than human—that Splettstoesser has seen there is the skua. The birds constantly raid the garbage dump at McMurdo, so they may simply follow the scientists to the interior looking for more food. But it's a long journey just for a handout.

"Sometimes they turn up 500 miles inland within a few days after we've set up camp," Splettstoesser says. "How do they find us? And why do they fly to the interior when they can't live there?"

For geologists like Splettstoesser, research means being left at remote field stations, sometimes for months at a time. Field camps are often temporary tent towns, but some are almost as comfortable as McMurdo, complete with a cook, good food, and hot and cold running water. Scientists usually travel to their work sites by snowmobile or motorized toboggan, which marks a big improvement from Splettstoesser's first trip inland, when he had to drag equipment around on a sled like a husky.

The work sites at one field camp are so remote that helicopters must be flown in to ferry the scientists to and from work. Big ski-equipped aircraft such as C-130s, which only Americans operate in Antarctica, can land anywhere in the interior and so take helicopters to places like Vostok, a Soviet base 700 miles west of McMurdo.

"Quite often, an American scientist does a research project in Vostok, or a Russian scientist stays at a U.S. station—usually McMurdo," Splettstoesser says. "These exchanges have been popular for 30 years. The first I remember was in 1957 and 1958, the International Geophysical Year. It's fairly routine now for Americans to call Vostok on the radio and tell them they're coming to visit and ask if

Michael Parfit

The Amundsen-Scott station is located at the South Pole in the center of the continent surrounded by a great plain of ice. While the temperatures here are frigid, the climate on the Antarctic Peninsula is even milder than Minnesota's because of the ocean's moderating influence.

they need anything."

Maybe what Vostok needs most is heat. Last year it had the dubious honor of recording the world's lowest temperature ever: -128° F.

As the Vostok experience indicates, life in a field camp can be difficult. Splettstoesser has endured winds of about 80 MPH—"not too bad if you have some shelter"—and temperatures as low as -70° F, accompanied by 50 MPH winds that send the windchill down to -150° F. When the sun is out, though, it warms the dark tent fabric and makes for a fairly comfortable environment—that is, as long as the tent stays up.

"I know of people who have had their tents blown away," says Splettstoesser. "They survived by crouching behind rocks. After the storm had passed, a helicopter came and got them."

No one headed for Antarctica is allowed to board a plane in New Zealand unless they are wearing the "uniform" designed for the coldest weather. The uniform consists of thermal underwear, insulated trousers, rubber-insulated boots, parkas, and long, fur-lined "bear paw" mittens hanging by a string. These precautions ensure that all passengers will be outfitted for survival in case of an accident on the way.

Out on the barren ice fields sometimes comes a strange experience hard to find anywhere else: the sensation of nothingness—nothing to hear and nothing to see for 25 miles but blue sky and white snow. The incessant danger of sun blindness is present even on cloudy days.

"If there is no wind, it's very silent," Splettstoesser says. "You start to imagine you're hearing things like a plane, or you hear your heartbeat or watch ticking. It's a very strange silence, but you get used to it after a few days."

Small research stations sometimes get buried under snow and must be rebuilt. But the snow also makes a good, flat surface on which to pitch a volleyball net, which is what Splettstoesser likes to do at the distant "helicopter camps." Although movies are flown in to the bigger camps, it can get fairly lonely. In winter, about 25 people may be isolated for up to nine months in the big stations. However, solitude can be a balm for a harried scientist.

"It's a good way to get away from business, the world, the phone, red tape and so on," says Splettstoesser. "I get no newspapers there, and when I get back, I just ignore what's happened in my three-month absence. I don't catch up on old *Time* magazines or anything."

All of the scientific information collected in Antarctica is made available to scientists, regardless of nationality, at all the other stations. It is perhaps the one place in the world where people from every corner of the globe forget their home countries' politics and cooperate freely. As journalist Michael Parfit pointed out in *Smithsonian* magazine, Antarctica is unique because it was settled not for reasons of politics or religion but for reasons of science. And science cannot flourish where secrecy reigns.

The mutual cooperation stems from the Antarctic Treaty, signed in 1959, which reserves the entire continent for peaceful scientific use. All military exercises and nuclear weapons testing are banned. Although seven nations—the United Kingdom, Argentina, Chile, Norway, New Zealand, France, and Australia—have claimed parts of Antarctica, the treaty sets all claims aside until 1991. Many scientists are a little worried about what will happen then, especially since the claims of Chile, Argentina, and the United Kingdom overlap. But for the present, everyone helps each other out.

"When I was there in 1979 and 1980," says Pietz, "Palmer Station received fuel supplies from a British ship that also brought scientists and cargo in and out. Anybody coming down from South America tries to bring mail for whoever is there. When we were the first ship of the summer, we brought fresh vegetables."

Even the Falklands War didn't keep the British and Argentine scientists apart. Parfit describes a conference on minerals held in Wellington, New Zealand, at the height of the war, at which scientists from the two countries sat at the same table and never mentioned the conflict.

"I think they deliberately kept the Falklands War away from the peninsula, probably to protect the treaty," says Splettstoesser.

A particular point of concern is the number and types of settlements on the peninsula and on King George Island, just off its tip. Poland, the Soviet Union, Chile, Brazil, Uruguay, and China either have or are building stations in these areas; in addition, Chile has settled several families on King George, and Argentina has done so on the peninsula. The treaty specifically forbids nations to use any actions taken before 1991 as a basis for future sovereignty claims, but these new communities could weaken the ties between scientists of different countries.

"The influx of families means stable settlements, which could decrease the interdependence of the [scientific] stations," Pietz says. "Of course, I might be wrong, and they might be their own little UN and promote goodwill. We'll just have to wait and see.

"But scientists are the ones who have spent the most time in Antarctica and so must speak up for the place. I hope our work lets us understand Antarctica enough to protect it."

Deane Morrison is a University Relations writer.

A cartographic, geographic, didactic, and slightly eclectic look at finding your way around the "U" today

A Compendium of Maps

Judging from the questions most frequently asked of University of Minnesota students throughout the years—Where do you park? How do you know where to go?—University students have mastered a complicated art. They know how to read a map and indeed know where they are and where to park.

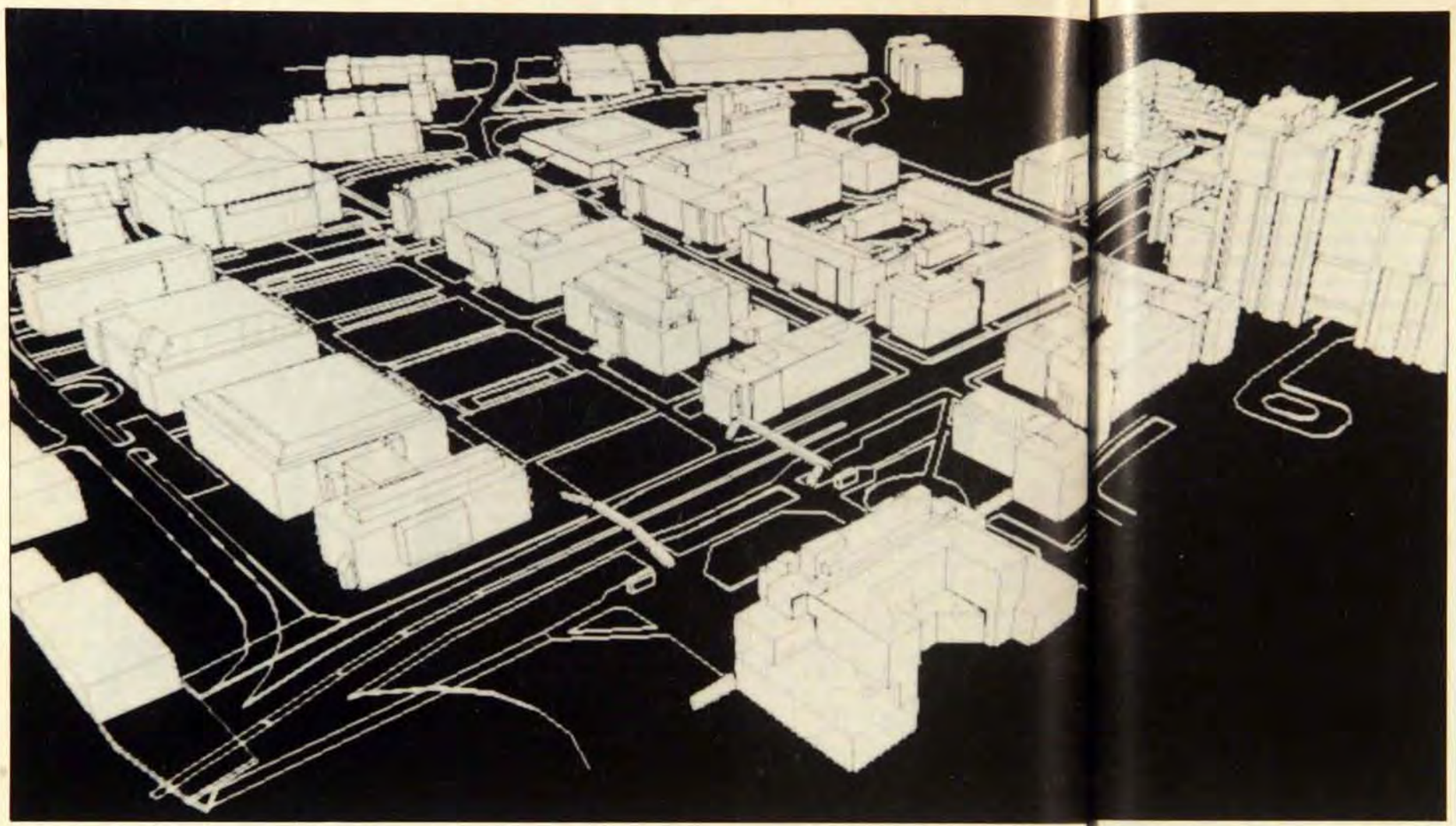
After undertaking this exercise in map study at the University, we know why. Scattered throughout the campus are maps, map makers, and map collections of all kinds. There are tactual maps for the blind, three-dimensional maps in architectural design, and cartoon recollections of "the universe and the University." We even discovered that the head of the map section of the Library of Congress is a graduate of the University of Minnesota.

University Relations has all kinds of maps to offer the lost: a large, detailed map showing all buildings on the Minneapolis and St. Paul campuses, and smaller individual maps to parking on those campuses. (They are available free of charge by calling 612-373-2126 or by writing University Relations, University of Minnesota, 6 Morrill Hall, Minneapolis MN 55455.)

For those who haven't mastered the University, we had the Cartography Laboratory in the geography department prepare a special map of parking spaces on the Minneapolis campus. We offer it to you, with our compliments. (We must warn you, however, that University students do not actually *read* their maps in public; that is frowned upon.)

We welcome you to explore Minnesota—the University of, that is—and we hope this guide to maps helps.

By Pamela LaVigne



Technically not a map, this view of the campus was designed by the Computer-Aided Architectural Design Center. To produce it, a program was developed by center director Lee Anderson and assistant director Oliver Ng that translated spatial information into numerical form.

Three-Dimensional, by Design

A blank computer screen suddenly divides in two: blue above, green below. After a moment's pause, waves of other colors begin sketching in buildings, sidewalks, roads, land contours.

You're watching a computer draw a three-dimensional map of the Minnesota state capitol grounds. Instead of a conventional bird's-eye view, the vantage point is that of a person standing on the ground about a block away and slightly to the right of the capitol. The picture seems to be moving toward this spot, painting every detail in perfect scale and perspective. The last building—the one closest to the viewpoint—suddenly "paints over" several buildings. That's right—although they're there, from this spot they would be hidden.

Basically you've just watched a color slide paint itself on a television screen—and a technique known as computer-aided design. The possibilities are stunning. The computer will compose the scene as you like it: just decide what building you want in the center and where you want to be in relation to it—on the ground or high overhead. It will change colors to suit your fancy or purpose. Specify any time of day and of year—perfect shadows will fall over the picture.

The computer will map not only what's there but also what isn't. You can fit a new building into open space or drop it over an existing one. You can change the contour of the land and the landscaping. See what happens when you add streetlights. Be a little whimsical. Float a few clouds overhead. Park cars here and there, and make every one a BMW.

Architectural drawings are like three-dimensional maps. But pair them with a computer graphics display, and you've got a map that's more versatile than the fold-up kind will ever be.

It takes only a few minutes in the University's Computer-Aided Architectural Design Center to get excited about the possibilities. Sophisticated graphics workstations and custom-designed programs are changing the way city planners, highway engineers—and architecture students—work.

"Our emphasis is computer-aided design," center director Lee Anderson says, "using the computer in the very early stages of conceptualizing the design." Computers are more than drafting instruments, he stresses. They're design tools, letting a designer work easily with many more options than would be possible if each variation had to be hand drawn. "Students come to a greater understanding of the principles of design by doing them in another form," he says.

Anderson, assistant director Oliver Ng, and others have adapted and developed programs for translating spatial information into numerical form so that the computer can display it—and play with it—in three-dimensional form.

"By developing software here we gain a lot of flexibility," Anderson says. "A program for a building design, for example, besides including length, width, and depth measurements will also include data like wall thickness, R values for insulation, sun transmission, and cost of building materials."

"You can quickly and easily use this program," says Peter Hill, project manager of the capitol-area demonstration. That's because it was developed internally, expressly for teaching purposes, he says. "This asks you exactly what it needs to know" and in everyday language. "After you've worked with it for a while, it's very difficult to make mistakes."

When a designer tackles a project, "no one's too sure what it is going to look like," Anderson says. Being able to picture it, in color and from any angle, helps both designer and client.

"Highway engineers are interested in being able to visualize a highway after it's completed —its environment," says Anderson. "How is it going to be when you drive down it? People in nearby neighborhoods want to know what it's going to look like when it's all finished, whether they will be able to see over the noise barriers from their second-story windows. Graphics gives them a chance to provide more input back to highway people and give the highway people a chance to see what's planned before it's built."

The center has a contract with the Minnesota Department of Transportation to develop programs for just such applications. It's also designing programs for the Capital Area Planning Board. For these clients, the center has added yet another option: animation. The computer generates millions of "slides" of an area, "moving" a few steps for each image. The on-screen display is synchronized frame by frame with a camera; the film is transferred to videotape; and, voilà, a fly-by view of the area under study is ready for viewing.

"It may take 60 hours to produce one or two minutes of animation," Anderson says. "We leave the computer running for two to three days."

How do the buildings get "into" the computer? They're digitized. Anderson explains: "All the objects to be displayed are flat surfaces pieced together—polygons. You have to digitize each corner so that all the spatial values have a number. The [computer] file contains all these points and all the connections, like connect the dots."

Entering this information is called constructing the data base. Although the dimensions of a project—building, freeway, airport—have already been determined and can be entered directly into the computer, for the center's demonstrations students have digitized the projects by hand by running a special tool over a hand-drawn architectural drawing.

The rendering is laid on a table underwired with a fine magnetic grid. The tracing tool, or puck, looks like a magnifying glass with a calculator sidecar. It easily fits in the palm of the hand. Inside the glass are crosshairs and four wires. The first task is to establish the drawing's scale. The operator moves the puck over, say, a one-inch line, taps out on the calculator the equivalent number of feet it represents, say 1,000 feet, then hits the code key to enter the data. Then the operator continues tracing over every line on the drawing, encoding length, width, and height measurements.

Once the graphics data base is constructed in this way, architecture students then can manipulate a site—add, subtract, view from a different angle, see in a different light. Anderson and Ng have created computer programs that enable students to work out design variations easily and see results quickly. In some cases, they have adapted programs originally designed for much larger computers to the center's IBM PC and Apple Macintosh personal computers. And they've made the programs interactive, so users proceed through the program by responding to conventional English language questions on the screen.

After the orderliness of the demonstration, the center itself is amazingly disheveled looking. Office-chair castoffs, folding chairs, and old cafeteria-style tables line the walls and cut across the room. Students seem to have taken to the place as their own. The personal computers sport small embossed name strips like the kind workers put on their lunch boxes. Here the names are those of famous architects: Le Corbusier, Boromini, Alberti. (Except for one used by assistant director Ng. It's labeled *"jian zhu"—architecture* in Chinese.)

The center, in fact, looks a lot like students' studios elsewhere in the architecture school.

That's exactly how Anderson planned it. During 1981-82 he visited about a dozen schools to see how they handled computers in the teaching of architecture. He found that computers were "available but isolated, used by a hardcore little group of techies." At Minnesota, he says, "I don't want architecture students to see [the center] as an air-conditioned, enclosed white room, antiseptic, because this is A Computer, it doesn't have anything to do with our tracing paper. It doesn't have to be a different world."

Beginning this quarter, computers will be even more visible and accessible as design tools. "Architecture school may be the only place at the University where students *have* a place of their own," says Anderson. That place is the design studio, where the school provides a drafting table, model-making table, and pinup area. Thanks to a $560,000 grant from IBM, a new design studio will be set up—and nestled among the usual equipment will be IBM PC/AT workstations.

Integrating computers with students' work areas hasn't been done before, says Anderson. "It's going to be sensational. We'll have really quite a pioneering effort."

Each workstation consists of a keyboard and display, a separate screen for color graphics, a printer, and a digitizer pad/table. Fourteen volunteers will be selected for the new studio. Each will have his or her own workstation. Next year, seventeen more will be added.

Anderson has already adapted programs that were developed originally for the Cray supercomputer and the Apollo supermicrocomputer to the smaller IBMs. He will have students make a three-dimensional map of part of downtown St. Paul, including Rice Park, the Ordway Theatre, and the public library. As is, students can use it for analysis. Later they will design their own projects and plop them down next to or even on top of an existing building in the area—all without moving a brick.

Computer-aided architectural design can't replace the fold-up map for convenience, but for mapping what might be, it has no rival.

Geographic Directions

The Cartography Laboratory on the Minneapolis campus is a narrow, rectangular room set up for work. High drafting tables underlit with fluorescent bulbs line the walls. A huge orange double sink abuts a floor-to-ceiling gray steel map case. On the walls, multicolored maps depict the complex bedrock and surface geology of several Minnesota counties. If these pin-ups are meant to inspire student map makers, the seriousness is offset by a whimsical decoration overhead: an inflatable globe, blown up and dangling from a string.

The lab, part of the geography department, was begun in the mid-sixties to produce maps illustrating research findings for geography faculty, says Gregory Chu, the lab's senior cartographer. It has all the equipment, including track-mounted camera and darkroom, to prepare printing plates for every map it produces.

These services and facilities are also available to other University departments, as well as to outside firms. Clients have included the Minnesota Geological Survey, Encyclopaedia Britannica, Harper & Row publishers, and Labrador, part of the Canadian province of Newfoundland.

Maps can be grouped into four categories, Chu explains. Reference maps, such as a topographic maps, record all the physical and most of the constructed features of a place: elevations, forests, buildings. They are published by the U.S. Geologic Survey.

Cadastral maps, similar to reference maps in accuracy and detail, are large-scale survey maps. "They even define who owns the gutter," says Chu. Examples of these are plat, tax, and insurance company maps. Reference and cadastral maps require special techniques such as land surveying and aerial photography.

Perhaps most familiar to everyday map users are route maps for surface, water, and air navigation, and thematic maps, displaying information in broad categories, such as crime statistics by neighborhood. Most of the lab's projects are thematic maps presenting research data.

Except for the actual data, a cartographer decides how everything will be seen on a map. After determining type style and sizes, Chu uses a small typesetting machine in the lab to print all the words that appear on a map. Special symbols—mathematical signs, Greek letters, tent-shaped figures that represent state parks—come in press-on sheets. Positioning is done entirely by hand.

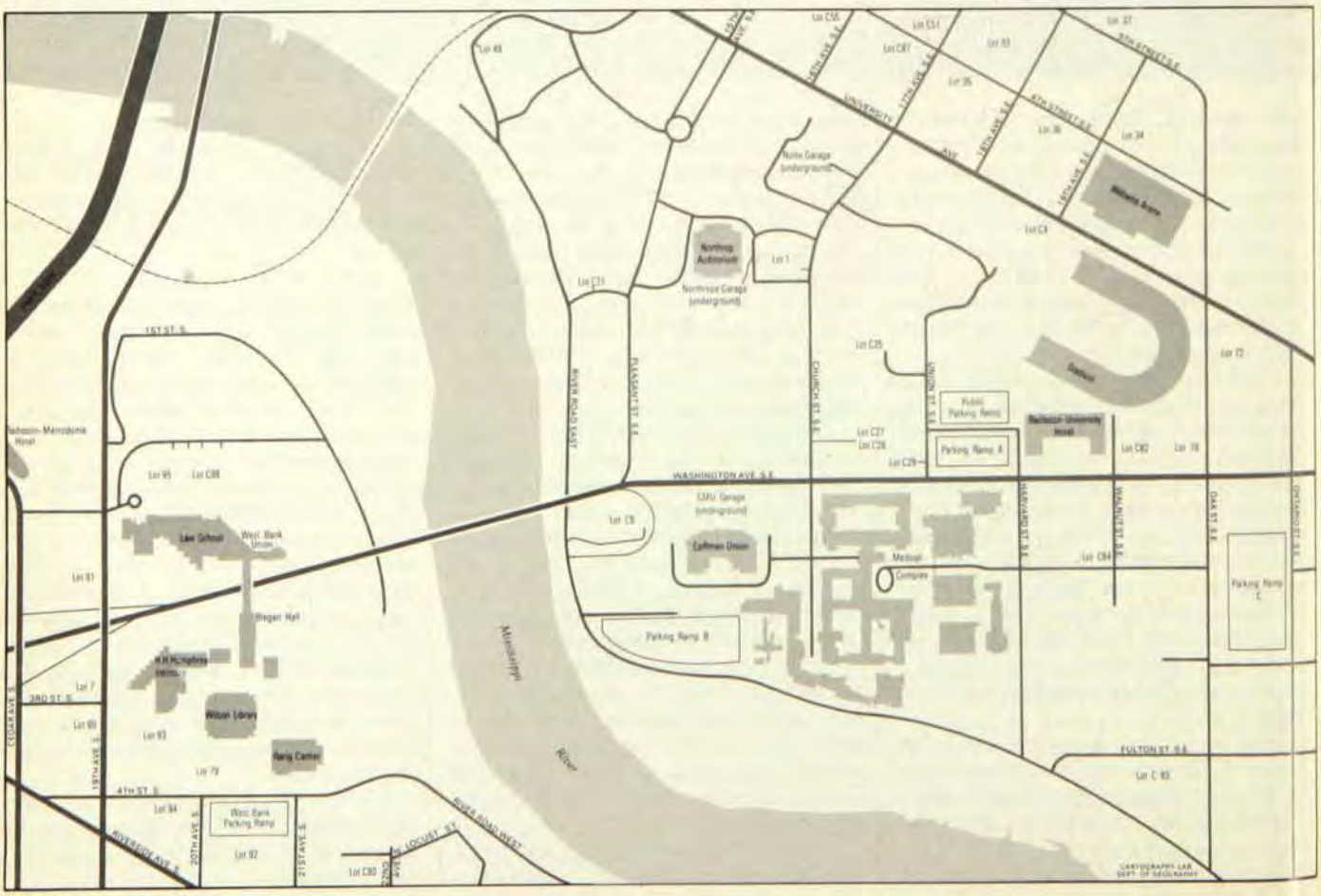
"One of the most difficult parts is designing the map," Chu says, "—not only choosing the colors and sizes of symbols and lettering but relating the geographic facts so as not to give distortion."

Chu finds a map of California to demonstrate the problem. The map shows population density by county—red for most dense, orange for next highest density, then yellow, and so on. Two counties bordering Los Angeles are desert land for the most part. Population density is high only along the western edge of the counties, where they are closest to Los Angeles. Because of the mapping technique used, however, the solid color suggests that the population is evenly distributed throughout these adjoining counties.

Two maps showing the distribution of milk cows in Wisconsin illustrate the distortion problem in another way. Both are the same size and use dot scattering to represent the cows. One map looks almost solid black in many places; the other is more finely speckled. Again, the cartographer must decide what size dot to use and how much each dot will represent.

"You have to digest the data and figure out a good way to present it," says Chu. "Given one set of data, you can probably map it twelve different ways. So you have to be familiar with the different map making methods."

Besides dot scattering and shading,



some other methods are the three-dimensional approach, the "smoothed statistical surface" that looks like rolling computer-generated waves, and the circles of a contour map.

"There's no way to estimate the time it takes to make a map," says Chu. "It really depends on the complexity of the map and the form it's in when it comes to us." For a quick walk-through of the process, he picks up a map of the United States showing which types of trees grow where. The researcher has marked the different regions with colored pencils, giving the map a pastel patchwork look.

When this map is printed, only two colors will be available: black and brown. The first task is to decide where these colors will be used in place of the researcher's original colors, and where black-and-white line, dot, or symbol patterns will be substituted. One choice is easy. To mark a region forested with a mix of deciduous and nondeciduous growth, Chu used a pattern of row after row of tiny round-top trees next to fir trees.

Student map makers draw the boundries next—first in pencil, then retraced in ink. For each different color or pattern, a negative is made on what looks like a sheet of thick red plastic, which is actually a photosensitized film, or peel coat. The inked drawing goes underneath it, and then the cartographer uses an X-acto knife to cut out and peel off parts of the negative corresponding to the appropriate part of the master.

"You have to know what you're doing—your color scheme—and your geography. That's the important thing," Chu says. "In a sense we're graphic designers, production people, photographers, draftsmen."

After this demonstration, the complexity of the multicolored maps on the walls takes on a greater significance. They all have bylines in large type. Were these the cartographers? No, Chu says, they're the people who commissioned the maps, prepared the legend, and wrote short articles that are printed on the maps. A cartography credit line appears in tiny print somewhere near the bottom, but it's the name of a place, not a person.

"I don't complain about this thing," says Chu. "My concern is that they give us a good contract. That means there's more money for our students. They pick up money to go to school, and they pick up good practical experience."

The Cartography Laboratory created this map of parking and streets on the Minneapolis campus. The best spots for public parking are the Harvard Street, East River Road, and Oak Street ramps and lots 37, 34, and 72 on the East Bank (Northrop lot is under construction and not open), and the West Bank Ramp and lot 95 on the West Bank. Lots marked with "C" are for University contract parking only. To park in "coupon parking" lots, you must purchase coupons at the University in advance.

John Wolter charted his course to the Geography and Map Division of the Library of Congress at the University in the library science and geography departments. As division chief, he oversees four million items.

Map Happy

The stationery carried the name of a management consulting firm. The letter writer signed "president" after his name. "I used to think there was only one job in the world I envied," he wrote. "Director of Mystic Seaport [a seafaring museum in Connecticut]. Now I know there's two."

That job is chief of the Geography and Map Division of the Library of Congress. The person in this enviable position—and the subject of the *Time* article prompting the letter—is University alumnus John Wolter.

Wolter speaks warmly of the institution he's been a part of since 1968. "This is a great public library," he says. "Anyone can walk in the door, ask for anything, and get to look at most anything." As the name implies, Congress created the library, supports it to this day, and stands first in line for its services. The library serves as the de facto national library, Wolter says.

The map division keeps the world's largest collection of maps and atlases: more than 3.9 million items in an area totaling more than two acres. Housed in the basement of the James Madison Memorial Building on Capitol Hill, the division end to end is the length of two football fields. Wolter oversees a staff of 37.

Growing up in St. Paul, Wolter says, he always wanted to see what can't be seen in the Midwest: mountains, oceans, "just see the world." He traveled by imagination over maps and railroad timetables he'd collected until he was eighteen, when, in 1943, he signed on with the merchant marine and started seeing the

world firsthand. After doing a stint in Korea with the army, Wolter returned to Minnesota and entered the University. He sandwiched a master's degree in library science ('65) between undergraduate and Ph.D. degrees ('56 and '75) in geography.

His undergraduate adviser was John Borchert, now Regents' Professor of Geography, whose ability to apply a geographer's analysis to contemporary problems of urban planning has earned him national recognition. Through Borchert, Wolter realized that his long-standing personal interest in geography could be a scholarly, professional focus as well. "He nailed me down," says Wolter. His graduate adviser was Fred Lukermann, now head of the College of Liberal Arts. "The geography department at Minnesota is absolutely tops," says Wolter. "I can't think of a better place I could have gone."

Wolter's first job in a library was as a student worker in the James Ford Bell Library on the Minneapolis campus. This renowned collection of ancient maps, travel diaries, and explorers' documents was a perfect spot for the wandering-sailor-turned-scholar. Later, as map librarian for Wilson Library, he combined the map holdings of the library and the geography department into a single collection, housed with the departmental offices.

He also taught—at the University—a course on source materials for geographic research, and at the University of Wisconsin-River Falls. "I was testing my teaching ability," Wolter says. "I enjoyed it very much, but this [Library of Congress job] appealed more. It was the right mix of library science and geography."

And what riches it offers to a map lover. The earliest map in the collection is a portolan chart from A.D. 1320 to 1340, showing sailing routes across the Mediterranean. A one-of-a-kind piece, it is drawn and lettered in ink on vellum and was probably made in Genoa. The latest type of maps to enter the library are land-satellite photographs.

The division also holds complete sets of subscription maps and atlases, dating from roughly 1870. A map-making firm sent its employees to survey an area, then sold the maps to businesses. Detailed maps made for insurance companies were used to underwrite policies. The maps show all the buildings in a town, what they're constructed of, what businesses they housed—and where the fire hydrants were, Wolter says. On one of them he came across notes about his grandfather's bobsled factory in St. Cloud, Minnesota.

What makes a map good in his eyes? "Design," Wolter answers firmly. "If it gets across its message without elaborate text material. If it can be understood from the key or legend alone.

"I'm an old seafarer, so [nautical] charts really appeal to me," says Wolter. Topographic maps, depicting three dimensions on a flat surface, are also favorites. How to make a map look like the landscape continues to challenge cartographers, he notes. "And that's not only mountain tops but ocean depths, too." He mentions thematic maps, also, "the maps that show the social things, like population distribution." These he enjoys for "the cleverness with which cartographers will put two or three variables together and design a map to show that. It's just appealing as the devil, and some of the best color work I've ever seen is coming out now in these maps."

This year the geography and map division will add the four millionth piece to its collection. "We'll acquire some smashing item," Wolter says with relish. Whatever it is, there is no doubt that Wolter will have the administrator's know-how to arrange the purchase, the scholar's appreciation of its value—and the delight he's had since childhood in the map-maker's evocative art.

Maps to "U"

For someone who was just passing through, cartoonist Pete Wagner certainly left his mark on the University while he was here.

From 1974 to 1976, when Wagner was a political cartoonist for the *Minnesota Daily*, his antics on campus as well as the editorial page enraged and entertained. He was suspended for a week after he wrote the "f-word" on his forehead, then tried talking about it to a fundamentalist preacher holding forth on Northrop plaza. When he ran for student body president on the Tupperware Party ("Two Lids in Every Refrigerator"), six times the usual number of voters turned out for the primaries, which he won, but not for the final election, which he lost. All the major television networks and UPI covered his "campaign."

Wagner collected his cartoons, the reactions they provoked, and his thoughts on surviving the politically apathetic seventies into *Buy This Book*, its title a nod to *Steal This Book*, by Abbie Hoffman, whose activist radical style he much admires.

Wagner graduated from the University of Wisconsin-Madison in 1977 with a self-styled degree combining political science and mass communication. He later toured campuses giving chalktalks as "The Un-American Boy." Back in the Twin Cities now, he's married, working a regular job, and free-lancing for clients from corporations to churches.

Wagner's caricatures and political cartoons can be seen weekly in *City Pages*, an alternative newspaper in the Twin Cities, for which he also is calendar editor.

His caricatures have been commissioned by accounting firms, banks, even Pillsbury, as gifts for retirements and roasts. Radisson Hotel Metrodome had him draw the New York Yankees last spring (he did Billy Martin in a van en route to the Dome). Each player signed his caricature, and the series is hanging in the hotel's Neon Cowboy Lounge. He takes his pad and pencil each year to a Lutheran church camp, an Episcopal church fair, and Campus Carni—a benefit for the Children's Heart Association and other charities.

Drawing caricatures at private parties is "pure joy," Wagner says. "There you're directly interacting with people. The funniest thing is doing it with kids. They have no inhibitions about laughing at how funny it is. They're not embarrassed like adults."

Maps are becoming a specialty, too. The official maps of the city of West St. Paul, "very representative but in cartoonish style," is his work. "We Gopher You, Minneapolis," a poster-sized version of River City, shows all the people as gophers. Doug Kaufman ("yuppie entrepreneur," Wagner says) commissioned the map and is donating one dollar from the sale of each to the Children's Heart Association.

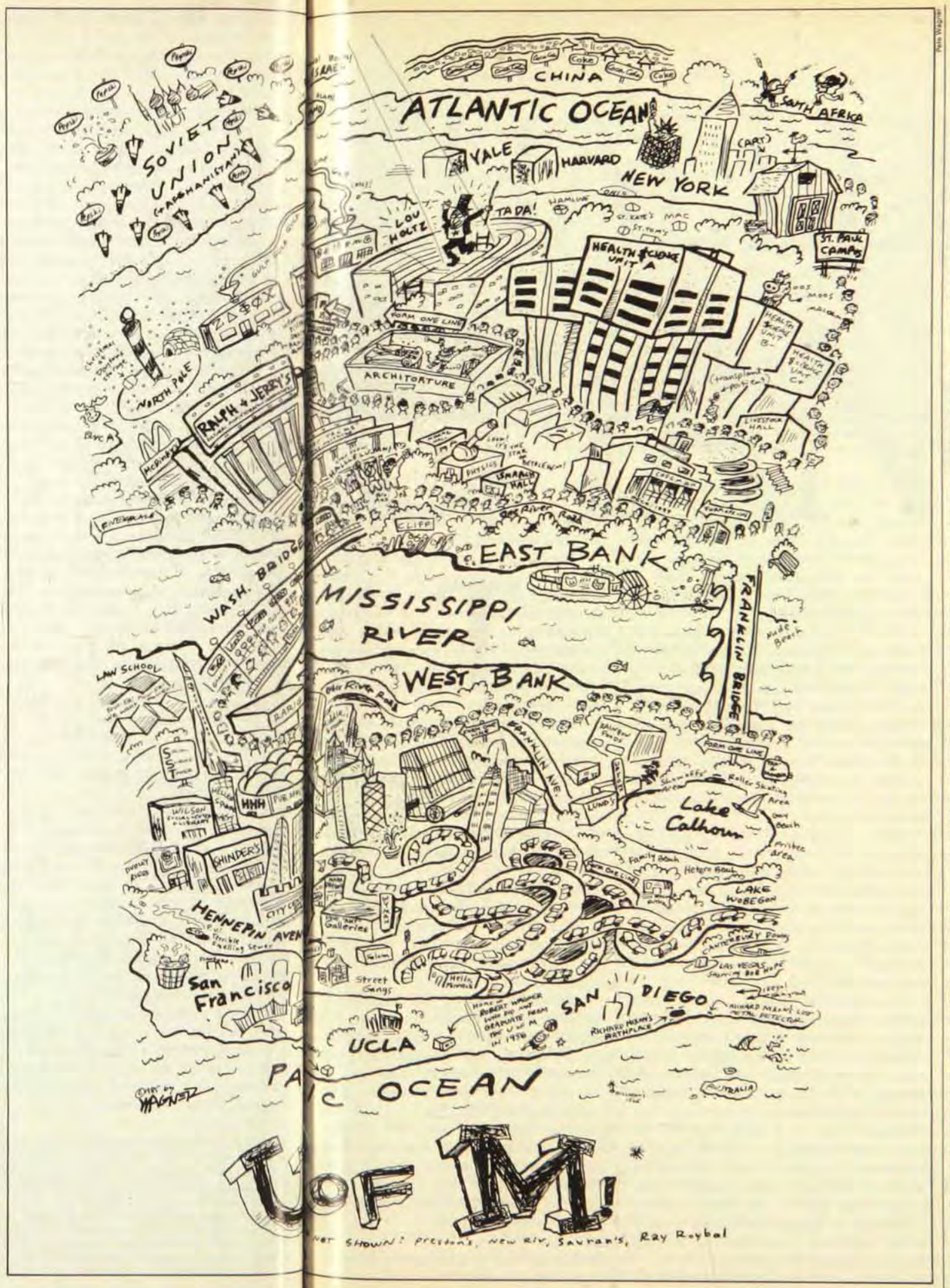
Political cartooning remains Wagner's fiercest love. He laments, though, the relaxed drawing style—"too loose as far as I'm concerned"—in today's political cartoons. "It's a little disheartening to me. Editors have lost an appreciation for careful, skillful drawings. Nowadays, in newspapers, cartoons are just funny, they use political cartoons to come up with a gag. My approach to the art form is more traditional. I'm more of a classicist."

And as much the provocateur as ever.

"I don't do political cartoons to change people's minds or even to get them to think like I do. I do it just to make people *think*."

He mentions a group show that included his work at the First Unitarian Society. "It's appropriate that a political cartoon would be appreciated by the church. A political cartoon is a moral art form. You moralize." Although a cartoon can entertain, it also instructs. "You're always saying, as a political cartoonist, 'This is right and this is wrong.' " He laughs, then adds, "Usually, though, you're saying, 'This is wrong and this is wrong and this is wrong.'

"I'm not on one side or another. I'm a critic."



Former *Minnesota Daily* political cartoonist Pete Wagner was given the assignment to map the University. Here is his version, guaranteed to provoke—interest.

When Your Fingers Do the Walking

Getting around the University is a daunting prospect for newcomers and doubly so for blind and visually impaired students. Thanks to geography professor Sona Andrews, tactual maps show the way.

"There's not a blind person in my family, and I'm not a do-gooder," says Andrews. "I'm interested in cartographic communication: what can maps communicate, and how can they communicate to a very small audience with special needs?"

Andrews first encountered tactual maps, with their raised and textured surface, as a graduate student at Arizona State University. Her adviser had made some tactual maps, and she took them on as a thesis project, creating tactual maps for that campus.

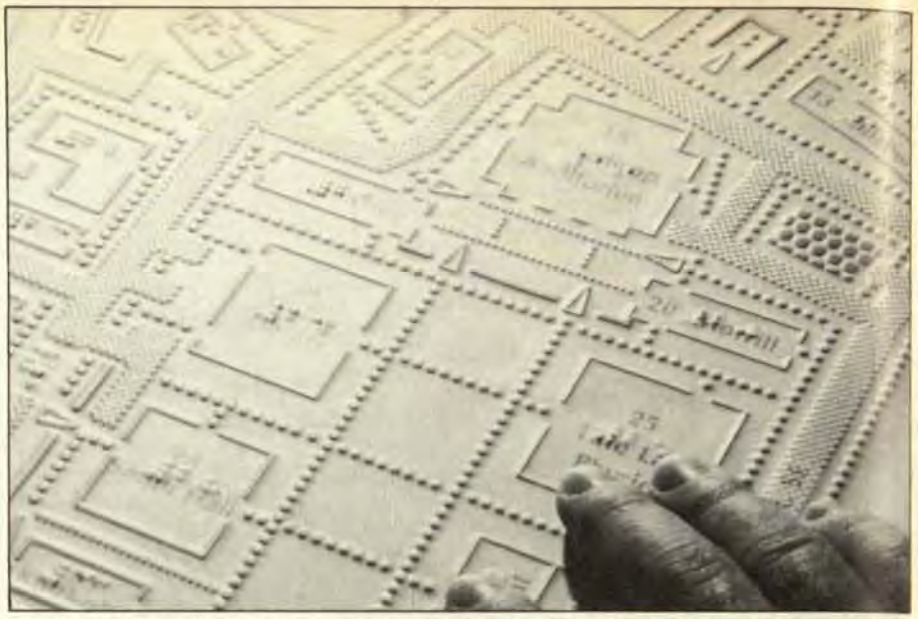
At the University, eight blind students worked with Andrews and research assistant Antony Goddard to develop the first tactual maps of the Minneapolis campus. The students suggested what areas to cover and what details to include. Next, Goddard did field work, "actually walking the area, using a visual-based map and noting the features consultants said they wanted to know," Andrews says. He started with the West Bank because the consultants said it was least familiar to them. Two prototypes were drawn and sample molds made of them before students were satisfied that the maps served their needs.

The final product is an atlas with six maps—an overview showing key buildings and delineating the five areas covered in greater detail in the next maps. Each page has Braille and large print. The legend includes information found on maps for sighted users: buildings, streets, parking, the Mississippi River. It also reports details such as sidewalks, paths, barriers, hazards, building entrances, stairs, elevators, and bathrooms. A manual, also in Braille and large type, goes along with the atlas.

Each map is a sandwich: heavy posterboard back, in the middle a photocopy of the map with large print lettering, and a clear plastic top embossed with Braille and different textured patterns and symbols. Blind and sighted persons can read the same sheet.

"Visually, it looks very bold," says Andrews, handling one of the maps. Students here wanted more information than students she's worked with elsewhere, she says. "For me, as a tactual cartographer, this map is fairly cluttered, but for the students it works quite well."

The Office for Students with Disabilities handled distribution of the maps; of the 100 sets available, about a dozen remain. Funding, approximately $3,500, came from the Office of Physical Planning, (then) Handicapped Students' Services, the Marquette National Bank in Dinkytown, and Twin Cities alumni of Delta Gamma sorority.



Geography professor Sona Andrews, research assistant Antony Goddard, and their students have made the University the largest producer of tactual maps for blind and visually impaired students in the world.

With funding from the Center for Urban and Regional Affairs (CURA), Andrews and Goddard also produced 150 copies of a tactual atlas of the metropolitan Twin Cities. For Windward Passage, a sailing group for disabled people, the pair also prepared a tactual nautical chart of the Apostle Islands. For both of these projects, the tactual map is embossed in clear plastic and laid over a printed map of the same area.

With a new map-printing method, Andrews has been able to teach tactual map-making courses and greatly increase the number of tactual maps available to blind students on campus. The laminated-plastic maps are made in a vacuum-form press, one by one. A thin metal mold for a single, roughly eleven-by-twelve-inch map costs $90.

Andrews now uses a capsule paper process for reproducing maps. Paper is impregnated with ammonia capsules. A drawing of a map is photocopied directly onto this special paper, which is then run through a Thermo-fax machine. Infrared light from the machine concentrates heat wherever there is a dark line on the photocopy, causing the ammonia capsules underneath the lines to boil. The boiling pushes up the paper, thus creating a raised surface that follows the map's pattern. Each sheet of encapsulated paper costs 50 cents, and from photocopier to finished map takes about five minutes.

In the tactual map-making courses she teaches, Andrews pairs each sighted student with a blind student. Together they prepare a map to go along with a class the blind student is taking.

"The [drawing] quality doesn't have to be great," Andrews says. "A finely detailed coastline, for example, just becomes garbage under the fingertips." Students in the class make outline maps and also thematic maps showing how data is distributed over a geographic area—average rainfall for 1981 in eight western states, for example.

"We are the largest producer of tactual maps in the world," Andrews says. A directory lists more than 40 maps that she and her students have produced. It includes mobility maps for the St. Paul campus library, Twin Cities' shopping malls, paths around the lakes in Minneapolis, and campgrounds in Minnesota state parks. "We have by far the most current and unique tactual maps. American Printing House for the Blind has the largest number of outline maps, but we're slowly catching up to them in quantity and, from what I hear from blind users, in quality, too."

Andrews found out what a front-runner the geography department is only recently when she filled out a survey on tactual maps for the Geography and Map Division of the Library of Congress. No, she didn't know that University geography graduate John Wolter heads that division. She knows his work, though, she says, pulling a thick, black book from the shelf behind her desk. It is Wolter's 1975 Ph.D. thesis, "The Emerging Discipline of Cartography." Andrews has been using it in her courses.

Pamela LaVigne is a University Relations writer and editor.

THE CHALLENGE OF CHANGE

The pomp was understated, academic, casually dignified.

The circumstance was the November 15th inauguration of the University's twelfth president, Kenneth H. Keller.

To the unknowing or uninvolved, the campus seemed mostly the same as it does any chilly Friday; there was the usual ebb and flow of students, and end-of-the-week classes proceeded according to schedule. But throughout the day in scattered offices around the campus, on the third and fourth floors of Coffman Memorial Union, in Northrop Auditorium, and for thirty minutes across the Washington Avenue Bridge and along the Mall, the University celebrated.

With academic regalia and heralding trumpets, the inauguration marked the official beginning of Keller's presidency and celebrated the University's long history and promising future. It was one of those perhaps too-rare occasions when faculty and staff members, students, community and state leaders, alumni, other friends, and the public at large had the chance to see and feel part of the University as a whole, to participate in a common experience that encompassed all campuses, all disciplines, all University enterprises and efforts.

The inaugural ceremony itself was preceded by a procession of more than 70 dignitaries representing colleges and universities nationwide and 200 faculty members followed by the Regents' Professors, deans, vice presidents, chancellors, and regents. Leading the procession from Coffman Memorial Union, macebearer Stanley Kegler, vice president for institutional relations, was already inside the doors of Northrop by the time Gov. Rudy Perpich and Keller joined the end of the line at Walter Library.

Inside Northrop, the parade formed a sea of flowing black spattered with brilliant turquoises, royal blues, emeralds, and magentas, then broke into applause when Keller, garbed in the University presidential gold gown and black tam, entered the auditorium lobby.

After official greetings and messages of support from individuals representing 56,000 students, more than 15,000 faculty and staff members, and 250,000 alumni, a genuinely pleased Keller was formally installed by the governor, who presented the University mace to him. While the mace, a symbol of authority, has been received by four presidents, a newly designed and cast silver presidential medallion was presented to Keller by chairman of the board of regents Charles McGuiggan.

Balancing the traditional ceremonial activities, however, was Keller's future-focused inaugural address, acknowledging the University's development during the tenures of past presidents, and issuing his own challenge to the University to change and improve in a dynamic manner. (Excerpts of Keller's speech appear on page 22.)

Earlier in the day, the president had breakfast with twenty publishers, editors, and managers of statewide media, and lunch with inaugural participants and delegates from other institutions. The procession and ceremony from 2:30 to 3:30 p.m. were televised live by local Twin Cities stations and transmitted by satellite to the coordinate campuses and the rest of Minnesota.

A public reception for Keller, attended by more than 3,000 people, followed the ceremony at the Radisson University Hotel.

DO NOT READ

UNTIL THE YEAR 2085

Nineteen eighty-five should be remembered as a watershed year for this state and the University of Minnesota. In this year we have in many ways begun to shape change so that we may meet the future on our own terms. Recognizing that knowledge will be the steel of the postindustrial economy, we have focused on education as a key element of our economic development and job-creation strategy. This strategy incorporates having a world-class university, strong and world-renowned for its graduate programs and research.

We are rising to this challenge with plans to substantially increase faculty and to finance more than 100 chairs in various disciplines. With a new electrical engineering and computer science building and with increased commitment to other technology-related disciplines, we are positioned to lead in developing and applying technologies that will guarantee the long-range economic success of our state and our nation.

President Keller brings to the University vital, excellent leadership. His vision, expressed in the "Commitment to Focus" plan, ensures that both human and financial resources will be maximized so that students may fully realize their potential, enjoy prosperous lives, and contribute to the prosperity of others.

Rudy Perpich
Governor
State of Minnesota

On the occasion of the inauguration of Kenneth H. Keller, the twelfth president of the University of Minnesota, it is my wish that a special emphasis be placed on the liberal arts. It is my hope that President Keller will be instrumental in establishing an environment where education of the "whole person" will be foremost. Our society needs persons with well-developed professional skills in engineering, teaching, law, medicine, agriculture, and business, but it also desperately needs individuals who can do the following:

Put issues and events in perspective.

Provide enlightened leadership.

Achieve both broad and profound levels of understanding.

Articulate choices considered and made.

In honor of the inauguration of the twelfth president of the University of Minnesota, Kenneth H. Keller, we present this time capsule of wishes and hopes for the University under his leadership

Appreciate aesthetic worth.

Participate in the creative process.

Convey a meaningful measure of humane sensibility.

In other words, we require persons who can carry on and use the liberal arts in their work and in their lives. I believe that the record will demonstrate President Keller's commitment to the future of the University of Minnesota through his strong support for the liberal arts.

John Q. Imholte
Chancellor
University of Minnesota, Morris

In 1985 the most pressing need of the University of Minnesota is for persuasive leadership. A new University president has come to office and has offered his publics "Commitment to Focus." Those who look back at this administration will have this statement as a benchmark. If the historical record serves them well, they will see "Commitment to Focus" in the context of an institution that had evolved a powerful planning effort and a sturdy bureaucracy. The planning and the rest will be noted, but those looking back will say that these were the Keller years. The years when President Keller was the University's chief administrator must seem to have been good ones for facing challenges. The beginning is hopeful. We have a momentum given by the "Commitment to Focus" as well as the possibility of creating many new academic posts of high prestige and visibility. There are other moves that augur well. Those who look back at this administration will see it as crucial and forward looking.

Robert H. Beck
Regents' Professor of History and Philosophy of Education
University of Minnesota

I would hope that the great University of Minnesota will pursue a course consistent with Cardinal Newman's idea of a university. He defined a university in terms of the concept of *studium generale*, or school of universal learning, with teachers and learners "from every quarter."

Now we witness the spectacle of faculties at several American centers of learning engaged in what can fairly be called intellectual incest. "None but the correct thinkers on this faculty," they cry. And who but *correct* thinkers are competent to decide who are the correct thinkers?

In the "heartland of America" let Minnesota's great University ever be true to Newman's ideal.

Warren E. Burger
Chief Justice
United States Supreme Court

The things I might wish for the University in the future are already indicated in some detail in President Keller's "Commitment to Focus":

- The opportunity for all students to select a quality education at this public institution.
- The strengthening of this University to bring it into the top rank in the country.
- A continuation of emphasis on complete liberal education of all students while at the same time developing our graduate programs so that Minnesota's young people are not tempted to go to other schools for the best education in their chosen field.
- Retaining our top professors by support for their creative work plus an envi-

ronment for open exchange of ideas.

All of these points are concerns of President Keller, and I trust he will remain at Minnesota and be allowed to carry out his plans.

Warren MacKenzie
Regents' Professor of Studio Arts
University of Minnesota

The University of Minnesota, Duluth campus, is anxious to begin a new era of academic excellence under the leadership of President Kenneth Keller. President Keller's vision and dreams of highest academic excellence for the University of Minnesota will be achieved through his strong academic leadership. There has never been a time when the UMD campus has taken more pride in its having been a part of the University of Minnesota. The UMD campus pledges itself to assist President Keller in serving the land-grant mission of the University and the general lofty goals of higher education for the people of the state of Minnesota and for the nation as a whole.

Robert L. Heller
Chancellor
University of Minnesota, Duluth

For a public university to make significant advances as it deals with current problems and prepares to meet the perplexities of the future, it must have these components:

- President—a leader of commanding intellect who courageously defends academic values and institutional autonomy, who knows the prerequisites of academic greatness, and who has a vision of what his/her university can become and, after considering solicited advice carefully, leads the institution in that direction.
- Regents' trustees—dedicated statespersons with a burning commitment to education that makes them sensitively aware of the boundaries of their role and willing to lay aside their parochial concerns in order to promote the welfare of the university as a whole.
- Faculty—scholars, deeply absorbed in teaching and research, who desire to convert the rhetoric of excellence into academic decision making at all levels, and who continually search for creative ways to meet their responsibilities, combining the best of the traditional with the best that emerges from innovative experiments.
- Students—consumers and apprentices who discern the need for *education* as well as training, and who eagerly seize the opportunity to derive benefit from a faculty that not only conveys knowledge but also creates it.
- Legislators—wise lawmakers who support the university because of its unique role, and who perspicaciously recognize that its commitment to focus will enable them to refashion higher education into a more rational system.
- Community—enlightened citizens who not only value the university's contribution to the economy and to the quality of life but also recognize that people are "enabled by understanding," and who are willing, when the arrows begin to fly, to defend the institution in its disinterested search for truth.

The University of Minnesota is fortunate in having most of these components (and potentially *all* of them) working together in its behalf. During the next decade and beyond, it will be facing the difficult challenges of adaptation, but the prospects of our being able to handle them successfully are very good. Let us move ahead and quicken the pace!

John E. Turner
Regents' Professor of Political Science
University of Minnesota

I would like to hope that in this year of declining hope, of world gloom, of hardscrabble thought, of lackluster heroes, of myopic prophets, of pre-depression gluttony that Minnesota with the voice of its new president will ring out a clarion call to men and women to be not faint of heart; to gird for undreamed achievements, to cast down the naysayers; to lift up the weak and the burdened; to move forward to the horizons that beckoned our sturdy forefathers and led them to build this tower of enlightenment in the shadow of the Big Forest.

Let us turn our backs on the sleazy politics of Washington, the ignorant visions of the doom sayers, and hold out our idiosyncratic hands to the people of the world to join us in a crusade that can only end in victory—a crusade to make this a world fit for a new generation of clear-eyed critics and individualists.

Harrison E. Salisbury
Taconic, Connecticut

Cicero said it all in the passage from which we take our motto:

Omnes artes quae ad humanitatem pertinent habent quoddam commune vinculum et quasi cognatione quadam inter se continentur.

All the arts that have to do with mankind have a common bond and, as it were, contain within themselves a certain affinity.

Rutherford Aris
Regents' Professor of Chemical Engineering
University of Minnesota

What do I wish for the University on this occasion? That this be remembered as a period in which the University studied its "Commitment to Focus" and clearly identified a direction for excellence in the University.

What do I wish for President Keller? That he find that he has the support of all the constituencies of the University (internal and external) to truly follow the "Commitment to Focus" and give him the support to make the University of Minnesota one of the truly great universities in the country, now and into the future.

What ideas, objects, events, or persons define the times? Since the University of Minnesota, Waseca is a technical college for agriculture, my first reaction to this question relates to the current scene in agriculture. It is a very difficult time for a majority of those involved in the food and fiber industry. We are in the middle of what is likely to be a major restructuring of production in agriculture, and none of us is completely sure what the outcome will be. A variety of values and concepts is being rethought, and tomorrow's agriculture may not resemble what we have known—but agriculture will continue to be one of the most important aspects of our economy and our future.

What would I like printed in the magazine for future university presidents, students, and magazine editors to read? They should be able to read a synopsis of what the University is today. They should hear from administrators, regents, faculty, and Regents' Professors about what they would like the University to be in the future or what they think the University will be in the future.

Ed Frederick
Chancellor
University of Minnesota, Waseca

University of Minnesota Technical College, Crookston joins with the other collegiate units and campuses of the University of Minnesota in congratulating Dr. Kenneth Keller as the twelfth president of the University of Minnesota. UMC pledges its support to work with Dr. Keller as the University continues its service as a leading land-grant university in this country. His commitment to academic excellence and his vision provide inspiration to all of us.

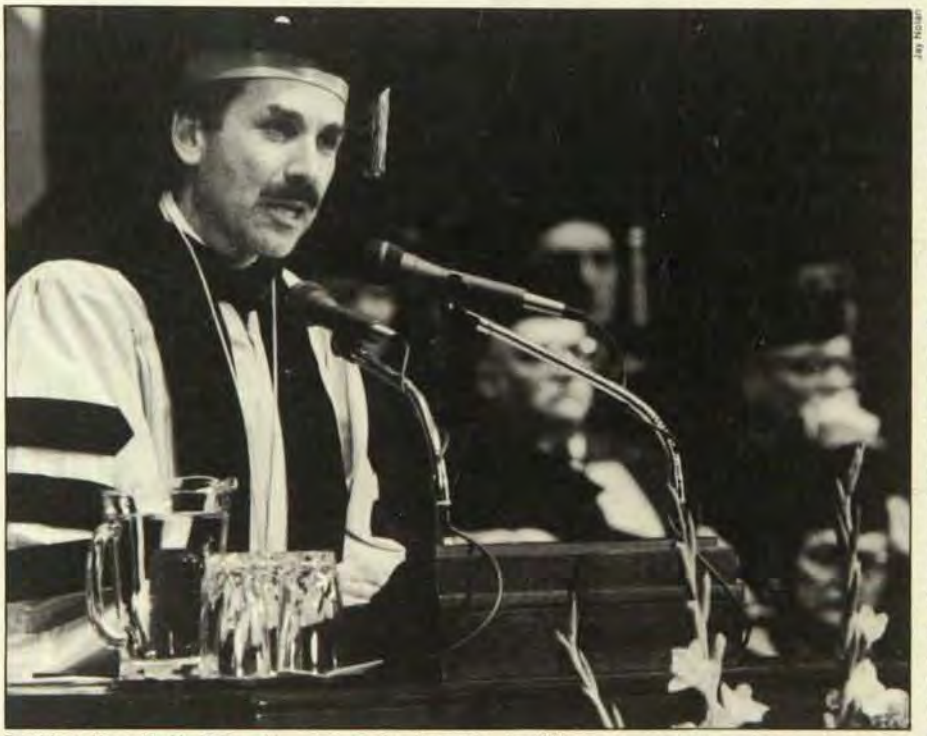
Under Dr. Keller's leadership, UMC, as a rural technical college, envisions the opportunity to strengthen its teaching, research, and service in this area of the state as an integral part of the University of Minnesota.

Donald G. Sargent
Chancellor
University of Minnesota, Crookston

THE INAUGURAL ADDRESS

OF PRESIDENT KENNETH H. KELLER

On November 22, 1869, William Watts Folwell, a 37-year-old New Yorker who had been educated and taught at Hobart College, was inaugurated as the first president of the University of Minnesota. The inauguration took place in the presence of all nine faculty and probably most of the sixteen students in a large room on the third floor of a building known as Old Main.



Jay Kistler

President Kenneth H. Keller, 51, came to the University in 1964 as an assistant professor of chemical engineering. During his University career, he also served as dean of the Graduate School, chair of the senate consultative committee, and vice president for academic affairs.

It was in this setting that Folwell said, "It is hope, not memory, which inspires our hearts and dictates our utterances. We are gathered today in no historic audience-chamber: we employ no ancient symbols nor formulae: no effigies . . . in marble . . . to remind us of the great and good of olden times. But looking forward to the future, amid scenes as yet unused to academic displays, we celebrate and emphasize with song and praise and benediction—beginnings."

In the 116 years since that time, that hope has been fulfilled. From those beginnings, from the class of 1873 with its two graduates to the present, almost 400,000 students have earned their degrees at the University. The lives of hundreds of thousands of other Minnesotans have been touched and affected by this institution. We have built our traditions and accumulated our memories, and the names of Pillsbury and Folwell, Northrop and Vincent, and many others now adorn our buildings to remind us of our past. Thus, today, our inauguration ceremony, with mace and colors, with seals and the symbols on the walls of this auditorium, celebrates our history . . . .

History and tradition take on particular meaning when we talk of change, and in the past several months we have talked a good deal about change. Indeed, change is vital to a university. New areas of knowledge develop; new approaches to learning and teaching evolve; new needs arise in the society we serve . . . .

The period in which we now find ourselves has all the makings of a time of great change. There is every indication that the enrollments of traditional college-age students will go down in the next few years, in sharp contrast to our experience during the last twenty years . . . . But there are significant changes beyond the issue of enrollment levels that will challenge us and that will demand response. Let me give you some examples.

Even as enrollments decline, the makeup of our student body will shift. We will see an increased fraction of minority students and adult and part-time learners whose needs must be met, and more, whose justified aspirations must be encouraged. That will require us to develop more flexibility in the ways we teach and in the times of day in which we teach. It will also offer us opportunities for cultural diversity, which, if we are wise, we will learn to use to enrich the University community.

. . . We face an economic crisis that may well build to a social crisis in the rural areas of our state and that we must help to avert. In contrast to the past, solutions to these problems will not come simply through improvements in the technical processes of production agriculture. They will require a much broader involvement of widely diverse disciplines within the University to address the complex social, economic, and legal issues that confront and confound us.

In still another area, the rate of technological innovation, so important to economic development in Minnesota as elsewhere, has changed the relationships between universities and industries. The speed with which the results of basic research are converted into practical products has brought university and industrial scientists much closer together. The extraordinary expense of equipment for research and development has required that we share it. These developments and the recognition that technology transfer is the only practical way by which the fruits of our scientific accomplishments can improve the lives of people have encouraged us to seek new and innovative relationships with industrial partners. These relationships must be crafted in such a way that our essential independence is maintained.

Finally, and in some sense ironically, the very success that universities have had in promoting technological growth has

brought its own changes . . . . In an age so defined by technology, the preservation and transmission of human values becomes both more difficult and more necessary: more difficult because technology can create its own values and become master rather than servant; more necessary because that distortion is and should be unacceptable.

None of these is a trivial matter for the University. They have led to our discussions of planning and focus, of priorities and choice—in short, of institutional change. But if we are to make that change intelligently, . . . we must see our role as one of linking the past with the future. We have to recognize in our history and in our traditions those principles that are vital to our identity so that we can preserve and enhance them. At the same time, we must be able to distinguish such principles from what Matthew Arnold referred to as "(those) stock notions and habits, which we now follow staunchly but mechanically, vainly imagining that there is a virtue in following them staunchly, which makes up for the mischief of following them mechanically."

The great leaps in the University's history have occurred when we have challenged the habits; the great errors when we have ignored the principles. The distinction between principle and habit is not always easy to see, and that gives rise to the debates we have had and will continue to have about change. That, of course, is as it should be, and I believe that out of it will come a better understanding of our identity . . . .

Let me share with you my own views about our identity—our identity as a public research university, our identity as a land-grant institution. The University was created as part of a new movement in American higher education . . . .

From the beginning, our commitments were in place to provide a diversity of educational options not only to satisfy people's intellectual interests, but to prepare them for careers and to expand knowledge through research. The public support that was implicit in the act establishing the University and that became a reality with the Morrill Land-Grant Act added still other dimensions. In particular, it committed us to recognizing that we educate people not only for their individual benefit, but for the benefit of society. And it led us to recognize that our responsibility to society extends beyond the classroom; that the talent and the knowledge of the University are resources that must always be available to the community . . . .

There is nothing easier than to read into the charge and the tradition the message that we should be all things to all people . . . . As attractive as that notion might have been in simpler times, it is badly flawed today. It is flawed first because it fails to recognize that the University is only one of many public institutions . . . . To assume that if it is not done here, it will not be done well, is a kind of arrogance that is inappropriate. It is flawed also because, in misusing the institution to provide services or programs for which it is not well-suited, we dilute our efforts in the primary areas that are fundamental to our mission and our unique strengths.

As hard as it may be to believe of an institution this large and complex, a public research university is a fragile institution. To carry out its work well, to reach the level of quality that we have accepted as a goal—not quality narrowly defined, but quality rigorously defined—requires that we achieve a number of delicate balances in our activities, that we confront and resolve a number of ambiguities in our roles. If we fail to do so, we won't fail as a university, but we will indeed fail as a great university. In a state as committed to education as Minnesota, that distinction is important.

What are those balances and ambiguities? Let me suggest a few. There is, of course, the balance of teaching and scholarly activity. With only a few, very specific exceptions, the strength of every program in the University depends on that complementarity . . . .

In this respect, public and private research universities are quite similar . . . . In a sense, we can view scholarly activities, that integration of teaching and research, as the basic stitch in the fabric of any research university. But the fabric itself will differ between public and private universities because the design is different. The stimulus of scholarly efforts, the shaping of the broad directions of the public university—of this university—is a response to the needs of the society and the region. Thus, we do not look for differences in the quality of the activities in public and private universities, but we do look for and find differences in the cluster of their activities.

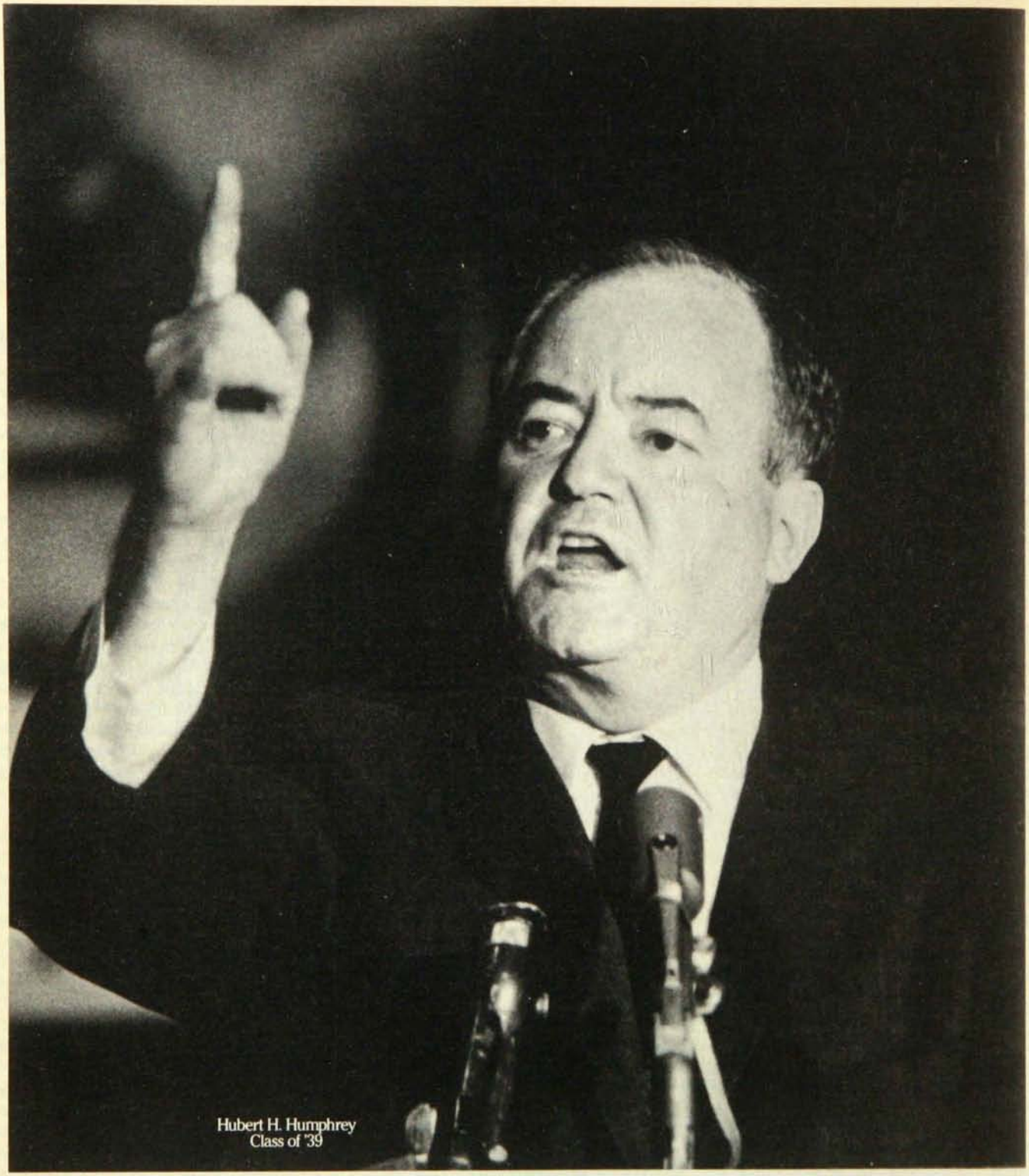
This public orientation of the University illustrates one of the ambiguities that we confront. For its health and its effectiveness, a university requires a certain independence from society, independence that allows it to consider a range of ideas, some popular, some unpopular, and to debate them in order to strengthen our understanding of the issues, independence that allows it to serve as a loyal critic of the society, and independence that allows it the time and the space to discover new knowledge and to create new works.

But a public university must serve and respond to society. This obligation connects it closely to the political and social realities of the community. Thus, there is a constant tension between its need to remain separate and its obligation to connect . . . . But if we are not simply to play our role adequately, but to play it well, we have to work to preserve the independence that is vital to our usefulness . . . we must preserve our identity, we must insure that each thing we do is consistent with our mission . . . . It is as much our obligation to society to maintain and build a strong university as it is to meet the needs of the day. Needs change; the importance of a strong university does not.

I began by talking about change, and I would like to come back to that subject. When one talks about tradition and linkages, when one warns about the importance of preserving identity, when one presses for independence and separateness, it is easy to mistake the message as endorsing the status quo. That is not my intention. I believe that out of the disciplined and thoughtful processes of rational reflection and open dialogue will come new ideas and new insights to change the "stock notions" of the society. Out of the processes of fundamental, unconstrained research will come new knowledge to serve society; out of rigorous academic programs, grounded though not buried in disciplinary knowledge, will come individuals with the capacity to lead their society in new directions. The University can and should change. But it is more important that it preserve its ability to change society; to change and improve our lives . . . .

Today, perhaps more than at any time in the past, the University community has focused on and come to understand many of those issues. Moreover, we are part of a state that has traditionally understood the value of education, encouraging it, and supporting it. Those are reasons for seeing our future as a bright one, and I certainly do.

As I look around this auditorium, it is clear to me that an inauguration ceremony has less to do with individuals than with institutions. We quite properly display, honor, and celebrate our University. I join in that celebration out of respect and love for this University, of which I have been a part for 21 years. In this audience are my mentors, my colleagues, and my friends—my professional family as well as my personal family. As I stand here I find myself filled with memories of the excitement of this place—*our* place. In accepting the stewardship of the University, I do so with very deep pride in this institution and with very deep commitment to it. It is a distinguished University in a great state, and I can do no more than pledge to you my best efforts to care for it and to advance it with your help and support. Thank you.



SOME OF OUR GRADUATES LIVE FOREVER.

It's one thing to make your mark. It's quite another to cut a lasting swath through the conscience of an entire people. But wherever a hand is offered in friendship, or a voice speaks out for justice, the words will forever carry the hope of Hubert H. Humphrey, class of '39.

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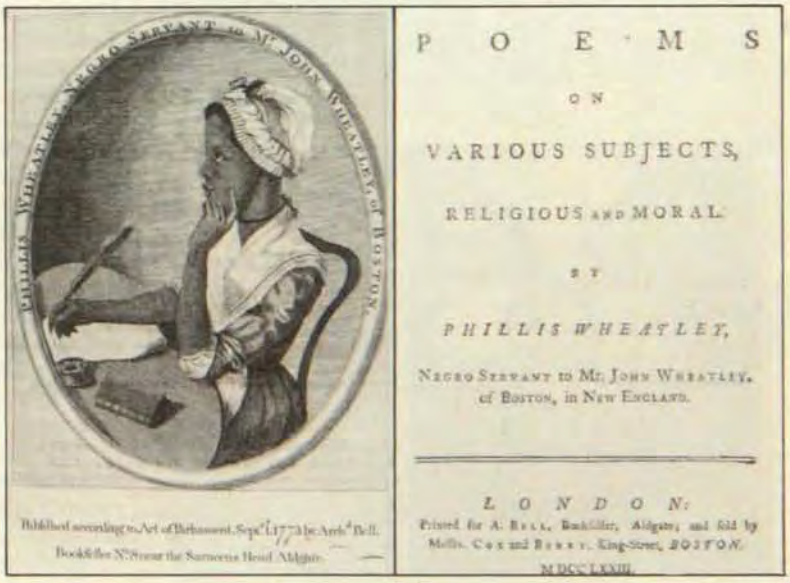
EACH AND EVERY ONE OF WHOM WAS BROUGHT TO YOU BY THE UNIVERSITY OF MINNESOTA.

Silent Witness

"For the past four years I've been in still another college. This time simply a college of books—musty old books that went out of print years ago—and of old people, the oldest old black men and women I could find, and a college of the young; students and dropouts who articulate in various bold and shy ways that they believe themselves to be without a valuable history, without a respectable music, without writing or poetry that speaks to them.

. . . each day I look about to see what can and should be done to make it a bigger college, a more inclusive one, one more vital and long living. There are things our people should know, books they should read, poems they should know by heart . . . ."

Alice Walker
In Search of Our Mothers' Gardens



The University's new Black Studies Collection, 3,000 volumes strong, records the history, heart, and soul of blacks in America. And it's only a prologue

By Amy Ward

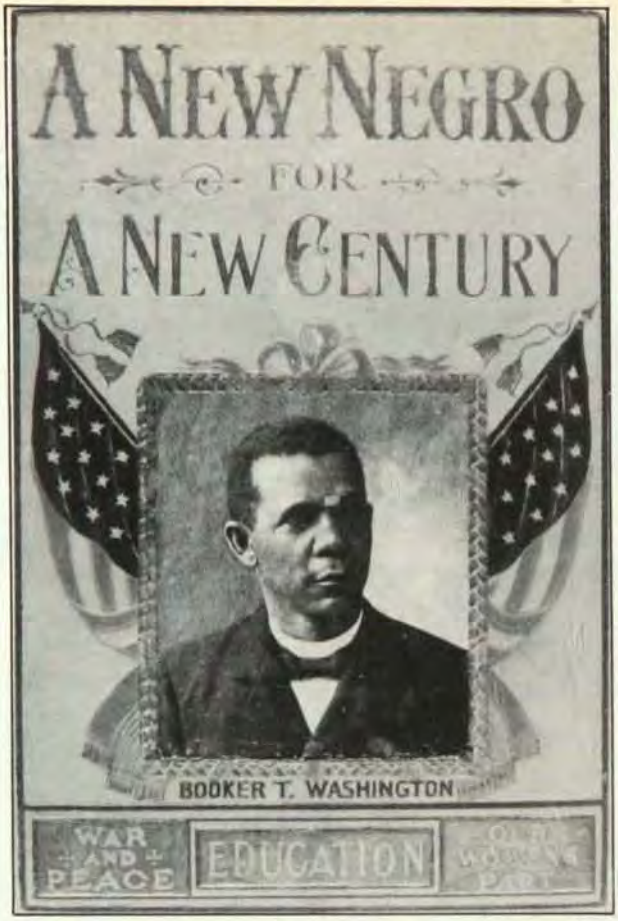
In casual, out-of-class clothes, a wild Hawaiian shirt and white hat that offset his black beard flecked with gray, John Wright, associate professor of English and Afro-American studies, helped unpack 60 cartons of books. As he opened up the precious cargo sent to Special Collections and Rare Books on the fourth floor of Wilson Library at the University of Minnesota, Wright was in awe of the "kaleidoscope of titles and authors and book jackets."

The new Black Studies Collection at the University had arrived. These 3,000 books, some written centuries and continents apart, were gathered together by Richard Lee Hoffman because they were written either by or about blacks. Hoffman, a professor and playwright who teaches English and speech at New York City Technical College in Brooklyn, New York, took almost three decades to amass his collection, now owned by the University.

"Space is a very great problem in Manhattan," says Professor Hoffman ruefully by phone from his home on West Twelfth Street. Aside from storage problems, Hoffman had to sell his ponderous collection to make money to support his work as a playwright. He won an award from the Eugene O'Neill Memorial Foundation in 1970 for his play *Modern Times*.

Far more than literature, history, biography, social science, and art, far more than rare books, old manuscripts, notes, and inscriptions by famous people, the Black Studies Collection is a record of

Previous page. Title pages, *Poems on Various Subjects, Religious and Moral*, by Phillis Wheatley, London, printed for A. Bell, sold by Cox and Berry, Boston, 1773.



Cover, *A New Negro for a New Century*, by Booker T. Washington, American Publishing House, Chicago, ©J. E. McBrady.

Photograph of Muhammad Ali by Gordon Parks for *Life*, from *To Smile in Autumn*, by Gordon Parks, W. W. Norton and Company, New York, ©1979.

From bottom left: Silhouette by Joseph Cranston Jones, from *The Tree Named John*, by John B. Sale, The University of North Carolina Press, Chapel Hill, North Carolina, ©1929. Illustration by Charles Cullen, from *The Black Christ and Other Poems*, by Countee Cullen, Harper and Brothers, New York, ©1929. Illustration by Aaron Douglas, from *God's Trombones*, by James Weldon Johnson, Viking Press, New York, ©1929.

both the internal view (provided by black authors) and the external view (provided by other authors) of black life in America since its inception.

The strength of the collection is in twentieth-century literature and works by authors important in Wright's current research on the 1920s Harlem renaissance period—authors such as James Weldon Johnson, Langston Hughes, and Richard Wright.

Just to see all these works by and about blacks in one place is a thrill, says Wright, who spearheaded the movement to acquire the collection. To see such a testament to black literature and culture before, Wright had to travel to Harvard University or to the Harlem branch of the New York Public Library.

But why spend $150,000 on these books when many are still available in other libraries, some titles on the lower floors of Wilson itself?

"Already the works of major authors from the forties and fifties are no longer available," says Wright. "Even texts of the sixties are disappearing from print . . . . The publishing industry . . . interested in mass-market sales at tremendous volume, has made the viability of Afro-American writing, save for a few select authors, increasingly precarious."

Staying in print is a problem for most authors, regardless of race, but "it's intensified for Afro-American authors," whose sales can fluctuate with the cycle of public attention to race relations, says Wright. The hardcover editions of works by contemporary writer Ishmael Reed went out of print within four years of first publication, Wright points out, "and he is a major literary figure of this period. Even well-stocked public libraries, like the Minneapolis Public Library, are not comprehensive at all in their Afro-American collections.

"This was a chance for us to acquire, in one fell swoop, a collection of national stature," says Wright. To assemble a similar body of work in piecemeal fashion, he notes, would have been difficult and may have been impossible because of the breadth and quality of the collection.

The new collection will be a major resource for research by students and faculty in the Afro-American studies and English departments, predicts Wright. And since both American studies and women's studies are now focusing on cultural pluralism, the collection will no doubt become a valuable asset to those departments as well.

As with all special collections owned by the University, the books can be used by anyone: students, faculty, and those not associated with the University. You just have to take the elevator to the fourth floor, give up your briefcase or backpack to a special locker, and, armed with only a pencil and tablet, wait quietly in the

reading room as a librarian disappears through the door of the vault to retrieve your books.

The vault is kept dark because acid in modern paper causes book pages to yellow in the light, says Austin McLean, curator of Special Collections and Rare Books, as he flips on a switch to reveal tier upon tier of books, many old and leather bound. "You can see a newspaper age practically overnight," says McLean, who is slender and graying, with intense blue eyes. He moves swiftly through the stacks like an agile monk in a familiar, quiet cloister, and with broad gestures points to the new Black Studies Collection.

For some, a book is merely the language and ideas expressed by the text. But to a true bibliophile, the type style, the kind of paper, the binding, even the dust jacket design, are all significant; the book becomes an entity of both form and content.

But books wear out, lose their dust jackets, are rebound, and may eventually leave the reader with no idea of what they looked like originally. "A book is an artifact of our civilization," says McLean, "and you want to know what it looked like when it came out." However, some books are lost forever. "Some books printed in the incubular period from 1450 to 1501 have vanished from the face of the earth."

Luckily, most of the books in the Black Studies Collection are in excellent condition. Many have the original dust jackets, of interest to artists because of the artwork and to sociologists because book jackets even of years past were designed to sell books.

Readers not only can read first editions, without prefaces or editing changes of later volumes, but also can study dust jacket art such as the Art Deco stylizations of hanging human figures on Countee Cullen's 1920s book of poetry, *The Black Christ*.

The comprehensive collection appears to leave no stone unturned in documenting the work of black authors, including a 1773 copy of *Poems* by Phillis Wheatley, the first Afro-American to publish poetry. Taken from Senegal on the west coast of Africa as a child, she became a house slave (later freed) for the family of John Wheatley in Boston. She learned to speak English, was educated, began writing poetry as a teenager, and became an international celebrity during the revolutionary period. Although Wheatley's eighteenth-century verse may not be popular today, her life's work is an important chapter in the adaptation of African slaves to the New World.

More accessible to the modern reader might be the raw and powerful lines of another black female poet, Ntozake Shange. In her book *Nappy Edges* she

Cover, pamphlet, painting by Charles White, from *Salute to Paul Robeson on the Cultural Celebration of his 75th Birthday*, 1973, ©Paul Robeson Archives, Inc.

Title pages, *Bond and Free; A True Tale of Slave Times*, by Jas. H. W. Howard, Edwin K. Meyers, printer and binder, Harrisburg, Pennsylvania, ©1886.

Photograph by Doris Ulmann, from *Roll, Jordan, Roll*, text by Julia Peterkin, Robert O. Ballow, Publisher, New York, ©1933.

writes:

> "you are as sweet as magnolia milk
> in dark spanish coffee."

Or the heartfelt appraisal by Ralph Ellison (author of *Invisible Man)* of Mahalia Jackson in a 1958 *Saturday Review:*

> For all her concert appearances about the world she is not primarily a concert singer but a high priestess in the religious ceremony of her church. As such she is as far from the secular existentialism of the blues as Sartre is from St. John of the Cross.

Also familiar to many contemporary readers will be the works of James Baldwin, Paul Robeson, Maya Angelou, and Alice Walker.

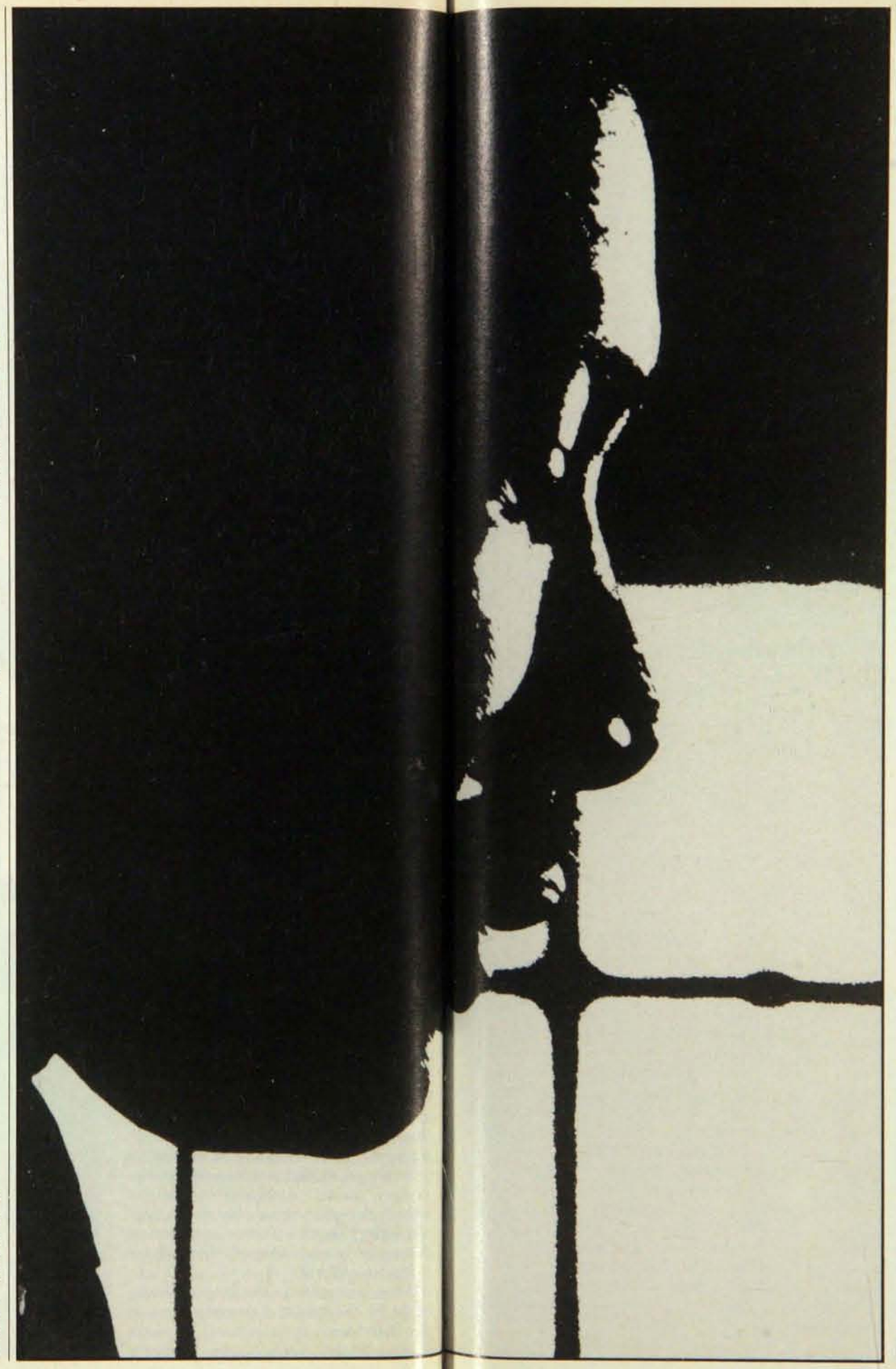
Other, more obscure, works preserve for posterity evidence of racism. Thomas Dixon, Jr.'s *The Clansmen* is a 1905 historical romance about the Ku Klux Klan, and in *Adventures of an African Slaver,* a nineteenth-century seafarer complains:

> In old times, before treaties made the slave-trade piracy, the landing of human cargoes was as comfortably conducted as the disembarkation of flour.

Counterpoint to these volumes is *Letter from Birmingham Jail,* written in 1963 by Martin Luther King, Jr.:

> I guess it is easy for those who have never felt the stinging darts of segregation to say wait. But when you have seen . . . hate-filled policemen curse, kick, brutalize, and even kill your black brothers and sisters with impunity; . . . when you suddenly find your tongue twisted and your speech stammering as you seek to explain to your six-year-old daughter why she can't go to the public amusement park . . . and see her begin to distort her little personality by unconsciously developing a bitterness toward white people . . . when you are forever fighting a degenerating sense of "nobodiness"—then you will understand why we find it very difficult to wait.

The collection includes many works by white authors about blacks, among them Harriet Beecher Stowe's *Uncle Tom's Cabin,* Joel Chandler Harris's Uncle Remus books, the controversial Black Sambo books by Helen Bannerman, *Kingsblood Royal* by Sinclair Lewis, *Member of the Wedding* by Carson McCullers, *The Reivers: A Reminiscence* by William Faulkner, and Jack Kerouac's novel *Pic.*



Photograph by Kenneth Thompson, from *The Measure of a Man,* by Martin Luther King, Jr., Pilgrim Press, Philadelphia, ©1959 The Christian Education Press.

Some southern white writers—Julia Peterkin and E. C. L. Adams, for example—collected and wrote about black folklore and legends, their works linking Afro-American and Euro-American traditions.

Biographies of jazz greats, popular entertainers, and sports figures abound. The collection contains not only books (many signed by their authors and some inscribed to friends), magazines, and photographs, but also scripts: a shooting draft of *Roots: The Next Generations,* the carbon typescript of the 1943 all-black version of *Carmen,* and the screenplay of *To Sir, with Love.*

From academic works to a Wonder Woman comic book written by black science fiction writer Samuel R. Delaney, the collection seems to have no limit to its diversity. Histories of black Civil War soldiers share shelf space with *Soul on Ice* by Eldridge Cleaver. *The Good Fight* by Shirley Chisholm, the first black U.S. Congresswoman and the first black presidential candidate, contrasts sharply with *I Was a Negro Playboy "Bunny" (at New York's Playboy Club).*

The collection boasts three copies of Richard Wright's autobiographical best-seller *Black Boy,* and *The Flowers of Friendship: Letters Written to Gertrude Stein* is included by virtue of a 1945 letter from Wright to Stein about her response to his book:

> The things you said about *Black Boy* made me very glad . . . . America has made Negroes into a strange people . . . . They live and move and walk through the white world with fear in their hearts . . . . It is all like a nightmare. But for writing, it is great. Negro life as it relates to white life shimmers with a thousand little dramas and I've been able to get only a shadow of what I've seen and felt on paper.

Such shadows, perceptions, and facts—by Wright and by other authors—are just what have been captured en masse in the new Black Studies Collection. By harboring the work of black writers and the work of other writers about black life, the University has established a major resource for the study of Afro-American literature and culture. And to avoid disappointing present and succeeding generations of students and scholars, plans are already under way to add to the collection by keeping pace with contemporary black writers. As Alice Walker may have observed, the garden will grow brighter. The college grows bigger.

Amy Ward is a Twin Cities free-lance writer whose works have appeared in Twin Cities *and* Minnesota Monthly.

Thoughts on the Revolution

By Alice Walker

Cover, illustration, from *Uncle Tom's Cabin; or Life Among the Lowly*, by Harriet Beecher Stowe, The Riverside Press, Houghton, Osgood and Company, Cambridge, Massachusetts, 1879, ©1851 and 1878 Harriet Beecher Stowe.

The real revolution is always concerned with the least glamorous stuff. With raising a reading level from second grade to third. With simplifying history and writing it down (or reciting it) for the old folks. With helping illiterates fill out food-stamp forms—for they must eat, revolution or not. The dull, frustrating work with our people is the work of the black revolutionary artist. It means, most of all, staying close enough to them to be there whenever they need you.

But the work of the black artist is also to create and to preserve what was created before him. It is knowing the words of James Weldon Johnson's "Negro National Anthem" and even remembering the tune. It is being able to read "For My People" with tears in the eyes, comprehension in the soul. It is sending small tokens of affection to our old and ancient poets whom renown has ignored. One of the best acts of my entire life was to take a sack of oranges to Langston Hughes when he had the flu, about two weeks before he died.

We must cherish our old men. We must revere their wisdom, appreciate their insight, love the humanity of their words. They may not all have been heroes of the kind we think of today, but generally it takes but a single reading of their work to know that they were all men of sensitivity and soul.

Only a year or so ago did I read this poem, by Arna Bontemps, "The Black Man Talks of Reaping":

I have sown beside all waters
in my day.
I planted deep within my
heart the fear
That wind or fowl would take
the grain away.
I planted safe against this
stark, lean year.

I scattered seed enough to
plant the land
In rows from Canada to
Mexico.
But for my reaping only what
the hand
Can hold at once is all that I
can show.

Yet what I sowed and what
the orchard yields
My brother's sons are gather-
ing stalk and root,
Small wonder then my chil-
dren glean in fields
They have not sown, and feed
on bitter fruit.

It requires little imagination to see the author as a spiritual colossus, arms flung wide, as in a drawing by Charles White, to encompass all the "Adams and the Eves and their countless generations," bearing the pain of the reaping but brooding on the reapers with great love.

Where *was* this poem in all those poetry anthologies I read with eager heart and hushed breath? It was not there, along with all the others that were not there. But it must, and will, be always in my heart. And if, in some gray rushing day, all our black books are burned, it must be in my head and I must be able to drag it out and recite it, though it be bitter to the tongue and painful to the ears. For that is also the role of the black revolutionary artist. He must be a walking filing cabinet of poems and songs and stories, of people, of places, of deeds and misdeeds.

Alice Walker won a Pulitzer Prize for her novel The Color Purple.

Excerpted from *In Search of Our Mothers' Gardens*, by Alice Walker, Harvest Books, Harcourt Brace Jovanovich, Publishers, New York ©1983 by Alice Walker.

The First Step

The purchase of Richard Hoffman's 3,000-volume collection not only brings one of the most comprehensive and spectacular collections of literature by and about blacks to the University, it is a significant step in bringing the American studies program into a role of national leadership.

"The collection represents a superb opportunity to ground the program in a distinguished collection that can serve as a regional magnet for students and researchers," says John Wright, associate professor of English and Afro-American studies. "In one move, the program has acquired a resource of national importance and visibility that bolsters the department's redefinition and curricular expansion. With many of the books and materials represented in the collection either extinct or already institutionalized, it would be nearly impossible to duplicate such a collection today."

The University of Minnesota Foundation has taken the responsibility of raising $75,000 to pay for half of the collection. "In addition, we need to develop funding sources for new acquisitions and maintenance of the collection," says Austin McLean, curator of Special Collections and Rare Books. Corporations or individuals interested in contributing to the collection are asked to contact Mary Hicks, Foundation project development officer, at 612/373-9934.

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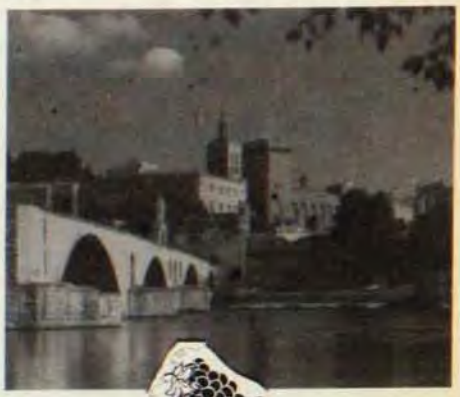
$2650 per person, double occupancy from Minneapolis/St. Paul via New York



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JOURNALISM

Taking a Byte out of *Daily* Production

Romanticism has given in to efficiency at 10 Murphy Hall. The glue-smeared desks, the twelve-foot-long patched-up stories draped over shaking old dividers, and the steady cacophony of hammering typewriters and shouting reporters have given way to computers, sedate dark blue furniture, and journalists subdued by the presence of modern technological superintelligence.

The *Daily* newsroom isn't what it used to be.

The *Daily* has purchased a so-called dual CPS system from ATEX that has two identical main computers that control 31 terminals in the newsroom, and a system for translating and beaming the finished stories to another system in the production department, where the paper is laid out electronically. That department is located three blocks away on Washington Avenue and Oak Street in Stadium Village. Each of the computers can control sixteen terminals, so if one of them breaks down, the newspaper can still be produced.

The *Daily*'s new computer system arrived September 3 and was up and running three days later, just in time to produce the homecoming issue. The installation was finished two weeks sooner than normal for such a system, says John Slothower, *Minnesota Daily* production manager, because of the *Daily* staff's careful planning and previous knowledge of computer language.

"The whole move from a manual to a completely electronic system covered a period of about sixteen years," says Slothower.

The *Daily* was totally produced by outside contractors until 1971, when the production department started looking for an electronic newsroom system. Because of excessive costs for premature systems, planning for it had to be put on hold. In 1976 the *Daily* finally purchased a system with eight terminals for the production department, but reporters continued to work on typewriters because installing newsroom computers was too costly. In 1982, a serious planning phase started, which culminated in a letter of intent with ATEX in January 1985.

The final purchase price for the system is several hundred thousand dollars. The investment has put the *Daily* in line with other modern newspapers across the nation. "It's very exciting because we're finally providing our reporters with an environment they'll encounter when they go into the real world of journalism," says Slothower.

Although the purchase of the new computer system causes reporters to reminisce about the old days, most of them seem to agree that the computers have made their lives a lot easier. Says Doug Iverson, editor of the *Minnesota Daily*, "I kind of miss those old days, but it's much more efficient now."

Since no typing is required, the *Daily* has cut production time 60 percent, says Iverson. Previously, the stories had to be typed, then edited manually before they were sent to the production department to be set into type. This arrangement sometimes led to misunderstandings between the editors and the production department. "Now, we have more control of the copy," Iverson says. "It is more accurate and time efficient." The stories are entered directly into the computer system by reporters, and editors can call up the stories on their own terminals and edit directly from the screen.

The ease of editing has also led to longer stories, says Iverson. Reporters used to have a tendency to write short stories when they had to use typewriters, because editing was a tedious and time-consuming process.

The efficiency and ease of editing have also led to later deadlines for the *Daily*. Stories can now be finished as late as 11:00 p.m. and still make it into the next edition.

Timeliness, accuracy, and thoroughness are some of the positive benefits of the *Daily*'s computerization, but the staff has fallen victim to a less positive consequence, which does not necessarily further the ideals of objective journalism. Says Iverson, "I think we would die if we didn't have the system.

"We must be spoiled."

MEDICAL TECHNOLOGY

The Bourgeois Bruise

If you find your body covered by bruises after a long night with gin and tonic, the cause might not be what you think.

You could be a victim of "cocktail purpura."

Cocktail purpura bruises are a common symptom of thrombocytopenia, a condition that is caused by the quinine in

tonic water. In some people, quinine can lead to a low platelet count in the blood—which in turn can cause spontaneous bleeding.

Quinine is not the only trigger of this condition. Several hundred compounds can provoke abnormal bleeding disorder, according to Doug Christie, assistant professor in the Medical School, division of medical technology. "Quinine and quinidine, along with other cardiac agents, are the most common, but diuretics, antidepressants, cancer-treating drugs, psychiatric drugs, Tylenol, aspirin, penicillin, gold, and even some foods—like citrus fruits and beans—have been known to cause thrombocytopenia," he says.

Thrombocytopenia is the medical term for a low platelet count, which is often caused by the destruction of platelets in the blood. Platelets are necessary for what is known as hemostasis, or normal arrest of bleeding processes. As the blood circulates, it exerts a certain amount of pressure on the microcapillary system. During the normal course of the day, this pressure ruptures some of the capillaries. "This is a normal process in our bodies," Christie says. "When that happens, the platelet recognizes this microscopic wound, sticks to the wound, and seals the broken microcapillaries until they're healed.

"If you don't have any platelets or have an extremely low platelet count, you will frequently bleed spontaneously even if you just sit in a chair."

This bleeding can progress into different stages, each with its own symptoms. The first stage is petechiae, which are small red spots on the surface of the skin. The second stage, purpura, causes bruising—and might escalate into intracranial, gastrointestinal, and urinary tract bleeding, all of which are life-threatening complications of thrombocytopenia.

Although these symptoms can be triggered in many ways, Christie's research focuses on drug-induced immune thrombocytopenia—how drugs and different medications provoke production of antibodies that destroy platelets. He is concentrating his efforts on clinical and molecular studies, as well as broader studies that attempt to reveal some common denominators among patients who get this disease. After five years of studying why the body makes antibodies against its own platelets, he now heads a leading research program on drug-induced platelet antibodies in the country.

In his clinical work, Christie is looking for new testing procedures to detect antibodies in a patient's blood serum. "The antibodies the patients make in response to the drug are often extremely difficult to detect and to characterize," says Christie. "In our laboratory, we are seeking more sensitive, more cost-effective methods to detect these antibodies in patients suspected of developing drug-induced immune thrombocytopenia, but in whom no antibodies were detected using standard methodology. Many of our assay procedures may simply not be sensitive enough now."

One of his newly developed techniques, the rosette method, has proven a highly sensitive way of detecting the drug-dependent antibodies. A patient's serum suspected of having antibodies is mixed with platelets and the drug believed to have caused thrombocytopenia. A commercially available substance called Protein A is then added. If drug-dependent antibodies are present in the patient's serum, they will cause the platelets to adhere to the Protein A, forming clusters that have an appearance like a rose when seen through a microscope.

Christie developed this method at the Blood Center of Southeastern Wisconsin in Milwaukee, and says he is the first to report the use of the rosette method to detect drug-dependent antibodies.

Christie's molecular studies focus on the nature of the reaction between the antibody and the platelet when the drug is present. He is also seeking answers that will explain how the antibodies are formed and what the drug is doing.

Christie also asks why only certain patients get this side effect from using the drug. "Can we find some common denominator among all of these patients? Can we say that if you have this particular blood type or this particular genetic factor, you're more likely to develop these antibodies?

"Right now, that's only speculation," he says. Christie is doing his best to find answers to the questions regarding this disease. His appointment at the University offers benefits to the University Hospitals, to himself and his own research, and to the people who are afflicted with this condition.

"I'm helping the hospital system to set up their own testing for drug-dependent antibodies. This has a double benefit. One is that they don't have to wait so long for a definitive diagnosis. It also provides me with the ability to locate patients who are in the local area. My research is heavily dependent on the willingness of patients who have recovered from drug-induced immune thrombocytopenia to donate serum and plasma that contain these drug-dependent antibodies. Presently, the only source of these antibodies is the patients who make them . . . and who are willing to donate some of their blood for ongoing research."

For the victims of cocktail purpura and other symptoms of thrombocytopenia, comforting news should be that Christie and his research team are coming up with new ways to detect the antibodies and are getting closer to finding a common denominator among the patients. Some other findings of Christie's are not as comforting, however. He's learning that once a white blood cell has been triggered to make the antibody, it retains the ability to do it again, long after it has shut down active production. Says Christie, "These lymphocytes [white blood cells] behave as if they are armed and ready to fire if they ever see that drug again. The patient must always avoid this drug in the future because any contact with it might precipitate the profound, life-threatening thrombocytopenia."

PHARMACY

Outpatient Pharmacy

They have catheters inserted in their veins all their lives. Many of them can't eat anything. Some can but don't get enough nutrition out of the food they eat. At night they hook the catheters up to machines that pump nutrition into their systems.

"It's a different kind of intake for your calories," says a south Minneapolis man who is suffering from gastrointestinal disorders. "I can't get enough food through normal supplement. I must accept it and deal with it.

"It's kind of hard sometimes."

A few years ago, a person suffering from gastrointestinal disorders would have either been dead or confined to a hospital. Now the University Hospitals, through the Home Health Care system, sends these patients back to their homes with a heavy load of information, ready-made intravenous food, and a feeding machine.

The Home Health Care system is a part of the nutrition support program, which is a rapidly expanding area within the University's clinical pharmacy program. It is also an example of one of the many new roles of the pharmacist. These new pharmacy functions include cooperating closely with doctors to prescribe drugs during surgery, running a drug-dosing service and the state Poison Information Center, and researching drug effects in elderly patients.

The Home Health Care program trains 30 patients with gastrointestinal disorders a year, and a multidisciplinary team monitors 15 patients at any given time. The patients come from all over the country but are primarily from Minnesota, the Dakotas, Iowa, and Wisconsin. Patients living far away do not need to report to the hospital very often; instead, the Home Health Care team contacts local physicians or public health nurses and has them monitor the patients.

During a patient's hospital treatment, a

physician inserts an intravenous catheter into his or her vein. A clinical pharmacist teaches the patient how to take care of the catheter, how to administer the fluid from the machine, and how to handle the solution, which is made in hospitals or by private companies. The patient is then sent home.

The Home Health Care program is an example of the nutritional assessment research conducted by today's pharmacists. The Home Health Care team is a multidisciplinary group, consisting of three pharmacists, one pharmacy resident, one pharmacy fellow, a nurse, a dietician, three physicians, a surgeon, a pediatrician, and an expert in internal medicine.

The team "crosses almost all lines within the health-care field," says Bob Cipolle, assistant dean in the school, adding that the program serves patients who are critically ill and in intensive care units as well as those who are in their homes and take care of themselves.

People who are under high stress or are undergoing transplants or other forms of surgery need supplemental carbohydrates, calories, and fat. At University Hospitals, pharmacists try to determine the best balanced diet to maximize the body's own defense mechanism.

Says Cipolle, "If the body doesn't have the ability to fight off infection, all the antibiotics in the world won't do you any good. We are now learning that it's very important to treat patients aggressively with nutritional supplements early on."

Another new role for pharmacists is working directly with doctors to prescribe "high-tech" drugs—drugs that can be highly toxic and are given to patients undergoing surgery, particularly those having transplants. "This is certainly a unique role [for the clinical pharmacist]," says Cipolle. "When you transplant a foreign organ into somebody, the body tries to reject it, and we give a very important combination drug therapy to suppress the body's ability to reject it."

Some faculty members in the school have created a pharmacokinetic—drug-dosing—service. They can individualize drug doses by measuring the drug level in the blood and determining exactly how fast a patient metabolizes the drug. This has been done mostly for patients with cardiovascular diseases, says Cipolle, but it is also used extensively when treating overdoses and toxicology cases.

Another example of the changing role of the pharmacist is Rick Kingston, a faculty member who works at St. Paul-Ramsey Medical Center, operates the state Poison Information Center, and coordinates a network of pharmacists throughout the state. These pharmacists answer questions about poisonings, overdoses, and toxins.

Pharmacists researching drug effects on elderly patients are also bringing their expertise to the larger community. The elderly often have a special need for drugs and are more sensitive to them than younger and healthier people might be, says Cipolle. "It's common to find older people who have four to six medications prescribed for them. There is a potential for problems caused not only by the drug but also by the inability of the patient to manage all of these tablets and capsules they have to take every day."

These new functions mean that today's clinical pharmacists are no longer restricted to the pharmacy counter. They are now working actively to save people's lives in the hospital—and are keeping them healthy when they are sent home.

LAW

For Inquiring Minds

These days the *Law Alumni News* is more than just a newsletter. Its glossy cover, smooth pages, and professional layout are an impressive contrast to the word-processed, three-page, stapled newsletter.

This is a new look for the Law School's publication, which has a long history as a newsletter. Recently, however, interest in the publication faltered, and the school went several months without publishing its newsletter before making a comeback in a new magazine format.

The fall/winter issue of the magazine drew good reviews from administrators, staff, and alumni. At first, faculty wasn't excited about filling the pages of another newsletter, but after the first issue came out with a new look and new editorial format, Vanne Hayes, assistant dean of the school and editor of the magazine, received complaints from professors who thought the magazine's space was insufficient to cover all subjects. Consequently, enough material has been contributed for the next issue to expand the magazine from twelve to sixteen pages.

The school plans to publish two magazines a year: a fall/winter issue and a spring/summer issue. Although plans are being made to include feature stories about alumni and faculty in future issues, the magazine is currently mostly news and event oriented. It includes sections such as "Placement News," "Law News," "Faculty Notes," "Alumni News," and "Law School Programs." Items in these sections include students' admission scores, the new students' majors and the schools they come from, and what jobs the students get after graduation.

"The magazine is also a good communications vehicle for alumni," says Hayes. "We try to give them a flavor of the special activities we have." This includes information about the school's programs and seminars, information about job changes and retirements among alumni, and stories about the faculty's research activities.

"The Law School alumni have a lot of pride in their school," says Hayes, "and we want to do anything we can to reflect this excellence."

VETERINARY MEDICINE

Veterinary Variations

Taking care of family pets when they get sick is not necessarily the only career choice for veterinary medicine graduates. To prove that point to current veterinary students, the Minnesota Veterinary Alumni Society presented the Life after Veterinary College series in October.

"The purpose of the program was to provide an opportunity to view alternatives currently available to veterinary graduates," says Professor Glen Nelson, director of alumni affairs for the college, noting that a majority of students think only of private practice as a career choice.

The series, held on two consecutive Thursday nights from 7:00 to 9:00 p.m., featured eight veterinary alumni who work in areas other than private practice.

Speakers and their topics included Regent Charles Casey, large-animal practice; Roland Olson, now with the Ramsey County Humane Society, animal welfare and military veterinary medicine; Laverne Schugel, industrial veterinary medicine; Earl Thompson, who is working in Ghana and Nepal, veterinary needs overseas; Associate Professor Shirley Johnston, academic veterinarian careers; Tom Haggerty, executive secretary of the Minnesota State Board of Animal Health,

regulatory veterinary medicine; Peter Poss, general manager of Jennie-O Foods in Wilmar, Minnesota, and Gerald Sprout, small-animal practice.

Although only 16 percent of veterinarians nationwide are in nonprivate-practice areas, alternative careers should be brought to students' attention during their studies, says Nelson.

This is the first time such an elaborate series has been conducted for the college. Reception was so good that another night may be added to the program next year.

The Minnesota Veterinary Alumni Society has 362 members.

LIBERAL ARTS

Cultural Pluralism New Requirement

Come fall 1986, all incoming students to the College of Liberal Arts (CLA) will be required to take at least two courses that focus on Afro-American, American Indian, Asian American, or Chicano cultures. By making this change, the University becomes the first state university to institute a U.S. cultural pluralism requirement. (The courses can be used to fulfill other CLA requirements also.)

"Just as the world-studies requirement was made because we thought it was important to learn about other worlds, this requirement was made because we thought it was equally important to learn about our own world," says Jean Cameron, CLA curriculum coordinator. "We wouldn't think it strange to require American history, and this is what this is."

The requirement, passed this spring by the Council on Instruction and Advising and the Assembly, was actually proposed two years ago by CLA Dean Fred Lukermann.

For three reasons, the requirement failed to pass before and only narrowly passed (27 to 24) this year. Some faculty believed that there would be too many requirements and that cultural pluralism would be too controversial an issue to address as a requirement.

Others feared that if the change was made, everyone with a concern would feel they should get a required course in the CLA curriculum, too. This potential problem was alleviated, says Cameron, by adding a clause that the U.S. cultural pluralism classes must incorporate other significant social factors, such as social class, gender, age, and sexual preference.

The requirement as finally passed also stipulates that courses deal with the general concepts of race and ethnicity, and ethnocentrism and racism.

Cameron notes that students were the greatest supporters of the requirement.

PUBLIC HEALTH

Young at Heart

Most people know that if they smoke, are over 40, overweight, sedentary, or have high blood pressure, they should watch for signs of heart disease. But are there trouble signs for people under 30?

An answer to that question is the crux of a long-term study by the University's division of epidemiology, the University of Alabama, Northwestern University, and an Oakland, California, health maintenance organization.

Coronary Artery Risk Development in Young Adults (CARDIA) will monitor 5,100 18- to 30-year-olds nationwide. Each voluntary participant receives extensive testing and a physical examination, including an electrocardiogram, a treadmill test, tests for blood constituents and lung function, and measurement of body size and fat. Participants also receive a questionnaire about their psychosocial habits and diet, says David Jacobs, principal investigator in Minneapolis.

Study participants will receive the four-hour examinations every two years, but it will be five to ten years before published results have any meaning, says Jacobs.

Approximately twenty University people are working on the project, recruiting volunteers door-to-door. Minneapolis will have 1,400 volunteers. The first round of examinations will not be finished until May or June.

Study participants are differentiated four ways: by gender, ethnicity, age, and education. "Education is a reasonable surrogate for socioeconomic status," explains Jacobs.

The age of the group presents a challenge. Convincing a large number of people who are under 30 of the program's importance is often difficult. These young adults are often not set in their habits, rarely live in one place for a long time, and usually do not make the study a priority. In addition, the examination is so long that finding time for it is hard for them. Finally, they have to be found every two years, says Jacobs.

These and other challenges have created the need for an improved methodology. "In the process, we have made advances in collecting dietary and exercise-ability information," says Jacobs.

"The health value of the examination for the participant is stressed," says Mildred Cox, recruitment supervisor. "If they were to get a similar examination from their medical provider, it would cost between $400 and $600."

The study is being funded by the National Heart and Lung Institute, a division of the Human Health and Services Department.

This department was compiled by Bjørn Sletto and Alia Yunis, Minnesota interns and students in the School of Journalism and Mass Communication.

COLLEGE OF EDUCATION

'48 **Wesley J. Matson** of Minneapolis, former dean of education at Winona State University, has received the Gordon Mork Outstanding Educator Award of the University's College of Education Alumni Society.

COLLEGE OF FORESTRY

'71 **Joseph Ulliman** of Moscow, Idaho, has received the Phi Kappa Phi/Alumni Association Distinguished Faculty Award from the University of Idaho. Ulliman is on a one-year sabbatical in West Germany, where he is preparing a book on remote sensing and conducting research on acid rain's effects on the Black Forest.

GRADUATE SCHOOL

'50 **Dwight A. Ink** of Rockville, Maryland, has been nominated as assistant administrator for the bureau of Latin America and the Caribbean of the Agency for International Development. Ink, former president for administration of the U.S. Synthetic Fuels Corp., chaired the U.S. delegation to Mexico for the U.S.-Mexico Exchange on Administrative Reform in 1985.

'52 **John D. Scanlan** of San Diego, California, has been nominated to the post of Ambassador to the Socialist Federal Republic of Yugoslavia. A former University instructor of general studies, Scanlan entered the U.S. Foreign Service in 1956 and currently serves in the Bureau of European Affairs.

'57 **John Furlong** of Menomonie, Wisconsin, has retired from his position as assistant to the chancellor at the University of Wisconsin-Stout.

'62 **Charles DeCorsey** of Minneapolis, instructor at Richfield Senior High School, has been awarded the Distinguished Leader in Education Award by the Minnesota Academic Excellence Foundation.

'73 **Dorothy Johansen** has been named associate professor of science at Mayville State College in Mayville, North Dakota.

'74 **Walter Broughton** of Wichita, Kansas, has been named securities management manager of the Fourth National Bank & Trust Co.

'75 **Edgar Harvey, Jr.**, of Sioux Falls, South Dakota, professor of English and holder of the Humanities Area Chair at Sioux Falls College, has been named Outstanding Faculty Member at that school.

'76 **Gordon Patzer** of Playa del Rey, California, has been appointed West Coast manager of program analysis for national television research at CBS/Broadcast Group.

'79 **John Talley** of Clifton Park, New Jersey, organic chemist at General Electric Research and Development Center, has been recognized by the

Hicks B. Waldron, '44, chair and chief executive officer of Avon Products, has been elected chair of the national board of directors of Junior Achievement. Waldron, former vice president and group executive for consumer products at General Electric Co. and chair and chief executive officer of Heublein, is a recipient of the 1985 Horatio Alger award, which recognizes leaders who "exemplify the merits of America's free-enterprise system."

center for his patents on novel inorganic metal oxides and the development of a nonhalogen flame retardant.

'81 **Robert Falotico** of Hillsborough, New Jersey, has been named principal scientist in the cardiovascular pharmacology department of Ortho Pharmaceutical Corp.

'83 **J. Steven Jungbauer** has been appointed instructor of health, physical education, and recreation at Manchester College in North Manchester, Indiana. Jungbauer is also head coach for the school's men's and women's cross-country and track-and-field teams.

'85 **Mark E. Braaten** of Clifton Park, New York, has been hired as mechanical engineer at General Electric Research and Development Center.

LAW SCHOOL

'63 **John Karalis** of Phoenix, Arizona, has been elected vice president and general counsel of Sperry Corp.

'74 **Ann D. Montgomery** of Minneapolis, judge of Hennepin County District Court, has been elected president of the Minnesota chapter of the Federal Bar Association.

COLLEGE OF LIBERAL ARTS

'42 **Willis Dugan** of Sauk Centre, Minnesota, former University professor of educational psychology, has been named honorary executive director emeritus of the American Association for Counseling and Development. Dugan is past national president of the society, which represents 45,000 counselors in schools, colleges, business and industry, employment services, and social agencies.

'45 **Richard Van Dusen** of Birmingham, Michigan, executive partner in the law firm of Dickinson, Wright, Moon, Van Dusen & Freeman, has been elected trustee of the Kresge Foundation, an organization that supports construction and renovation projects of institutions in the areas of higher education, health care, social services, the arts and humanities, science, conservation, public policy, and religion.

'62 **Joyce Kelly** of Ellicott City, Maryland, has received the National Parks and Conservation Association's Stephen T. Mather Award, given annually to public employees who have worked to preserve the nation's environment. Kelly, former division chief for recreation, cultural, and wilderness resources for the U.S. Bureau of Land Management, instituted natural-history, cave-management, and paleontological policies at the bureau.

'68 **John T. Daniel** of Chanhassen, Minnesota, has been named senior account manager for Viewlogic™ Systems.

'82 **Douglas Killian** of Minneapolis, has been named deputy manager of public relations for Northwest Orient Airlines's Orient region in Tokyo, Japan.

SCHOOL OF MANAGEMENT

'74 **Joel Schleicher** of Longboat Key, Florida, has been named executive vice president and board member of Murray Industries, a holding company of Murray Chris-Craft.

'81 **David J. Lanners** of Spartanburg, South Carolina, has been appointed vice president for manufacturing and operations for Holmberg Electronics.

MEDICAL SCHOOL

'53 **Frederick S. Cross** of Cleveland, Ohio, has been named distinguished member of the Academy of Medicine. Cross is chief of thoracic and cardiovascular surgery at St. Luke's Hospital in Cleveland and clinical professor of surgery at Case Western Reserve University.

SCHOOL OF PUBLIC HEALTH

'76 **Jerry Campbell** of Bryan, Texas, former adviser to the minister of health of Bahrain, has received a fellowship in the British Institute of Management.

'79 **Ralph La Gro** of New Haven, Michigan, president of MCG Telesis, has been awarded fellowship status in the American College of Hospital Administrators.

INSTITUTE OF TECHNOLOGY

'42 **Arthur V. Dienhart** of Minneapolis has retired from his position as vice president of Northern States Power Company after serving 38 years in design and construction of generating plants, substations, transmission lines, and buildings.

'76 **Rolf Kemen** of Mineola, New York, has been hired as real-estate analyst for the advisory and appraisal department of Merrill Lynch Commercial Real Estate.

COLLEGE OF VETERINARY MEDICINE

'66 **Muhammed R. Karim** of West Chester, Pennsylvania, has been named dean of graduate studies at West Chester University.

DEATHS

Harlo Beschenbossel, '31, Morrisville, Pennsylvania, on August 23, 1985.

Helen Hanks Borgeson, '31, St. Paul, on August 27, 1984.

Lavinia Nesbitt Brown, '15, Fontana, California, on March 30, 1985.

Norman G. Carlson, '41, Glenburn, California, on April 13, 1985. Carlson, a medical doctor, was active in community affairs and built the Fall River Valley Medical Center, which was later purchased by Mayers Memorial Hospital, where Carlson had been a staff member. Carlson was involved in several medical associations and community organizations.

Ralph E.C. Fredrickson, '35, Cincinnati, Ohio, on June 5, 1985.

William T. Harris, '32, Roseville, Minnesota, on September 29, 1984. As director of the University News Service and assistant director of University Relations from 1946 to 1972, Harris was the University's public information head and media relations chief. He was active in several community and professional organizations and served as board member of the University School of Nursing Foundation and as trustee and director of the the American Legion and Auxiliary Heart Research Foundation.

Robert W. Ince, '63, McLean, Virginia, on August 7, 1985. A Foreign Service officer with the U.S. Department of State, Ince had served in Ghana, Nigeria, Liberia, Colombia, and Bolivia, in addition to assignments in Washington, D.C.

C. Jay Iverson, '21, Bethesda, Maryland, on July 31.

Abraham Kimeldorf, '36, Irvington, New Jersey, on June 8, 1985.

Edna M. Lobenstein, '23, South Ogden, Utah, on April 1, 1985. A former home-demonstration agent at the University's College of Home Economics, Lobenstein had worked at Kansas State University, where she directed the state program of 4-H activities for girls.

Ray J. Lunemann, '59, Hopkins, Minnesota, on August 19, 1985.

Kendall Macho, '32, Las Vegas, on April 14, 1985. A pharmacist, Macho was a medical service representative at Rowell Laboratories before his retirement in 1976. He was active in University pharmacy alumni affairs and had been instrumental in organizing the College of Pharmacy Alumni Society, serving as its first president in 1958 and later receiving its Distinguished Pharmacist award. The Minnesota Alumni Association recognized his service to alumni with the Distinguished Service Award in 1977.

Fred A. Maides, '25, Grand Forks, North Dakota, date unknown.

Charles R. Miller, '21, St. Louis Park, Minnesota, on April 11, 1985. Before retiring, Miller served as vice president and trust officer of First National Bank, Minneapolis.

Lester Matthes, '42, Delray, Florida, in April 1984.

Margaret Pettit, '41, Minneapolis, on July 25, 1985.

Charles R. Sandberg, '43, Zumbrota, Minnesota, on April 13, 1985.

Merwin Silverthorn '17, Bethesda, Maryland, on August 14, 1985. Silverthorn, a retired lieutenant general in the U.S. Marine Corps, had been a troop leader in World War I, a high staff officer in World War II, and had made several contributions to concepts of amphibious assault during the period between the two wars. At the outbreak of the Korean War in 1950, Silverthorn was in charge of U.S. Marine Reserves and has been credited with mobilizing them smoothly for active service.

Charles V. Stone, '71, New York City, on March 10, 1985.

Perfection in the Balance

BY DAVID K. LARSON

Rarely have University athletes bested or matched virtually every record set before them. Gopher gymnast Laurie Kaiser has.

The two-time, all-Big Ten junior from Plymouth, Minnesota, has set new marks for the vault and for floor exercise. She is also coholder of the all-around and balance-beam records, which leaves only the uneven-bars record intact.

Four feet eleven inches of energy and determination, Kaiser mixes a busy gymnastics training schedule with a premed curriculum and the goal of becoming a pediatrician. "If I had extra time, I wouldn't know what to do with it," says Kaiser. "I like kids a lot. I always wanted to be one."

Kaiser is all-American in every manner that the definition encompasses. The official all-American title is an honor Kaiser could conceivably earn if she stays healthy this year. Last season, Kaiser was off to an outstanding start when she matched two school records, including the all-around, when she took first place against the Japanese Collegiate All-Stars in December. Then she broke her thumb in a tobogganing accident in mid-January.

A cast kept her out of the all-around competition for a month. But Kaiser, working with a plastered thumb, continued to compete in the floor exercise and on the balance beam. She recovered in time for the Big Ten Championships, where she finished seventh overall and third on the balance beam, earning all-Big Ten honors for the second straight year. More important, she qualified for the National Collegiate Athletics Association (NCAA) Midwest Regional Championships.

Kaiser scored high enough at the regionals to earn one of ten individual berths at the NCAA National Championships. During her last workout prior to the meet, Kaiser broke her ankle on the balance beam and was out of the competition, which also cost her a chance to earn all-American honors. "It doesn't seem like I had a season at all last year, with working through all the injuries and competing with a cast," says Kaiser. "I was finally coming back when I qualified for nationals. I was super happy, working hard, and getting psyched to work out every day. Then, one more front flip and—bam."

In mid-June Kaiser personally cut off her fiberglass cast a week early to train for the World University Gymnastics team tryouts on July 20. "I'm just too hyper to sit around," says Kaiser.

Gymnast Laurie Kaiser holds University records in the vault and floor exercise and is coholder of the all-around and balance-beam records. She's working to add the uneven-bars and the Big Ten all-around records to her honors.

The World University Gymnastics team is made up of the top six university gymnasts in the nation, who compete with the top six gymnasts from other nations. Remarkably, despite the short lead time, Kaiser placed seventh and made the team as an alternate.

The Gopher gymnast is no stranger to top-notch competition. In 1981 she made the U.S. national elite team, competing with and consistently defeating the likes of Mary Lou Retton and Julianne McNamara. Kaiser left elite competition in 1982 for a number of personal reasons, including lack of abundant financial resources. Training in an elite gym with top-level coaching does not come cheap.

Kaiser put elite competition on hold at least temporarily when she came to Minnesota in 1983 to pursue an academic career. "You can't do club gymnastics seriously and attend college at the same time," says Kaiser. "When you're in club gymnastics, you have to put in hours and hours, taking up your whole day. If you're not actually working out, you're conditioning at home. You can't go to school, do homework, and do club gymnastics at the same time."

During the 1984 summer Olympics, Kaiser cheered on her friends Retton and McNamara from her living room, along with the rest of America. "It could easily have been me out there," says Kaiser. "I can do every trick they can do. You never know what could have happened, so I am not regretting anything. It happened. There is nothing I can do about it now, so I have to accept it, work hard now, and shoot for the World University Games."

Kaiser is looking forward to the new season, which started December 1 when the Gophers hosted the highly ranked Japanese Collegiate All-Stars. "I want to beat my all-around record I set against the Japanese national team. That wasn't even four out of four events. I missed on the balance beam."

The Gophers have competed strongly in the Big Ten in past years, finishing third behind first-place Ohio State last year and second in each of the two prior years. With the entire squad returning, the Gophers' chances of capturing the 1986 Big Ten Championships, which will be at Williams Arena March 21 and 22, look promising.

Both Kaiser and head coach Katalin Deli agree that if Kaiser has an area that she needs to improve it is the uneven bars. Kaiser nearly won the Big Ten all-around competition as a freshman in 1984, but a fall from the uneven bars cost her the title.

"It is an event that many fear because it is easier to make mistakes," says Deli. "Some consistency has been missing in the past, but I expect her to do well this season. Laurie has a lot of determination and is willing to work hard to achieve her goals."

"Balance beam, floor exercise, and vault—I'm strong, I attack it," says Kaiser. "When it comes to a meet, I don't hold back at all, and I'm comfortable doing it. Bars has always been different that way for me. Maybe I have to find a routine that I can get along with so I can hit it."

Many times, gymnastic analysts have stated that the peak for a gymnast is in the higher teens, but twenty-year-old Kaiser disagrees. "Usually, peaks at young ages occur because of body changes or because young gymnasts work so intensely that they can't handle it anymore. I'm not growing any more at all. As long as my body can hold out, I can still learn new tricks."

Kaiser still hopes to compete in gymnastics at the national elite level in the future. "I still have the tricks," says Kaiser. "I'll have to work on compulsories as well."

When asked about her long-term future plans, Kaiser answers, "I can't see myself without gymnastics. When I become a medical student, it will be a hard changeover to put my emphasis entirely into something else."

And what about a possible 1988 Olympics berth? "I'll play it by ear and see what happens," says Kaiser, turning back to the balance beam, where she completes three graceful back flips in a row, landing a few inches from the beam's edge. With a sudden thrust of power she leaps off the beam, doing a double back flip and landing with near-perfect posture.

Then she climbs aboard again, working toward perfection and a chance to set a new balance-beam record in her next competition.

David K. Larson is a student assistant sports information director for the men's intercollegiate sports information office.

SCORES

Football

In the final regular game of the season, the Gophers lost to the Iowa Hawkeyes in Iowa City 31-9, ending the season with a 6-5-0 overall record. In spite of the loss, however, the Gophers were invited to the Independence Bowl in Shreveport, Louisiana, where they will play Clemson December 21. The game will mark Minnesota's first bowl appearance since 1977 and is only the third bowl game in the team's 103-year history.

The loss to Iowa ended the Gophers' hopes of going to the Rose Bowl. Expectations were high at the beginning of the season, when the Gophers held top-ranked Oklahoma to 13 points, losing to them 7-13.

The loss was followed by a 45-15 win over Purdue at home, a 21-10 win over Northwestern at Northwestern, and a 22-7 win over Indiana at home.

Quarterback Rickey Foggie was injured during the Ohio State game at home before a record crowd of 64,455 and missed the next game. Ohio State won 23-19 when a touchdown attempt led by quarterback Holt failed in the final seconds.

The Gophers lost to Michigan State 26-31 in Michigan but rebounded to defeat the University of Wisconsin-Madison 27-18. The University of Michigan Wolverines defeated the Gophers 48-7 at home.

The Gophers ended the season with a 4-4-0 record in the Big Ten. At the annual Gopher football banquet, Foggie was presented the Bronko Nagurski award as most valuable player; Andy Hare received the Butch Nash award for dedication to the University; Dave Puk, the Paul Giel award for unselfishness; Ray Hitchcock, the Bruce Smith award for outstanding offensive player; and Peter Najarian, the Carl Eller outstanding defensive player award.

Hockey

The pucksters started their first season under head coach Doug Woog by defeating Michigan Tech 3-0 and 7-2. Traveling to the University of Minnesota-Duluth, they split the series 4-2 and 2-5. In their third series of the year, they were swept by up-and-coming Denver University, 2-4 and 4-5.

Men's Cross Country

Gopher cross-country junior cocaptain Paul Gisselquist finished fourth overall at the Big Ten Championships. As a team, the young Gophers finished in eighth place.

INTERNATIONAL TOURS

Prices are based on double occupancy and are approximate until tour brochures are printed. For more information about any of our international tours, write to: Travel Director, Minnesota Alumni Association, 100 Morrill Hall, 100 Church Street SE, Minneapolis MN 55455.

Passage of the Mayas. March 1-9. This program focuses on the history and cultural impact of the Mayan civilization and features Merida and Cancun. Includes all sightseeing of Mayan archaeological sites on Mexico's Yucatan Peninsula. $1,850, from Chicago.

Golden Ring of Russia. June 18-July 1. Visit some of the most historic and colorful lands of Russia that have ever been seen by Americans. Three nights in Moscow are followed by a four-day Volga River cruise and visits to several medieval towns. Includes three nights in Leningrad and two nights in Copenhagen. $2,785, from Chicago.

Cotes du Rhone Passage. August 11-24. Travel from Paris to Lyon by the TGV high-speed train, then spend seven days on the scenic Rhone River. Dine at the restaurant of renowned chef Paul Bocuse. Trip concludes in Cannes, the sparkling jewel of the Cote d'Azur. $2,795, from Chicago.

Passage of the Moors. September 12-26. Follow the path of the Moorish caliphs from Morocco to Spain, and discover the cultural riches developed over 700 years along this passage. Starts in Rabat, concludes in Madrid. $2,575, from Chicago.

Yuletide Passage. December 18, 1986-January 2, 1987. Spend the holidays in Germany and Austria, the land of Christmas traditions. Tour begins in Munich, the "Happy Heart" of Bavaria, and ends with a magnificent New Year's Eve gala in Vienna. Visit Salzburg and Graz, and the "Christkindl Market" in Nuremberg. $2,895, from Chicago.

ADVENTURE TRAVEL

Minnesota Alumni Association (MAA) members can travel with ECHO: The Wilderness Company on any of the trips listed below at a 10 percent discount; groups of ten or more receive an additional 5 percent discount. Prices listed are approximate projections for 1986; ask about youth rates. Proof of MAA membership is required to qualify for these discounts. Direct all inquiries to: ECHO: The Wilderness Company, 6259 Telegraph Avenue, Oakland CA 94609. 415-642-1600.

IDAHO

The Main Salmon. Some come to the Main Salmon River for the adventure; others come simply for the beauty. Whatever your reason, it will be an experience to treasure. $748. MAA members: $673.

Middle Fork. The classic mountain whitewater run in America. Big rapids, sheer walls, hot springs, and crystal-clear water. $829. MAA members: $746.

Snake/Hell's Canyon. A dramatic experience. The side hikes here are the best in Idaho; the wildlife is varied and abundant. $526. MAA members: $473.

Snake/Birds of Prey. Entirely without whitewater, this trip features the highest density of nesting raptors in North America. $545. MAA members: $490.

OREGON

Rogue. The rapids, the charm of the canyon, and the long, warm days bring people back again and again. Three-, four-, and five-day trips: $309, $397, $476. MAA members: $278, $357, $428.

CALIFORNIA

American. An old favorite. Plenty of whitewater action for beginner and veteran alike. One- and two-day trips: $66, $144. MAA members: $60, $130.

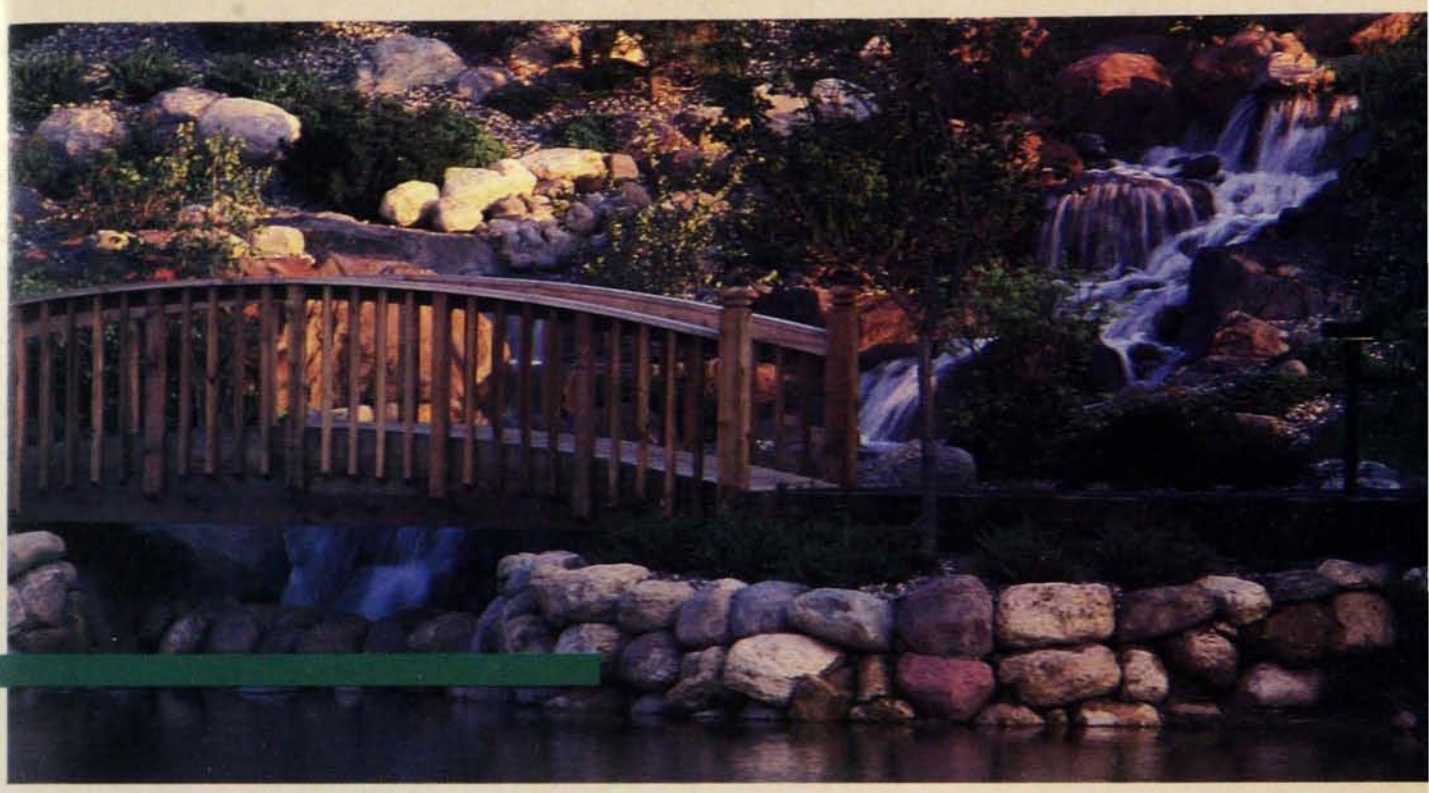
American North Fork. A superb one-day trip near Auburn, California. A narrow, fast river with exceptional rapids. $82. MAA members: $74.

California Salmon. A very classy river. Cold, clear, fast, and surrounded by steep canyon walls of evergreens. Two- and three-day trips. $91, $182. MAA members: $82, $163.

Merced. Whitewater is the name of the game. A great trip to combine with a vacation in Yosemite or a tour of the Gold Country. One- and two-day trips: $91, $182. MAA members: $82, $163.

Tuolumne. Mile for mile, no river in America can claim better rapids or a better river experience than the Tuolumne. Even its lesser rapids would be major challenges on most rivers. One-, two-, and three-day trips: $103 to $342. MAA members: $93 to $308.

Morocco



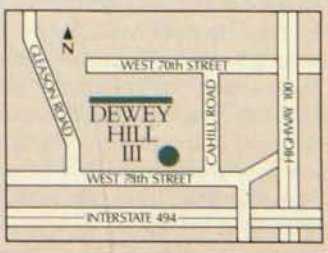
Imagination at Work: From May to November

Dewey Hill III is fast becoming the most talked-about new neighborhood in Edina. The imaginative waterfall pictured above is only one of many special features which have been designed into the outdoor environment and the homes themselves. There is a four acre pond, a lighted fountain, footbridge and a walking path with gazebos and seating areas. Interior design features include vaulted and skylighted ceilings, spacious bay windows and decks, special interior lighting and leaded glass panels among others.

Dewey Hill III follows in the tradition established by Larry Laukka in the first two phases of Dewey Hill where most of the homes are valued at well over $500,000. Dewey Hill III has received recognition for being one of the finest townhome neighborhoods in the Twin Cities. Visit it soon especially if you are considering a move to maintenance-free living.

Each townhome will be custom designed with one to four bedrooms. All are on the pond. Prices: from the low $300,000 range. **Second and final phase now under construction.** Color brochure is available on site or at your request.

DEWEY HILL III



Display Models Open Daily
12-7 PM Weekdays
12-5 PM Friday,
Saturday and Sunday.

(612) 829-0105

Townhomes in Edina by Laukka

Dressing for Success

BY ALIA YUNIS

Joanne Eicher, head of the department of design, housing, and apparel, and director of the Goldstein Gallery, is an expert on the social significance of dress.

"Clothes are our visible selves," says the coeditor of *Dress, Adornment, and Social Order*, a classic home-economics text. "Much of ourselves is invisible—our thoughts, our fantasies—but what we wear tells a lot about us."

Although many people pursue an academic career in clothing because of an interest in design and fashion, Eicher's interest in sociology prompted her to choose her profession.

"Academics have always protested the importance of dress," says Eicher, who received both her master's and doctoral degrees in sociology and anthropology from Michigan State University. "The world beyond academia has accepted dress as important only in the last five to ten years. The protests of the sixties that said dress should not matter were moral positions. In reality, judging people is a way of life."

After earning her bachelor's degree (with honors) in 1952, Eicher landed her first job working in a gift and leather shop. Despite her work in merchandising, Eicher found that she enjoyed analyzing patterns of behavior. When she and her former husband moved to Boston in 1957, she was hired to teach social sciences at Boston University and conduct research on the social significance of clothes. From there, says Eicher, one project led to another.

From 1962 to 1970, Eicher conducted several studies on adolescents and dress. She found a relationship between how teenagers choose friends and their interest in clothes. "For instance, girls with high grades and a high interest in clothes will have friends who are just the same," she says.

Theorizing on the aesthetics of clothes, Eicher says she believes fashion is important, but only as important as being unfashionable can be. "If Liberace dressed in a proper gray flannel suit or overalls, he would not be as effective," she says.

Eicher does not think there is a definite fashion cycle. "When things do reappear, they are in a slightly different form," she says. "Times change; it isn't just a financial move by the industry. New fabrics, fibers, and technology don't allow things to be duplicated exactly. It is more of a creative matter. Designers respond to the world around them. Today's world is different from the world of the the 1950s and 1960s."

Fabric, textiles, and clothing have been woven into an interesting career by Joanne Eicher, director of the Goldstein Gallery. In the background is a poster of Alexander Girard, a Goldstein exhibition subject.

Eicher's main research today is in African textiles and clothing. In 1963 the University of Nigeria offered her a position as a research associate. In the three years that she was there, she discovered that no one had ever analyzed Nigerian materials. As a result, in 1969 she published the first of two volumes on the subject; the second volume was published in 1984.

With the help of research grants, Eicher continues to go to Africa intermittently. The main focus of her research is the Kalabari people of West Africa. She has written about both the social significance of their dress and the uniqueness of their handmade textiles. Kalabari cloth was the subject of a recent 1982 exhibition catalog. Eicher's displays have been shown in museums worldwide, including the Smithsonian Institution.

The Kalabari do not find Eicher's interest or that of the three postgraduates she has sent there strange, says Eicher. "Many of the Kalabari have advanced degrees, are sophisticated and well traveled. They are pleased that I am interested in their customs because they had not realized their customs were unusual."

Back at the University, Eicher believes that the 850 undergraduates in her department, which she calls the University's best-kept secret, are lucky. Because of its location in a manufacturing metropolis and its outstanding faculty and alumni, the department offers opportunities, such as internships, that cannot be found at other Big Ten schools.

Eicher is the first head of the department, which was formed in 1983 by combining the design department with the department of textiles and clothing, which Eicher had headed since 1977.

Eicher, 55, is an elegant, energetic futurist. "I have never liked looking back," she says. "The older you get, the wiser you get, so you should look forward to birthdays. Decade birthdays and half-decade birthdays are to be marked and celebrated. Maybe that's why I enjoy my Kalabari research so much. When an elder dies, they have a big bash and parade, celebrating his or her achievements."

In addition to continued research and teaching, Eicher's future includes bringing more attention to her department and especially to the Goldstein Gallery, which she feels educates the community and expands the horizons and opportunities of the College of Home Economics.

Alia Yunis is a Minnesota *intern and student in the School of Journalism and Mass Communication.*

A Historical Romance

BY SUSAN DAVIDSON

Tall and lithe, Roger Kennedy likes to sit—but not for long—in a hand-honed rocking chair in his curio-filled office at the Smithsonian Institution's National Museum of American History, where he has been director for six years. Kennedy's path to that office is unlike any other bureaucratic museologist's.

Born in St. Paul in 1926, Kennedy grew up at 514 Grand Avenue in a neighborhood populated largely by relatives. His father ran Kennedy Brothers, a sporting goods store. He attended Irving School and then St. Paul Academy, where he was editor of the school newspaper, "just as F. Scott Fitzgerald had been." For two years, between high school and Yale University, Kennedy served in the U.S. Navy in the Pacific, where he chipped paint, although his job title was radar technician.

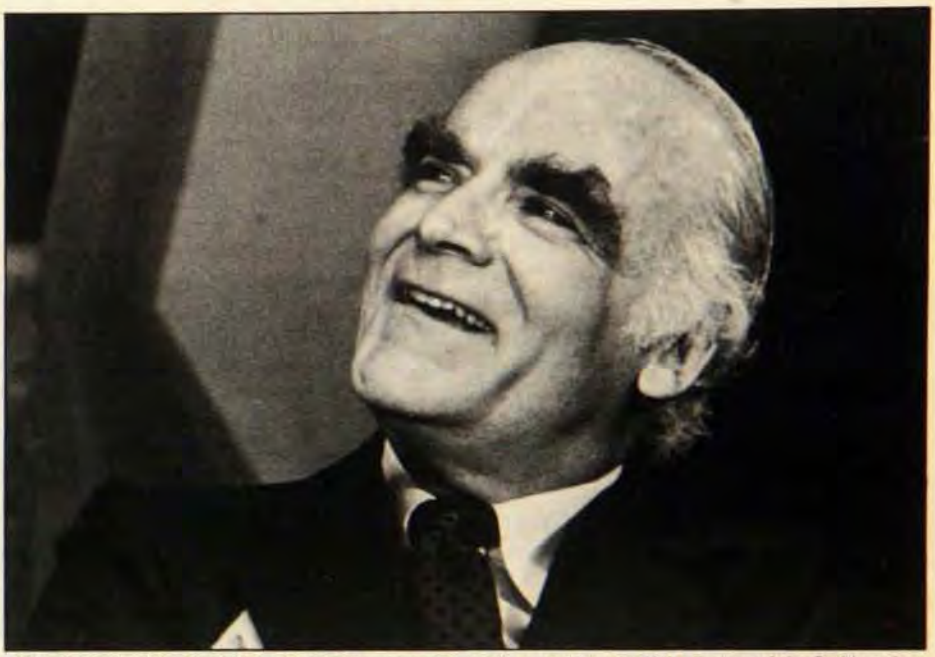
When the G.I. bill of rights funds for Kennedy's Yale Law School career ran out, he returned to Minnesota, spent two years at the University of Minnesota Law School (class of '52), went into real estate, and ran, unsuccessfully, for Congress "against a fellow by the name of Eugene McCarthy."

With his tinker-tailor mentality, the ever-restless Kennedy decided to seek a new challenge, and by the early 1950s, he had become a trial atttorney in the U.S. attorney general's Washington office; from there, he went on to the departments of Health, Education, and Welfare, and to Labor. For four years, in between those assignments, Kennedy worked for the Washington bureau of NBC.

By the late fifties, Kennedy was ready to go west. After he married, says Kennedy, "it seemed appropriate to learn a trade. Paint chipping and the law were somewhat stale at that point. So I went back to St. Paul to learn the banking business."

In Minnesota he served first as chair and director of the executive committee, then director, and later as executive director of the University of Minnesota Foundation and as vice president for investments.

Kennedy's restructuring of the University of Minnesota's finances came to the attention of the Ford Foundation, which became Kennedy's next employer. His titles were vice president for arts, vice president for finance, and senior financial officer. While at Ford, Kennedy mastermanded the publishing of American classics in moderately priced volumes. The series, which came to be known as the Library of American Literary Classics, is an achievement of which Kennedy is particularly proud.



Roger Kennedy, '52, is sometimes called the gatekeeper to the nation's attic. He's director of the Smithsonian Institution's National Museum of American History and is working to make history an applied science.

Such an eclectic background has served Kennedy well in his current position, where he holds the key to a museum often affectionately called "the nation's attic." But Kennedy is concerned that the six million visitors who annually walk through the National Museum of American History "go away starving," which is why the museum has a ten-year plan to reinstall what it has (and add to its already-extensive collections). Kennedy wants to "close the gap between the best that modern scholarship does and what the public gets.

"Attics are good places if one understands that there are reasons to keep old wedding dresses, toys, books one read as a child, ancestral portraits, cracked plates, the first telephone," says Kennedy. "These are objects that are symbolic only in their social context. Our business is to bring to bear what scholars know about that context and to clear away the foreground, so to speak."

The first of these newly installed galleries opened November 18 and is called "After the Revolution: Everyday Life in America: 1780-1800." The exhibition is for and about average people who did not always look "their Sunday best." "We are not," says Kennedy, "into typicality. It's a major fresh address to the way you do American art and American history for large audiences."

Surprisingly, turning the National Museum of American History into a livelier place does not consume all of Kennedy's time. He still serves on a panel that concerns itself with the future of New York's 42nd Street, belongs to the American Antiquarian Society, collects architectural ornaments, writes books (the latest, *Architecture, Men, Women, and Money in America, 1600-1860*, was published by Random House this Christmas), and still finds time to advise private clients on their investments.

"I'm fairly good at helping friends make decisions. That's really what my life has been like," says Kennedy. When asked if he considers that a Minnesota trait, Kennedy says, "I think it may be. We don't tend to get too angry out there, and we don't always have to be credited for everything we do. I think Minnesota is a remarkably civilized community—politically, aesthetically. There's a kind of reasonableness there."

Susan Davidson is a contributing editor at Washingtonian *magazine and a free-lance writer.*

Paradox and Ambiguity in an Information Age

BY STEVE CRAMER

Harlan Cleveland's latest book, *The Knowledge Executive: Leadership in an Information Society* (Truman, Talley Books, E. P. Dutton, New York, hardcover, $18.95), focuses on the implications of "the informatization of society," a phenomenon fueled by the modern melding of computers and telecommunications. In this new world, access to greater volumes of higher-quality information is faster and more open than ever before. The information explosion enables rapid technical advancement. It also gives rise to a citizenry unwilling to accept a future dictated by technology and experts alone. Informed people covet a role in shaping their destinies.

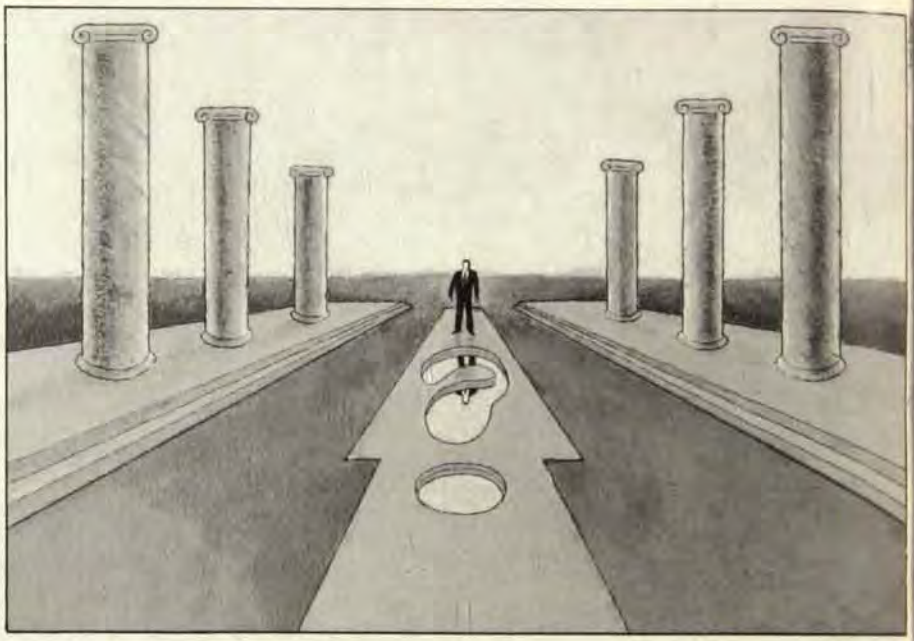
For leaders concerned with the general outcome of events, the information society is a difficult place to operate. Cleveland, director of the Hubert H. Humphrey Institute for Public Affairs, equates their task with directing traffic on a Parisian boulevard at the height of rush hour—from the middle of the street! "The executive leader," Cleveland writes, "weaves and dodges among his or her constituencies . . . trying to keep cool in the management of contradiction." Readers can be excused for questioning how people in authority *survive* when there is too much to know, too many others to involve in decisions, and the governing maxim of the times is "responsibility increases in direct ratio to ignorance."

Cleveland estimates that over a million Americans sprinkled throughout society face the challenges of executive leadership. A sobering thought is that their degree of success will in large measure determine the suitability of schools, livability of neighborhoods and cities, environmental quality, economic vitality, and virtually everything important about our collective lives.

Who are these people, and what qualifies them for their roles?

"People skills," including the ability to communicate, persuade, and negotiate, are essential. Cleveland attaches even more importance, however, to an *attitude* about leadership. Executive leaders, by conviction, embrace paradox and ambiguity as the normal course in decision making. Above all, there is a sense of personal responsibility for the "situation as a whole."

Most start as highly proficient specialists. The executive leader must be an "expert on experts," and Cleveland



believes the adage that it takes one to know one. Upon attaining the mantle of generalist, executive leaders maintain a healthy modesty about their state of knowledge, since decisions are routinely made with imperfect information and lack of agreement among specialists. Concern for results rather than credit characterizes executive leaders. They practice the "get-it-all-together" profession, Cleveland's slightly awkward but descriptive phrase for what these people do.

This profile is intimidating. I don't know anyone who "fits" perfectly. (I wasn't privileged to know Hubert Humphrey, cited as a role model who was "literally interested in everything.") Still, many elements are recognizable in current leaders. The description, as an ideal type, rings true.

Information-rich modern life creates the challenges that get-it-all-together types face. Cleveland argues that information is a fluid, uncontainable resource. Its widespread availability erodes traditional barriers to participation such as hierarchical social structures dependent on controlling the uncontrollable. Information is a leveler and a tool for fairness, particularly when combined with quality education, the "drive wheel" of the information society. Information knows no geographical bounds, nor is it limited by great distances.

In short, the dawning of the information age means that more of us are able to be part of the decision-making process. Leadership is more demanding, then, because the world is a better-informed, more participatory place. The question becomes, in Cleveland's words, "How do you get everybody in on the act and still get some action?"

This query leads to my favorite chapter, in which the author examines how much openness is enough. The question isn't (and probably can't be) answered conclusively, but Cleveland succinctly summarizes the costs of openness. He properly observes that no action should depend on secrecy to remain valid. On the other hand, to act decisively and with substance can be challenging with floodlights illuminating every step. A balance must be achieved among the public's right to know, an individual's right to privacy, and the citizenry's right to be served by effective and efficient public institutions. Our ability to innovate is dependent in part on the balance achieved among these considerations.

A corollary to the costs of openness is the risk that leaders experiencing the rigors of the information society will too readily respond to the cry "Don't just do something, stand there!" Informed and involved people are difficult to lead. No leader can or should, therefore, go too far in front. The tendency to hang back, however, can overcome the needed function of ascertaining where people want to go and pointing the way. Whenever I hear

a politician play it safe and pronounce closure on an issue by saying "The people have spoken," I'm suspicious that "the people" have been used to confirm the politician's own myopic vision. This is especially true in a time of rapid technological change. Saying no is much easier when the answer should be "Maybe; let's try it and see." Leadership, the author reminds us, is both knowing and *doing something responsible* as a consequence of knowledge.

The Knowledge Executive offers no easy solution to the complexities of decision making with information overload and expanding participation. Cleveland does not present a packaged formula for managerial success. Although upbeat in tone, the book isn't a simpleminded testament to the power of positive thinking. Instead, the author traces in a thoughtful way the influences complicating human affairs. In response, he pleas for integrative thinking by leaders trained for reflection who understand "everything is related to everything else."

Anyone who has followed developments at the Hubert H. Humphrey Institute for Public Affairs will recognize *The Knowledge Executive* as the "blueprint" for the school's evolution. Indeed, Cleveland cites programs initiated there as examples of the type of education for leadership he considers essential. I wish him and the institute well. Executive leadership can't be taught from a textbook, but it can be encouraged and nurtured. Harlan Cleveland makes a compelling case that doing so is a necessity in the modern information society.

Steve Cramer is a member of the Minneapolis City Council from the Eleventh Ward. He earned his M.A. from the Hubert H. Humphrey Institute for Public Affairs in 1981.

IN BRIEF

Black Colleges and Universities: Challenges for the Future; edited by Antoine Garibaldi, '76; Praeger Publishers, New York; cloth, $29.95. Garibaldi, chair and associate professor of education at Xavier University of Louisiana and former research associate at the National Institute of Education, has compiled a collection of essays that examines the field, function, and future of historically black institutions of higher learning. The thesis of the book is that black colleges, faced with fiscal stress, resource contraction, enrollment decline, and challenges to their cultural integrity, will need to expand, alter, or reinforce their traditional missions and goals so that they can carve niches for themselves in the American system of postsecondary education, and remain vital.

The book examines the functions of black institutions of advanced learning with respect to black leadership formation and community service, and addresses the challenges of research and development, scholarship, federal and state policies, the impact of desegregation, and trends in black college enrollment. The book was selected by the American Education Studies Association's Critics Choice list of outstanding books of recent years of interest to those in education studies.

Made in Washington; by Clarence D. Palmby, '40; The Interstate Printers and Publishers, Inc., Danville, Illinois; hardcover. Palmby, who served in both government and private sectors in this country and abroad, reviews U.S. agricultural policy during the past 50 years. Examining political actions at the heart of farm policy, he finds that time and again, actions and legislation by the federal government have eroded the foundation of the free market system. The book explores the full meaning of market forces and their impact on the operating ease of agriculture. History indicates, writes Palmby, that there are few new programs or techniques through which the government affects price by interfering with market machinery. But just because a scheme has been tested and found wanting doesn't mean it will not be tried again.

Going Public

BY KIMBERLY YAMAN

Chapter events, alumni college reunions, alumni magazines, and a mascot: these are what many people know of alumni associations. John French, '55, believes that founders of the Minnesota Alumni Association must have had more in mind, however, when they wrote the by-laws to the association's charter more than 80 years ago: "The objects and purposes of this association shall be to . . . do all lawful things for the welfare, benefit, and betterment of the University of Minnesota and its faculty, students, former students, and graduates . . . and encourage individual and community interest and participation in the University and higher education."

French, chair of the Alumni Association's newly formed public policy committee, believes that the association has been doing only a part of the job outlined in its by-laws. "The Alumni Association was creating great enthusiasm for the University, organizing a community of alumni interested in the welfare of the University," he says. But the focus has been largely on athletic activities, social activities, and "not much on the quality of the place as an institution and what the alumni could do to make it a better institution—not just richer, not just more glamorous, but a higher-quality place in terms of education."

Many alumni apparently share this view of the Alumni Association and what its vision should be. When marketing research focused on the reasons some alumni members weren't renewing their memberships in the association, a theme appeared, according to Minnesota Alumni Association Associate Director James Day: "We heard many times, 'I want to feel connected, to have a voice. I need more than a membership card; I need to be involved in some meaningful way with my alma mater.' This confirmed our belief that alumni have a natural interest in the University and its directions."

The Alumni Association investigated ways to involve alumni in University issues and proposed the creation of a public policy program. The idea, endorsed by the association's executive committee, was approved by the board of directors. In 1985 association president Penny Winton, '74, appointed a public policy committee, which was charged with determining appropriate University-related issues for alumni discussion and input.

Randall O. Eaton

Chair of the newly formed public policy committee is John French, '55.

Members of the committee are John French, attorney with Faegre and Benson; L. Steven Goldstein, senior vice president of Carmichael-Lynch Advertising; Ronald Handberg, vice president and general manager of WCCO TV; Jean LeVander King, president of the communications consulting firm Communi-King; Charles Osborne, vice president of Deluxe Check Printers; Michael Unger, attorney with Hvass, Weisman and King; and ex-officio member Penny Winton.

In May 1985 the association undertook its first public policy project: a poll of alumni opinion on divestiture of University stock in U.S. companies with South African business operations. The poll, the results of which were presented to the University regents, demonstrated to the association and to the public policy committee that its entrance into the public policy arena was both timely and appropriate. And it gives alumni a voice in University government.

"The Alumni Association, through its public policy committee, can be a natural barometer for alumni opinion, polling alumni and relating alumni views to central administration and the regents and the press, where appropriate," says committee member Chuck Osborne, '75. "We're doing the polling to provide relevant information to the decision makers, not to dictate public policy."

"One of the first decisions we made for this committee," adds French, "was that we would not dictate what the University should or shouldn't do. Our role is to look at the universe of things to do and explore them, narrowing in on priority issues, investigating new courses that perhaps haven't been looked at before."

With the perspective that it should respond not only to topical issues on campus but also to policies that affect the fate of the University, the committee has taken on the task of studying the University's process of regents selection. It has appointed a blue-ribbon citizens' panel, chaired by former University Regent Neil Sherburne, to perform an independent review of the selection process and report any recommendations for change to the public policy committee, the state legislature, and the community at large.

"The concern about the regents-selection process was not an issue that we brought up on our own," says committee member and association president Winton. "The governor and the speaker of the house have criticized it, and the legislature is talking about it. When we looked into it, we found not only widespread alumni concern but also a high level of interest in the community at large, directed not at current or past regents but at the selection process itself. It seems appropriate to take this on as a study issue."

The association removed itself from partisan aspects of the regents-selection issue by giving the study panel the charge to look at the issue. "When Neil Sherburne agreed to chair the independent study group," says Winton, "we knew the issue was in good hands, and we could step aside. What comes out of the study group's review is very much up to them and their collective wisdom. We have selected a study panel that is very representative and wisdom packed. The panelists are people who know the history of the state, of the University, of the business climate, and they go into their charge and their role with that perspective."

Winton reiterates the long-term importance of the polling process. "Alumni mirror a large segment of the general public. They are the ones who, in their jobs and in their lives, are determining where we go, setting directions, and listening to what's going on. They can speak with the voice of both citizen and alumnus, and we should listen to that voice."

Kimberly Yaman is editorial assistant of Minnesota.

CONSTITUENT SOCIETY EVENTS

JANUARY

7 **Nursing Alumni Society Board Meeting**
5-6 p.m., Campus Club, Coffman Memorial Union, Minneapolis campus.

9 **Education Alumni Society Board Meeting**
5 p.m., Campus Club, Coffman Memorial Union, Minneapolis campus.

15 **Biological Sciences Alumni Society Board Meeting**
Executive committee meets at 4 p.m., board meeting begins at 5 p.m., 127 Snyder Hall, St. Paul campus.

21 **Band Alumni Society Board Council Meeting**
7 p.m., 300 Morrill Hall, Minneapolis campus.

FEBRUARY

17 **Alumnae Society Board Meeting**
6 p.m., call MAA for location.

19 **Biological Sciences Alumni Society Executive Committee Meeting**
5 p.m., 127 Snyder Hall, St. Paul campus.

20 **Band Alumni Society Board Council Meeting**
7 p.m., 300 Morrill Hall, Minneapolis campus.

26 **School of Nursing Careers Day**
3:30 p.m., East Wing, Campus Club, Coffman Memorial Union, Minneapolis campus.

CHAPTER EVENTS

JANUARY

17 **Boston Alumni Chapter Hockey Game and Reception**
Contact Bob Fagone, 617-485-0553 or 617-485-4900.

26 **Basketball Pregame Party**
Gopher men's basketball vs. Northwestern, Levene Memorial Temple, Northwestern campus, Chicago.

FEBRUARY

6 **Phoenix Chapter Presidential Reception**
Speaker: University President Kenneth H. Keller.

7 **Sun City Chapter Annual Meeting**
Speakers: University President Kenneth H. Keller and Minnesota Alumni Association Executive Director Margaret Sughrue Carlson. Contact Paul Cartwright, 602-584-2059.

15 **Suncoast Alumni Chapter Luncheon**
Speaker: Sharon Satterfield, medical director, program in human sexuality. Contact Donald Enzmann, 813-736-6381.

Big Ten Tailgate Party
Chicago Armory, Chicago.

For more information, call the Alumni Association at 612-373-2466.

Fighting the Cold War

BY WILLIAM ROGERS

Most Minnesotans accept cold winters as a burden to be borne; few of us have ideas about how to make our cities more livable in our longest season. Most of us will be surprised to learn, then, that on February 15-19, over 1,000 people from twenty different countries will meet in Edmonton, Canada, for the "Winter Cities '86 Forum" to discuss ways and means of making winter cities all over the world better places in which to live.

The concept of a livable winter city originated in Minnesota. *The Winter City Book*, which I coauthored with Jeanne Hanson in 1980, was the first general book in this new field of winter studies. The book grew out of a 1978 conference at the Spring Hill Conference Center in Wayzata, Minnesota, which was sponsored by the University of Minnesota World Affairs Center. The conference and the book in turn were an outgrowth of discussions at the Minneapolis Committee on Urban Environment, which is an official city organization.

In spite of its Minnesota connections, however, the idea of the livable winter city has firmly taken root in our neighbor to the north, perhaps because Canadians, unlike Americans, have no Sun Belt. If Canadians want to move to a warmer climate, they have to become expatriates or citizens of the United States or another country, such as Mexico or a Caribbean "ministate." Although many Canadian cities are warmer than the Twin Cities, Canada is working hard to make all kinds of new adjustments to winter.

How *can* we make our northern cities more pleasant during the long winter? The problem may be approached in four major ways.

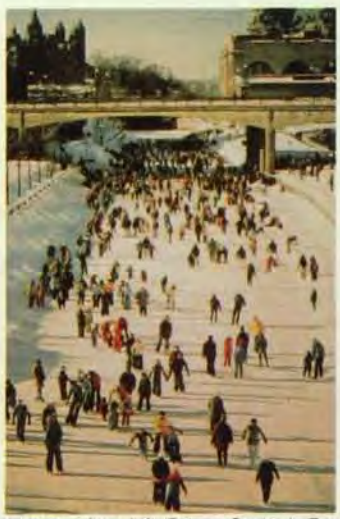
The first is better city planning. This is a long-run objective and involves moving from high- to low-density urban population clusters—a technical way of saying that more of us ought to move into town from the suburbs and live closer together to avoid spending so much time on icy, snowy, dangerous, potholed highways. We could avoid cabin fever by getting outside and walking short distances to groceries, drugstores, cleaners, and hardware stores for the necessities of life. Our lives should be arranged so that we can make contact with nature in ways other than driving a car or waiting at unprotected bus stops for bone-chilling lengths of time. Malls, skyways, and rapid transit also have their place as long as they are centered in the central city.

We must also think about the *natural* environment in winter. Here, the ideal trees to plant are the lovely conifers, including Minnesota's state tree, the Norway pine. The blue spruce and the white pine are also beautiful specimens for winter use. Unfortunately, early urban foresters came from warmer climates and brought their native deciduous trees with them. They failed to see the wonders of what have been called the palm trees of the north. Evergreens are highly regarded in other parts of the world, including northern Japan, where heavy snowfalls on the trees are called snow blossoms. Plantings of dogwood (red) and willows (yellow) are also suitable for the winter garden.

A third theme for winter-city improvement is the *social* environment, about which we are increasingly aware as more and more people take to cross-country skiing and other winter sports to chase away the winter blahs. The St. Paul Winter Carnival is perhaps the oldest festival that attempts to make the most of winter's assets. The carnival has been copied by other northern cities, including Quebec with its Carnivale and Ottawa with its Winterlude.

Two other winter activities are ice fishing, a popular Minnesota sport, and snowmobiling, which has led to the development of protective clothing that is practically impervious to cold. Although we have moved football indoors in the Twin Cities, outdoor winter buffs may choose from among many spectator sports, all of which the livable-winter-city movement encourages.

Finally, we need to improve our *built* environment. The curse of the winter city is its bleak appearance. Most of our larger buildings tend to be stark, square, and topless, with raw concrete, blue glass, or shiny metal as the principal building materials. We are learning that warm colors, such as shades of yellow and red, are pleasant to look at for six cold months of

Illustrating four ideas to take the chill off winter are, from left, Eatons Centre in Toronto; skating on the Rideau Canal in Ottawa; an ice sculpture; and inventor/engineer Norman Saunders's house, which is heated naturally. The ideas will be discussed at the Winter Cities Forum in Edmonton in February.

the year and that brick as a winter building surface is friendlier than cold steel. Although some people think that white on white is an ideal color scheme, many prefer to see houses in warm colors on snowy front yards. Victorian buildings, constructed with wood and brick and painted with earth colors, come into their own in the winter. Yellows and warm reds are found on buildings in Scandinavia and Russia, where people have lived in winter cities for many hundreds of years.

On the University of Minnesota campus is a pioneering winter-study venture. Research conducted at the Underground Space Center shows that an efficient way to build for the winter is to go underground, where the temperature remains at a constant 50 degrees and much less fuel is required to heat the building. The new Civil and Mineral Engineering Building is an example of an eight-story building that goes down rather than up.

Two buildings that face each other on the Minneapolis campus but that couldn't be more different—Pillsbury Hall and Williamson bookstore—illustrate two approaches to winter architecture. The old Pillsbury Hall, which has recently been cleaned, emerges as a jewel of winter warmth with its beautiful stone building materials and its elaborate decoration. It adds the kind of visual interest that is absent from the stark, modern Bauhaus architecture of our period. Facing Pillsbury is the new Williamson bookstore, topped with its icy metal sculpture, which exemplifies that period. Its raw concrete walls well illustrate much of what is wrong with today's winter-city architecture.

Nevertheless, the Williamson bookstore is also a winter-city architectural breakthrough in that part of it is underground, which keeps the building warm in the winter. This latter feature is hardly observable from ground level but is visible from the upper floors of Pillsbury Hall. The Pillsbury building is prettier than Williamson but is more expensive to heat during a time of costly fuel. The goal of winter-city architecture should be to combine beauty and efficiency for a harsh climate.

Let us hope that one day the Twin Cities can become a model of what a livable winter city should be. After all, only Fargo, North Dakota, and Anchorage, Alaska, in the United States have a lower average year-long temperature.

William Rogers retired from the University in 1984 after directing the World Affairs Center in the College of Electrical Engineering for 35 years. He is now consultant to the Minnesota International Center, with which the World Affairs Center has been merged.

Gold, Gold on the Range

BY SHAHLA RAHMAN

They were an unusual pair, staying in a rustic log cabin on Lake Vermilion on Minnesota's Iron Range last summer. Every morning she got up to sunbathe and read, and he got up to search for gold.

She is a native of North Carolina and a store manager for The Limited, a trendy clothes store for young America. He is a geologist and a Ph.D. student at the Colorado School of Mines. During the summer he is employed by a large mining company to explore for gold—an expensive and exhaustive undertaking in an area where iron ore deposits send compass needles jumping.

Gold in northern Minnesota? Experts say yes—definitely.

Current geological evidence points to the existence of gold in portions of northern Minnesota, says Elwood Rafn, director of the division of minerals of the Minnesota Department of Natural Resources (DNR).

Gold is generally associated with a type of rock formation known as greenstone, which can be found extending from Ontario into northern Minnesota. The Canadian rock is rich in minerals and holds a large amount of gold deposits, leading geologists to speculate that similar gold deposits exist in Minnesota.

"Our belief is that the same type of rocks that exist in Ontario continue into Minnesota. There really is no reason why they should stop at the U.S. border," says Rafn.

Rafn's sentiments are echoed by Michael Lalich, director of the Natural Resources Research Institute (NRRI) at the University of Minnesota, Duluth. "I believe an excellent opportunity for gold exists in northern Minnesota, and I would like to see a major statewide initiative to diversify the mineral industry," says Lalich.

Before anyone rushes to Ely to search for gold, Lalich points out that the good old pioneer days when one simply panned for gold in streams and rivers are gone forever. Today, the business of exploring for gold is considerably more difficult and time-consuming, and is extremely expensive.

Marty Vadis, manager of the DNR's mineral potential evaluation section in Hibbing, says that gold deposits in Minnesota are small and rare. Bedrock containing gold deposits, he adds, also do not show much physical or chemical differences from surrounding rocks and are therefore difficult and expensive to locate. The search for minerals in Minnesota is further complicated by a thick layer of glacial overburden—clay, sand, and rock sometimes several hundred feet thick—that prevents direct examination of the underlying bedrock.

Gold deposits discovered in Ontario most likely don't stop at the Canadian border but continue into Minnesota, say geologists. Companies are searching for gold but find it no longer pans out as it once did. Today it's a multimillion-dollar venture.

In spite of these difficulties, however, several companies are currently conducting multimillion-dollar explorations for gold. How does a mining company go about the business of finding gold? As a once-popular song says, "The road is long, with many a winding turn."

Vadis says that mining companies first do extensive studies of available geological data to find an area that holds good potential for yielding mineral deposits. Once an area has been selected, the companies conduct an airborne geophysical survey to measure such physical properties as magnetics, conductivity, and radioactivity.

After obtaining a lease from the state to explore the area, companies will usually survey the area again, using hand-held ground instruments. If the results are encouraging, they will usually drill a hole—some 800 to 900 feet deep into the bedrock—to obtain samples that can be examined and chemically analyzed for gold.

Because of the geological movements in Minnesota, some rocks stand on end, some have structural faults, and others are broken or contorted. Drill holes can therefore be close to the deposit but still miss it completely. "It helps to be awfully lucky," says Vadis.

Currently, sixteen companies hold DNR mineral exploration leases, granted by the state for a 50-year period. Companies pay a minimal rental charge during exploration and are permitted to keep their findings private. Once they cease to explore, however, the information becomes the property of the DNR.

Companies rarely keep a lease for 50 years, Vadis points out. Most of them drop their leases after 2 or 3 years. This, he explains, does not mean that no gold is in that location.

Vadis cites the example of the Hemlo deposit in Ontario, where intermittent gold exploration occurred for more than 100 years before a massive gold deposit was discovered in 1982. That deposit has published reserves of 75 million tons of gold ore. Eventually, that number will probably be around 100 million tons, with a $7 to $8 billion value, Vadis says.

"Unfortunately, gold is quite unusual in that it can occur in any rock type you

can think of," Vadis sighs. "Greenstone formations typically have more gold than do others, but you just never know."

Another problem, he says, is that gold is not visibly apparent in rock samples: you have to analyze it chemically. To do this, the sample is first crushed and then ground to a fine consistency, like talcum powder. The gold is then chemically removed from the rock.

"An awful lot of rocks look the same as one that might have gold in it, and, unfortunately, we cannot analyze every sample that we have," Vadis says. The DNR keeps all the drill hole samples that it receives from the mining companies, however, and currently stores more than two million feet of samples in Hibbing. Some of those samples are periodically analyzed to check their mineral composition.

"You just never know what you will find," Vadis says, recalling that the gold rush of the 1860s and 1870s in Minnesota resulted in the discovery not of gold but of iron ore, which continues to have a major impact on Minnesota's economy. "Now we have sort of come full circle. We found iron ore, and now we are back to looking for gold again."

Vadis says that the mining industry is cyclical. When the price of uranium was high, it was mined in great quantities, but once the price fell, there was no reason to mine it anymore. The same holds true for gold. As long as the price of gold was being controlled at $35 per ounce by the government—which it was until 1972—the United States had few gold mines. Now, with gold approximately $315 per ounce, interest in the exploration for gold is great.

NRRI director Lalich says that the institute is working closely with the DNR and other state and University agencies to expand the geological knowledge necessary to develop the mining of gold and other minerals in Minnesota.

Northern Minnesota has depended on iron ore as its major industry for many years and only recently has needed to examine alternatives to a greater degree.

Lalich cautions against expecting short-term solutions to the economic problems of the mining industry in the area. "Unfortunately, with a few exceptions such as gold, it is difficult to justify opening up a new mine in Minnesota at this time," he says. "If this trend continues, it is important for us to do our homework now so we won't miss the boat later."

Lalich hopes to have the NRRI play an important role in this process by conducting geological research and providing a data base to encourage and facilitate exploration. "Right now," he says, "we are in the beginning stage, but we hope to play an important role in developing the economy of the area in an environmentally sound manner."

What will the discovery of gold mean to Minnesota?

According to Lalich, simply "finding gold" is not enough. It has to be of sufficient quality and quantity to merit developing an operating mine. If such a deposit is found, however, DNR minerals division head Rafn says that one gold mine would employ 300 people directly and approximately another 300 indirectly. It would create a $12 to $13 million industry in Minnesota, and the state would receive $6 to $7 million in royalties.

All three officials—Rafn, Vadis, and Lalich—agree that predicting when gold might be found in the state is impossible. Even if a deposit were found this year, a long permit process must be followed, which could delay mining for approximately five years.

Could gold mining ever replace the iron ore industry in Minnesota? Hardly. As Lalich says: "One gold mine will never replace the taconite industry."

At its peak, the iron-mining industry employed 14,000 and even now employs between 3,000 and 7,000. "Iron mining is still a $2 to $6 billion industry, and it would be extremely hard to replace," Rafn says.

Right now, the state is concentrating on trying to diversify the mineral industry in Minnesota by encouraging explorations in the state. "If we keep exploring long enough," says Rafn, "eventually we are going to find gold."

Shahla Rahman is a news editor at the University of Minnesota, Duluth.

America Held Hostage, the Legacy

BY L. BRUCE LAINGEN

Five years ago, on a sun-washed afternoon in January, 52 Americans stood proudly on the South Lawn of the White House, our long flight to freedom from distant Iran ended, our country embracing us in an unprecedented outpouring of national affection. All around us was dramatic visual evidence—including the presence of a new president, newly inaugurated—of the consequences of a national drama in which we had played such a large, if offstage, role. An entire nation, watching by television, was transfixed by this final act of that drama and joined in a national celebration of freedom. The nation, brought together as rarely before, briefly set aside the anger, the frustration, and the bitter sense of having been held hostage themselves to the revolutionary turmoil of a little-understood place halfway around the world.

It was a drama that saw 52 Americans successfully used as pawns by tormented Iran to put its revolution on a more radical, clerical-dominated course—a course on which it still remains. It was a drama that unleashed an unending war between Iran and neighboring Iraq—a war more bloody than any in recent times. It was a drama that spelled the end of a presidency but launched new currents of patriotism, as the American people put the bitterness of Vietnam and Watergate behind them.

Five years later, what legacy remains? Perhaps it is too early to judge. It is sometimes not easy to identify the lessons of history, much less see them become reality in a country's policies and purposes. Some things are fact: Terrorism persists, and Americans are still held hostage, not in Iran but in Beirut, with an Iranian connection apparent. Iran remains caught up in its revolution, mired in war with Iraq, still bitterly hostile to the United States and likely to be so while the Ayatollah lives. American strategic interests in the region still suffer the costs of the Shah's collapse and our failed effort to build a relationship with the new Iran—failures symbolized in the seizure of our embassy. Iran is as important to us as ever—a strategic fact that we must not forget. Peace in the Middle East is as elusive as ever, its pursuit buffeted by terrorism, religious fundamentalism, and the scarcity of that vital commodity of diplomacy, a spirit of compromise.

Some things are not so clear: How can we deal more effectively with the threat of terrorism? How can we respond to the challenge of change in the developing world? Will America's new surge of patriotism remain purposeful as well as strong?

L. Bruce Laingen was a special envoy to Iran when he and 51 other Americans were held hostage in Iran. He is pictured here being presented an American flag by President Ronald Reagan. Today Laingen is vice president of the National Defense University, Department of Defense, in Washington, D.C.

Terrorism? Certainly we have learned that there are no easy answers. TWA 847 at Beirut reminded us of that, and painfully so, as does the continuing terror besetting the long-held hostages in Beirut. Our experience in the years since Tehran has assuredly not given us good answers on the use of force, despite our dramatic success in apprehending the four terrorists that seized the Italian cruise liner this past October—an action where three essential elements finally came together for us: good intelligence, superb technology, and decisiveness.

Because terrorism is an illegal resort to force, governments must be prepared to respond with force where these three elements are in place; but doing so must serve practical gain and not simply popular emotions. Balancing that need against a still larger obligation that rests on us as a nation will never be easy. And that obligation, reflected by the high priority we attach to it, is our need to preserve and improve human life, and to always contribute to, rather than detract from, the fabric of international law and practice. History demonstrates the importance of this obligation, and without it, all states great and small are in peril.

Yet another lesson we have learned in responding to terrorism—a lesson that perhaps we have yet to recognize fully—is that terrorism is rarely without motivation. Terrorism is evil, wrong on every count. But as was the case in Tehran, its practitioners are usually rational in purpose, their anger born of deeply felt grievances of social, political, psychological dimension—of which the number is legion in the Middle East. We need to remember not only that we must do much in the short term to strengthen our capacity to cope but also that until and unless progress takes place in the resolution of those grievances, there will remain those who believe that grievances can be met only by resorting to violence.

Those traumatic events in Tehran are a dramatic reminder not only of the immediate threat of terrorism but also of the challenge of change in the developing

world. It is a challenge primarily facing leadership in the developing countries, but facing us, too, as we defend our own national interests. As George Kennan once put it, "The task of international politics is not to inhibit change but to find means to permit change to proceed without upsetting the peace of the world."

That is no easy task. Change never comes easily, involving as it does in the developing world a need for broader participation in the political process, but participation that reflects a respect for traditional values.

Facing up to that challenge of change did not come easily for the Shah. He did not face the challenge until it was too late—until the challenge was so great that it became for Iran an idea whose time had come. Nor did we fare better there, failing as we did to perceive in time the way the premises of our policies in Iran were being undermined by the power of that idea. Nothing, to quote Victor Hugo, is more powerful than an idea whose time has come.

Coping with change in the developing world remains our challenge, given the leadership role we play and our immediate need to defend our interests in the context of governments as we find them. Change confronts us in our relationships with countries throughout the Middle East. Nowhere is it more dramatically apparent today than in South Africa. And five years from now, history will judge us severely if we and the leadership of the Philippines fail to meet the challenge of change there before it becomes too late.

Terrorism, revolutionary ferment, the challenge of change—all were involved in the Tehran crisis, and all are areas in which major object lessons were posed but where major questions persist. But perhaps what Americans remember most from that crisis is the sense of national unity that eventually evolved at home. Not a bad thing, we will all agree. We developed a sense of community, almost of family on a national scale, using 52 hapless Americans as symbols of a changed national purpose. The nation saw those Americans restored to freedom and began to think in a more positive sense about the country's policies and purposes. The events coincided with a new administration and the hopes that these quadrennial events in our political process always produce, whatever our political persuasion.

A passing euphoria? Perhaps. Certainly the scale of its dimensions at the time made it seem so, but few would deny that something new was triggered in our national psyche that has persisted. Witness the remarkable expression of that spirit in the patriotic fervor of the Los Angeles Olympics, the assertive Americana evident in the 1984 campaigns of both political parties, the effective manner in which an incumbent president has drawn on that spirit to affirm a sense of national will. And although this patriotic renaissance has assuredly not relieved us of the Vietnam syndrome, it has at least eased that burden and made this nation reach out to the veterans of that tragic war, giving them the recognition they had so long sought.

Without question, a tide of patriotism is abroad in the land, and the boost in our national psyche paradoxically stems in no small part from the pain felt in the hostage crisis. An object lesson was served; a nation is stronger when it has a sense of community. But questions remain: How deep, how lasting, is this patriotism? Does it extend to the sacrifice, the commitment it asks of us as a people to run the risks, to pay the costs that a dangerous world may ask of us and that a still imperfect society at home demands of us? Does this new patriotism simply reflect a superficial pride in our material good fortune—evident in the way we are spending more, saving less, and going ever deeper into debt, and evident, too, in our limited capacity to agree on foreign policy issues beyond the water's edge?

Who can answer with assurance? Definitive answers to such questions take more than five years. But for 52 Americans, for those of us back from Tehran, one central fact was clear then and is even clearer now: No other country offers the range of freedom that Americans enjoy. In no country does the obligation to defend freedom, and to work to see its extension elsewhere, rest as heavily as it does on the United States.

My experience as a hostage in Iran made that appreciation dramatically real. It made us 52 born-again Americans who understandably have a special love affair with our country and who identify in a special way with a quote from President Reagan: "In this land there is always the promise of a better tomorrow."

Toasting the Tenth

Margaret Sughrue Carlson

Margaret Sughrue Carlson is executive director of the Minnesota Alumni Association.

As alumni director, I attend two or three major University events per week. Each banquet, reception, sporting event, or educational forum has its trademark and memorable moments. Occasionally there are events that attain star status. Toasting the Tenth, the celebration of the tenth anniversary of women's intercollegiate athletics, was one such event.

Commemorative glasses, birthday cake, floodlights, and television cameras set the stage, but the stage was merely a backdrop for the drama of the evening. The heart of the event was a salute to the courage of the women and men who believed women's athletics should be an integral aspect of the total University program. Through the efforts of these pioneers, an impressive list of accomplishments has been achieved in only a decade.

In 1975-76, the first year of the women's intercollegiate athletics department, the budget was $259,838. Today, the budget has grown to $2.34 million, and the program boasts 280 athletes in eight sports and has awarded 56 full scholarships and 38 partial scholarships. And this year, after nine years of getting some funding from the University's general budget and two years of relying on the men's athletic program for financial aid, the women's program will be funded entirely by the state legislature.

Merrily Dean Baker, director of the department of women's intercollegiate athletics, is one of only two women in the Big Ten who oversee their own budgets and one of only about a dozen women directors in the nation.

In addition to the public support of the legislature, the women's athletic program has enjoyed strong private support. Kathleen Ridder, a board of trustees member who also chairs the Women's Athletic Development Fund Advisory Council, spoke at the celebration on behalf of women and men in the community who have volunteered their time and talent to help raise funds for women's athletic scholarships. They, too, had much to celebrate. In six years they have raised $391,409, and the endowment fund that they created four years ago currently stands at $900,000. Both achievements represent solid first steps toward building a financially stable women's athletic program for the future.

Among those honoring the department were a dozen "celebrity toasters," who shared their perspectives about women in sport at Minnesota and extended their best wishes for continuing success. People representing many facets of life in Minnesota united in their commitment and dedication to make the program a viable and healthy one. Representing Minnesota government were Lt. Gov. Marlene Johnson, Secretary of State Joan Growe, and House of Representatives Majority Leader Connie Levi. From the community and corporate world came businessman Harvey Mackay, businesswoman Diane Page, *St. Paul Pioneer Press Dispatch* Editor Deborah Howell, Minnesota High School League Associate Commissioner Dorothy McIntyre, and University hockey great John Mariucci. Representing the University were President Kenneth H. Keller, Regent Wenda Moore, Vice President Frank Wilderson, Men's Intercollegiate Athletics Director Paul Giel, and Professor of Surgery John Najarian. Representing the Big Ten Conference was Commissioner Wayne Duke.

After the toasting, four pioneers in the athletic program's short history were honored for their achievements and inducted into the Hall of Fame. Those honored for significant accomplishments by a University woman athlete were Chris Curry Gentz, '82, first woman student to receive an athletic scholarship, first and only Gopher woman athlete to win a national title (in diving), and first woman in University history to coach men (men's and women's diving); Gretchen Larson, '83, softball standout and all-American who competes internationally with the Raybestos Brackettes fast-pitch softball team; and Cathie Twoney, '83, Minnesota's only cross country Big Ten Champion and four-time cross country all-American and track all-American who holds lifetime bests that rank her third in the United States in the 2,000 meters and 5,000 meters. Honored for significant contributions by someone other than an athlete, coach, or administrator was Dorothy Lestina Sheppard, '29, who established the first endowment fund for women athletic scholarships and is a member of the Patty Berg Development Fund Advisory Council.

"When you're only ten years old, birthday presents are really important," said Baker as she unveiled several of many presents received by the department: a 100-page, ten-year history of the department produced by the Gold Club; a commemorative poster designed and produced by Pillsbury, Seitz/Yamamoto/Moss, Inc., and Watt-Peterson Printing; and a marketing campaign, which includes billboards soon to be seen across the Twin Cities, developed by Grey Advertising Company.

The vision and guidance for the event were director Baker's, but the volunteers took ownership for the evening. It was their night and their party. Volunteer Marilyn Bryant chaired the planning committee and served as emcee for the evening with former Minnesota Viking Paul Flatley. WCCO Radio personality Ray Christiansen, a good friend of both women's and men's athletics at the University, served as emcee for the Hall of Fame induction; and Don Stolz of the Old Log Theater scripted the entire evening as his gift to the department.

Everyone present felt the camaraderie of the evening—of the struggle to make the women's athletics program at the University one of the best in the nation, of the celebration of that achievement after ten years. The importance of the program, the commitment of the University, community, friends, athletes, and staff, and the dedication of the hundreds of volunteers made the event successful.

The strength of the University of Minnesota correlates directly with the involvement of volunteers such as those who made the evening an all-star celebration. Toasting the Tenth was truly an uplifting evening because it reflected the spirit and excitement of pursuing excellence—and the commitment and dedication of University volunteers. We're looking forward to the next celebration in 1995.

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