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Watching Politicians
LETTERS TO THE EDITOR

The Review welcomes letters from readers and will print as many of them as space permits. Letters may be edited for brevity and clarity. Unsigned letters cannot be used, but names of the writers may be withheld on request.

Dismaying 'Debut'

Your recent article [Winter 1990–91] on Christopher Rouse was very interesting, but I was dismayed to see Thomas Fitzpatrick’s use of “debuted” as a verb:

“When David Zinman headed the Rochester Philharmonic Orchestra he became a Rouse enthusiast and the RPO debuted many of his compositions.”

Surely, Mr. Fitzpatrick cannot imply a whole new usage: I debut, you debut, we debut.

Please ask your copy editor to eliminate future occurrences of this awkward and incorrect form.

Jessica Kramer Friedlander ’53E
St. Louis, Missouri

Although at least one modern dictionary (Random House) cheerfully accepts “debut” as both a transitive and intransitive verb, we tend to agree that it is awkward—at least in part because of the disparity between spelling and pronunciation. Since we really don’t like to dismay our readers, we promise to think twice about its use next time—Editor.

Robbed Again

The response to the letter from Rochelle Goldberg Ruthchild [Fall 1990] seemed to me to “rob” Sylvy Levy Kornberg ’38 yet again. Her husband’s words were interesting but I believe that she is entitled to be profiled as a distinguished alumna of the University in her own right—not as the wife of a scientist.

As a matter of fact her career demonstrates considerably more dedication and accomplishment than most in that in addition to her work she ran a home and cared for and reared three sons. Her determination at the University shows up in the way she met the difficulties of running between Prince Street and the River, a thing no man would have been expected to do, and the editorship of the Tower Times—this despite the heavy course load of classes and labs necessary to a degree in any science.

Those of us who date back that far remember well that we as women were always second-class citizens—President Rhees scarcely acknowledged our existence, and courses and schedules were drawn up with the men in mind. One might hope that in this changing society the University would exhibit its pride in some of its women graduates, realizing that they have been frequently overlooked and their contributions minimized.

Ruth O’Grady Smith ’35, 62G
Tucson, Arizona

The Nixon Visit

In the Class of 1966 Reunion newsletter, Walt Salerno asked if anyone remembered Richard Nixon’s speech at our graduation. I remember it well: The topic was “Academic Freedom.” Mr. Nixon allowed that it was a Good Thing, except, of course, in the case of national defense, when other things (the reputations of politicians, perhaps?) became more important.

I also remember participating in the first (but by no means last) protest march when President Wallis announced that Richard Nixon would be our Commencement speaker. River [now Wilson] Boulevard was full of chanting, singing, sign-waving students and faculty on a lovely warm spring day. As I recall it, our protest had two foci: First, neither students nor faculty had been consulted when the speaker was chosen. Second, since Nixon had attacked a Marxist professor at Rutgers University, and suggested that he should be fired because of his lack of enthusiasm for the Vietnam War, many of us felt that Nixon did not fully appreciate what academic freedom entailed: the integrity of scholarship and the opportunity to speak out on unpopular issues.

The outcome? Well, Nixon did indeed address our Commencement and a few members of the Class of 1966 boycotted the ceremonies for that reason. I was unwilling to disappoint my parents, so I was there. (That was my dad who raced across the field to shake Nixon’s hand after the address.) But the protest accomplished two things: President Wallis agreed to use a more consultative approach in selecting future Commencement speakers, and Mr. Nixon did not receive an honorary degree.

Further, the Rutgers professor in question, noted historian Eugene Genovese, was subsequently hired by the University and for many years chaired the history department.

Susan Blackall Hansen ’66
Pittsburgh

“Plus ça change,” as one of our writers remarked elsewhere in this issue.

This year’s seniors are also protesting, in this case because they may not have a Commencement speaker whose choice they can take exception to. The University last year reverted to an earlier tradition of inviting brief responses from honorary degree recipients in place of a major address. As of this writing, negotiations were continuing—Editor.
Features

Interior Motives
by Denise Bolger Kovnat

Handing out rewards like dog biscuits doesn’t necessarily lead to the desired result. That’s among the things students of human motivation have conclusively demonstrated.

The Mind’s Eye
by Tom Rickey

If you want to understand how the human mind works, try looking at the world through a robot’s eyes.

Watching Politicians
by Thomas Fitzpatrick

Richard Fenno pokes into their campaigns, soaks up the details of their legislative careers, and teaches the most pointed civics lesson since The Federalist.

Winslow Homer at Prout’s Neck
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seascapes by Winslow Homer
A portfolio of Maine-coast paintings from a major exhibition organized by the University’s Memorial Art Gallery.

Richard Leone’s Complex World
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by Jeremy Schlosberg
Chairman of the Port Authority of New York & New Jersey and chief executive of the Twentieth Century Fund, Richard Leone ’62 says he’s the kind of person who likes to think about and solve complex problems—which would seem to be a good thing.
Cracks in the Wall

When I meet with students on various informal occasions one of the most commonly asked questions is “What do you do?” A fair question. University presidents seem to be viewed in totally contrasting perspectives.

On the other hand there is a pervasive belief that the president does everything. Thus, I was asked pointedly by a student last year why she could not use her student ID card to get into a neighboring dormitory after 11 p.m. I had to tell her that I did not know the answer to that question and that I hoped I never knew the answer. Presumably, the president should leave key cards to someone else.

On the other hand, students can as easily assume that the president doesn’t do much of anything—or much of anything that they can detect. Although I do teach one course each year, that hardly qualifies me as a visible teacher. I don’t man the library desk or coach the volleyball team. I admit that there are days when I wonder what the president does—or should do.

One thing I did recently may have seemed like an act of sheer impudence: In the face of alarming reports on the condition of our New York State finances, I appeared before the state Division of the Budget to ask it for money.

I committed this act on behalf of the Commission on Independent Colleges and Universities in New York, whose chairmanship is one of my less usual duties for the current year. CICU is an association of most of the private colleges and universities in the state. Its principal effort is to influence state policy and programs that affect private higher education.

I was at the budget hearing to argue for increased support of three programs of vital importance to the college and university students of this state: the Graduate Tuition Assistance Program (G-TAP); the Higher Education Opportunity Program (HEOP) that assists academically disadvantaged students in making the transition to higher education; and “Bundy” Aid, a per capita grant given to institutions for each earned degree conferred.

The day before my testimony Governor Cuomo announced a projected $900,000 deficit in the current year’s budget—and we are told that even worse news lies ahead in the next budget. Not only did I fear I would be talking to a stone wall, I was apprehensive that the wall might actually fall on me.

In the last legislative session at least part of the wall did land on private colleges and universities. Alone among the sectors, private higher education took an absolute cut—a 5 percent reduction in Bundy funds. The governor has already called for a further reduction in Bundy to meet the current deficit.

Given the budget crunch and the apparent interest in reducing the state’s funding for private education, it might be well here to review a few basic principles—at least they were principles but yesterday.

Bundy Aid is named after McGeorge Bundy. When Governor Rockefeller established the modern SUNY system, there was considerable apprehension among the private colleges of the state that the new low-cost state system would drive the private sector out of business. Mr. Bundy and his commission looked at the financial state of private education as it was then (some 25 years ago) and decided that while private education was not as badly off financially as it might think, nevertheless the state should regard higher education—public and private—as a single entity. Economic support, the commission said, should be extended to both sectors as part of the concept of a single system.

Over the intervening years the balancing act that Bundy provided has been seriously impaired: In addition to last year’s cut, Bundy Aid has in the last five years lost 23 percent to inflation. On top of that, until a recent modest raise, tuition at SUNY and CUNY was held at 1983 levels while tuitions at private colleges have increased sharply year by year.

The cost of providing a degree is substantially the same in public and private education, but thanks to tax support of the publics, tuition in the SUNY system is now approximately $1,500 per year, or one tenth that of Rochester. (A recent article in The New York Times on one of our neighboring institutions in the SUNY system claimed that over half the students came from families with incomes in excess of $50,000 per year. A faculty member suggested that the reason students could drive BMWs was that they did not have to pay high tuition charges in the state system.)

Does the low state tuition matter? Well, I should think it does to taxpayers, but it also matters to this University. Of course, I will argue that Rochester offers more educational value—and I believe it—but there is no question that the sharply differential price DAMAGES our ability to attract middle-class (continued on page 47)
Humans are blessed with an innate hunger to do, to learn, to discover, to create, and to explore. Rewards, some psychologists argue, can chill this motivation—as can other prods such as deadlines, competition, and threats of being sent to bed without your teddy bear.

Psychologists Edward L. Deci and Richard M. Ryan, professor and associate professor respectively in the College of Arts and Science’s Department of Psychology, are students of motivation: They want to know, to put it simply, what does—or more to the point, does not—push our buttons. And it’s not always what you think it is.

“Intrinsic motivation,” their operant term, describes our innate hunger to do, to learn, to discover, to create, and to explore. Rewards, they argue—monetary or otherwise—can stunt intrinsic motivation, as can other major or minor goads such as deadlines, competition, surveillance, goal-setting, and threats of punishment.

The reason? These are all forms of “extrinsic motivation,” shifting our sense of control to someone or something outside of ourselves and undermining our feelings of self-determination and competence.

“To offer a prize for doing a deed is tantamount to declaring that the deed is not worth doing for its own sake,” declare Deci and Ryan in their 1985 book, Intrinsic Motivation and Self-Determination in Human Behavior.

now, for the behaviorists among us (those of you who, like B. F. Skinner, view human behavior in terms of physiological responses to external carrots-on-a-stick) it’s important to note that these psychologists aren’t saying that motivation cannot be prodded by positive or negative reinforcement. Certainly, most parents and teachers (not to mention those who regularly take home a paycheck) would agree that rewards do indeed motivate people, at least superficially. The problem lies in how they motivate people.
en, albeit in scholarly terms, for the vitality and inquisitiveness of the human spirit.

Have they ever been labeled idealists? "No," says Ryan. "The dirty word is humanist. But I take it as a high compliment."

Above all, the two are empiricists who can point to decades of solid research — some 30 years between them — in support of their theories. Their work, according to psychologist Deci: "The challenge for each one of us is to make our own place, so we can do what interests us and find satisfaction in it."

The Rochester researchers make this point in a study that observed a group of students working puzzles. Left on their own, the participants had become absorbed in finding the solutions. But when the psychologists intervened, something happened. Offered a reward for continuing with their activity, or threatened with punishment for giving up on it, the students lost their enthusiasm. The puzzles had become simply a means to an end.

Enthusiasm isn't the only thing that suffers from the imposition of external controls: Other studies have shown that the quality of learning is affected also. In other words, handing out rewards like dog biscuits doesn't necessarily lead to the desired result.

Deci's and Ryan's motivational theory — applicable to any number of human activities, including sports, religion, therapy, and the arts, as well as raising and educating kids — is bracingly optimistic, founded on the belief that people are naturally curious, active, and productive creatures, eager for and deserving of self-fulfillment in their pursuits. At its best, their work amounts to a declaration of independence, albeit in scholarly terms, for the vitality and inquisitiveness of the human spirit.

"Sure, there's such a thing as being graceful under pressure. But the point is that the more pressure you put on people, the less likely it is that they'll be graceful, or interested, or feel good about themselves."

Robert Vallerand of the University of Quebec at Montreal, is "one of the best laboratory research on motivation being done at the present time."

In a 1985 article in Psychology Today, Deci describes one of their frequently cited studies, which compares "controlling" teaching styles to those that are, in the talk of the trade, "autonomy supportive."

"My colleagues and I have found that even modest reminders about standards and accountability can bring disastrous results," he writes, bringing up a case in point — another study having to do with solving puzzles. In this one, each participant was asked to instruct someone else in how to arrive at the answer.

"We introduced all of the 'teachers' to the task in the same way, with one difference: Half of them were told, specifically, 'It is your responsibility as a teacher to be sure that your student performs up to high standards.' An analysis of the teaching sessions that followed showed the effects of that admonition.

"Teachers who had been reminded of standards talked three times as much as the other teachers," Deci writes. "They also tended to direct more, to control more, to evaluate more, and to criticize more." And, he reports, they showed their pupils how to solve the puzzles by giving them the solutions, rather than encouraging the experimentation that would lead to a conceptual grasp of the problem.

Having been told just what to do, these students managed to assemble twice as many puzzles as the students of the less controlling teachers. But, when Deci and his colleagues compared the number of puzzles the students solved on their own, the controlled pupils had assembled only one fifth as many as those left more to rely on their own ingenuity.

In this view, Hemingway's ideal of "grace under pressure" is noble — but irrelevant. "Sure, there's such a thing as being graceful under pressure," says Deci, "in the same way that there's such a thing as being genuinely interested even though you're taking your prelims for your doctorate. But the point is that the more pressure you put on people, the less likely it is that they'll be graceful, or interested, or feel good about themselves."

A glance at their resumes suggests that both scholars practice what they teach (although both, on principle, object to measurements of success, which Ryan dismisses as "fetishisms of standardized achievement").

A little quantification: Since joining the University in 1970 with an M.B.A. (from Penn) in addition to his Ph.D. (from Carnegie Mellon), Deci has written or co-written five books and edited three more, produced 14 book chapters and 28 journal articles, presented 28 papers at various gatherings, and supervised 15 doctoral dissertations (including Ryan's, completed in 1981).

Among other undertakings, he serves on a grant-review committee for the National Institute of Mental Health, acts as an editorial consultant to professional journals and textbook publishers, and, calling on his experience as a one-time journalist for the Rochester Democrat & Chronicle, sometimes translates his findings into articles for popular magazines like the Psychology Today story cited above.

Ryan is equally prolific. ("I'd like to say that I got into this field to help
other people—but it was really intellectual curiosity,” she confesses.) In the
decade since receiving his Ph.D. from Rochester, he has published one book
and 49 papers, presented another 25 papers at conferences, and supervised
eight completed doctoral dissertations, with two others in progress.

He also directs the Department of Psychology’s clinical training program
and, in his capacity as a clinical psychologist, counsels several people each
week. And all that is before you get
to the teaching: Twice Ryan has made
the select list of finalists for the Student Association’s outstanding teacher
award.

So how does a psychologist im-
mersed in theories of intrinsic motivation
go about sparking motivation in
others?

Wendy Levin, a 1987 graduate with
a B.A. in psychology, took “Theories
of Personality” with Ryan. “It was
wonderful,” she recalls. “He’s a terrific
lecturer. I have to say he just captivated
us. I remember he made the point that
most of us had entered college not be-
cause we really wanted to be in college
per se, but because we were on a sort
of conveyor belt from high school to
career. I’d never thought of it that way,
but he was right. He really reached us
with things like that.

I’m kind of chuckling as I think
back on it: I was motivated
in that class. We used to prepare
for exams in study groups that
would last for hours.”

Sitting in his comfortably cluttered,
plant-filled office in Meliora Hall,
Ryan leans back in his chair, draws
one sneaker-clad foot over the oppo-
site knee, and ponders his own teach-
ing style.

“I think that there is endless mystery
in the workings of the human psyche,
and I try to convey that sense to
my students,” he says. His words
come rapid fire, as if to keep pace
with his thoughts. “So I try to open
up questions—questions that
they can apply to themselves, so
they’re not just thinking of a set
of facts that they need to learn
for an exam, but rather they’re
learning something that has rele-
cance to the here and now in their
daily lives.”

What does he want for his
students?

“I would like them to be outstand-
ingly interested, outstandingly curious,
outstandingly engaged, enraptured,
excited, caught up in their subject.”

Which sounds like falling in love.

“Absolutely,” he says. “That is the pri-
mary goal of an educator.”

In the movie Dead Poets Society,
English teacher John Keating strives to
do the same. The depiction may be fic-
tional and romanticized, but it offers a
sense of what Ryan is after.

On the first day of class, Keating
leads his students—young men at a
New England prep school in 1959—to
the trophy cases in the school’s entry
hall, filled with ancient photos of
schoolboy heroes long since gone.

“I’d like you to step forward over
here and peruse some of these faces
from the past,” Keating tells the boys.

“You’ve walked by them many times;
but I don’t think you’ve really looked
at them.”

The camera focuses on the youthful
faces in the class, then on the equally
youthful faces in the photographs.

“They’re not that different from you,
are they?” Keating asks. “Same haircuts . . . full of hormones, just like
you. . . . Invincible, just like you feel.
The world is their oyster. They believed
they were destined for great things,
just like many of you. Their eyes are
full of hope, just like you.

“Did they wait till it was too late to
make from their lives even one iota of
what they were capable? Because you
see, gentlemen, these boys are now ferti-
zizing daffodils. And if you listen real
close, you’ll hear them whisper their
legacy to you. C’mon, lean in. Listen.

Hear it?”

“Carpe,” he whispers to his students
as they bring their faces to the glass,
“carpe—hear it?—carpe diem. Seize
the day, boys. Make your lives extraor-
dinary!”

(Impressed, but true to form, not
overly, as the students pour out of
class one asks another, “Do you think
he’ll test us on that stuff?”)

Ryan, who happens to have seen the
movie, adds, “I think that if students
have not found a passion while they
are in school, then they can chalk up
the experience as a failure—and I don’t
care what career they go into.

“My assumption is that the motiva-
tion is already there; it just doesn’t
always get sparked. A teacher’s job is to
provide nutriment, so that motivation
can take root and grow. These ideas
aren’t new; they’ve been stated many
times before, by people like Maria
Montessori and John Dewey.”

Indeed, Dewey—the teacher, phi-
losopher, and educational reformer—
anticipated by nearly a century recent
motivational theories. In *Democracy and Education*, written in 1906, he offered this example: "A youth who has had repeated experience of the full meaning of the value of kindliness toward others built into his disposition has a measure of the worth of generous treatment of others. Without this vital appreciation, the duty and virtue of unselfishness impressed upon him by others as a standard remains purely a matter of symbols which he cannot adequately translate into realities. His ‘knowledge’ is second-handed...."

Dewey’s notion of “vital appreciation” was illuminated in a study published in 1984 by Ed Deci and Carl Benware, one of Deci’s former graduate students. The participants—Rochester undergraduates—were asked to spend several hours reading and digesting some unfamiliar material on neurophysiology. Deci and Benware told half the students that they would later be tested on the material, the other half that they would be asked to teach it to another student.

Assessing the experience in follow-up questionnaires, those who had expected to teach—when compared with those who expected merely to be tested—reported that they found the material more interesting and had enjoyed learning it more. They also reported being more active in the learning process and more willing to participate in a similar study in the future.

What made the difference for the “teachers” in the experiment? The expectation of putting the new information to a real use—resulting in a form of learning that Professor Deci labels “conceptual.”

“It’s learning how to solve problems,” he says, “knowing how to deal with new situations, knowing how to research a problem. It’s organizing material, understanding how things fit together rather than simply the rote memorization of information.”

That’s the first goal of education, in his view. The second, personal growth and development: “a kind of personal satisfaction, a sense of self-worth, feeling good about who you are, feeling interested and challenged.”

According to what Deci and Ryan call their “organismic” theory of development, personal growth is built into our genes. The capacity to bloom is there, but it can happen only under the right conditions. Dewey would agree. “Nature as a whole,” he wrote, “is a progressive realization of purpose strictly comparable to the realization of purpose in any single plant or animal.”

However, robust growth and abundant learning aren’t achieved in a Sumnerhillian, anything-goes setting, according to motivational theory. To the contrary: Research shows that motivation can flourish—indeed, very often must take place—in an environment of clearly stated limits.
should be a good boy or girl and be neat with the materials”). Another third received “autonomy-oriented” limits (“Although it is sometimes fun to be careless with the paints, now is a time when it is important to be neat so the materials will remain nice for the other children”). The final third were told just to go ahead and paint.

A comparison of the controlled children’s work with the output of those who’d been given free rein showed clear differences: The controlled youngsters, told to be good girls and boys, simply weren’t as interested in their paintings, which were both less creative and technically inferior. The “autonomy-oriented” children, asked only to be considerate of their classmates, on the other hand, did quite as well as their unrestrained conferrees—both in maintaining enthusiasm and in creativity and accuracy.

A heartening outcome, by most anyone’s standards. But is research like this making its way into the classroom? Are educators beginning to get the message?

In June 1989, the Carnegie Council on Adolescent Development published a report, “The Turning Point: Preparing American Youth for the 21st Century.” Jacquelynne Eccles, a professor of psychology at the University of Colorado and a research scientist at the University of Michigan, served—along with a group of senators, teachers, educational administrators, and other academics—on the task force that prepared the report.

“I try to open up questions students can apply to themselves, so they’re not just thinking of facts they need for an exam, but rather they’re learning something that has relevance to their daily lives.”

“The kinds of ideas Deci and Ryan are talking about are already part of the middle-school philosophy in this country and are certainly compatible with the Carnegie Report,” says Eccles over the phone from Boulder.

“The report lays down certain principles. It says that all kids should be able to succeed; what that means is that you don’t use comparative grading and you don’t use normative grading—what’s known as grading on the curve. You grade kids on their progress instead of their performance; you use a lot of hands-on learning that’s grounded in their experience and that, essentially, tries to capitalize on intrinsic motivation.

“This report is having a big impact, because it’s hitting at a time when educators are interested in the subject.”

Sports psychology is another area where motivational theory is being applied. Indeed, if the motivational psychologists have their way, Vince Lombardi’s creed, “Winning isn’t everything; it’s the only thing,” may one day yield to the philosophy that “winning isn’t everything; learning is.”

The University of Quebec’s Robert Vallerand reports: “Dr. Luc Pelletier, an assistant professor at the University of Ottawa, is right now working with the Canadian Federation of Swimming, trying to teach Deci’s and Ryan’s motivational concepts to coaches, administrators, and athletes across Canada.

“We’re also beginning to see these ideas being applied in the work force, in quality circles, participatory management programs, and the like. The bottom line is that people want to have a say in what’s going on; they want to have a chance to express their opinions and be heard. They want choices. Children do the same thing; they may want to choose between something as simple as taking their bath first or reading the story first. But it gives them a sense of control over their environment.”

In the end, while Deci and Ryan are advocating that teachers, coaches, parents, and those in similar roles work to nurture what’s best in the human spirit, they aren’t seeking a utopia in which no pressures at all exist.

“We assume that deadlines, pressures, do have some function. There’s no way to say whether or not they should or shouldn’t exist,” says Deci, sitting in his office in Meliora Hall, filled, like Ryan’s, with obviously well-nurtured and motivated plants. He speaks quietly and deliberately, in contrast to his colleague’s fast-paced delivery.

“I think, really, the developmental challenge that faces each one of us is to bring our creative capacities to bear on something that also is useful in terms of a career—you know, what we do with the main part of our lives.

“What a lot of our work shows is how deadlines, other pressures, work against our capacity for being interested. The challenge, then, for each one of us, is to make our own place, in the midst of all those pressures, so we can do what interests us and find satisfaction in it.”

Or, as John Keating tells his students in Dead Poets Society, “This is a battle—a war, and the casualties could be your hearts and minds... .

“Boys, you must strive to find your own voice.”

After years of meeting deadlines, Denise Bolger Kovnat says she’s happy to learn that they’re as bad for instrinsic motivation as she always thought they were. (Her editor, on the other hand, is equally happy to learn that they still serve as a useful, if extrinsic, goal to achievement.)
The Robot Vision Lab may sometimes look more like Romper Room than the high-tech facility it is, but the ultimate goal here is weighty and basic—to understand how the human mind works.

By Tom Rickey

"If I had a robot that I could tell 'Go get my cereal box,' I'd be a rich man."

Grad student Lambert Wixson and his fellow researchers in the College of Arts and Science's robot lab haven't got to that point yet, but their Rochester Robot—a computer-directed swinging arm with camera "eyes" mounted at the tip—certainly knows a box of Frosted Flakes when it sees one.

Let's watch.

The robot veers around the Snoopy doll, skips the can of clam chowder, skips the Crunch Berries and the baking soda, and doesn't squeeze the Charmin. Suddenly, the robot stops and stares fixedly at the object of its search: Frosted Flakes in the bright blue box with the red-and-black tiger on it.

Rochester computer scientists believe that theirs is the first robot that can distinguish between similar objects by recognizing color combinations.

This ability could make robots far more useful, in many more settings, than they have been up to now. Such sharp-eyed automatons, for instance, could make a quick distinction between the cauliflower and the broccoli at the checkout counter and automatically ring up the correct price—with no need to bother about bar codes.

The color-vision capability that gives the Rochester Robot its supermarket savvy is but the latest skill added to its repertoire by scientists working in an environment that sometimes looks as much like a preschool playroom as a high-tech lab: Stuffed animals, toy balloons, building blocks, and electric trains are standard-issue equipment here.

Has the University gone back to Romper Room?

Yes, in a way, and properly so, considering that what is taking place here is robot training—and your average robot has yet to attain the innate intelligence of your average human two-year-old.
The low-tech Romper Room equipment may seem like a far cry from the multibillion-dollar Superconducting Supercollider or the Human Genome Project, two of today’s behemoth “big science” projects. But the object of robot research — to create what we call “intelligence” — ranks right up there in difficulty with (and arguably surpasses) the goals of such highly publicized, budget-busting schemes. And it is with the everyday kiddie playthings in Rochester’s robot-vision lab (backed, of course, by the lab’s extremely high-tech, multimillion-dollar computer hardware) that some of the most advanced work in this field is being done today.

“Our ultimate goal,” says Dana Ballard, professor of computer science, “is to understand how the human mind works.” Building a robot that can find the Frosted Flakes is an incremental step toward that goal.

Robot vision — endowing robots with the ability to “see” their world — opens one gateway into the field of artificial intelligence (or “AI” as its practitioners label it), a discipline that has been notorious for great expectations but skimpy results. The hoped-for automation that would cook, clean, do the laundry, and attend to all those other humdrum household chores have yet to materialize. Even in industry, where robots are increasingly to be found productively employed on assembly lines, their usefulness has been limited by an inability to adapt to changing circumstances or to navigate readily, if at all, in their environment.

Perhaps the rough going is linked to our notion of what constitutes intelligence. Consider the stereotypes: a professor tugging at his beard, ruminating on the origin of the universe; a neurosurgeon pondering his or (updated stereotype) her next move during a delicate brain operation.

To be intelligent, says this stereotype, you have to know a lot — as much as, for instance, Carnegie Mellon’s world-ranked chess-playing computer (nicknamed “Deep Thought”), a multimegabyte intellect that has beaten several human grandmasters. Since the “chess world” is predictable, the Deep Thought model is useful. But what about the real world? What if a knight or a pawn falls over? What if a game of checkers is placed before the robot instead of the expected chess pieces? The “intelligent” Deep Thought would be put to shame by nearly any child who could adapt to real-life circumstances — as the computerized chess champ, for all its mastery of every conceivable gambit, could not.

Deep Thought illustrates the dominant approach to AI over the past several decades. To create the faculty of intelligence, researchers have endowed their robots with scads of processing power, stuffing into them as much information as technology would allow in an attempt to represent the world as completely as possible.

But, says Christopher Brown, associate professor of computer science, “nobody’s machine is big enough to understand all of the world all of the time.” Brown, together with Ballard and Assistant Professor Randal Nelson, leads the robot-research group at Rochester, one of the institutions where scientists are attempting new approaches to the problems of robot vision and artificial intelligence.

Instead of relying on a central computerized “brain,” University researchers have endowed their Rochester Robot with a number of separate but potentially interactive abilities (or behaviors, as computer scientists tend to call them). Each of these behaviors represents only one short step along the road to achieving true intelligence. But, the theory goes, outfit the robot with enough of them, and you can ready it to tackle the tougher assignments like making its own decisions and learning new tasks on its own.

Graduate student Steve Whitehead refers to this as the “incremental approach” to intelligence. “Perhaps we’ll be able to build successful robots by following the evolutionary chain,” he suggests. “In the old days, scientists tried to create robots that were much like humans. Now we know how difficult that is. So we’re working on simple robots that can do simple tasks. Then by putting these different programs together, we can begin to create behavior that is intelligent. But we have to get the simple behaviors first.”

One of the basic behaviors Randal Nelson has recently programmed into

Imagine sending a robot shopping.
If the robot recognizes things only by shape, then what are you going to tell it? Pick up four rectangles and three cylinders?"
the robot allows it to detect moving objects while it is itself in motion; most robots can do this only when they're stationary. This is an ability that could be used in an automated surveillance system—a roving robot that would patrol a warehouse at night, setting off an alarm if it senses an intruder about to make off with the goods.

The ability to detect a moving object is just the beginning, however, says Nelson. The more difficult task is trying to identify it. Imagine you are walking along the sidewalk and something skitters past your feet. You catch a fleeting image out of the corner of your eye and somehow know that what you sensed was probably a dog or a cat. Some subtle characteristic in the motion tells you it wasn't a rolling softball or a blowing trash bag. But it's hard to pin down these subtleties, which we understand almost instinctively, and convey them intelligibly to a robot.

Wixson encounters a similar problem working on another aspect of robot training—teaching it how to locate objects. This is an important ability, he notes. "Consider how much time we spend just hunting out our car keys, or a jacket, or the cereal box." Think again of the small animal skittering across the street. How did you know it was not a horse, aardvark, or a jacket, or the cereal box? If you have equipped your robot with the ability to recognize color, the robot may come back with a box of baking soda and a can of beans. With the ability to recognize color, the robot can distinguish one cereal box from another, and the Campbell's from the Heinz.

on most heavily by robot researchers. But the shape of a flexible object can change. And, from the robot's point of view, any one object can have differing shapes depending on the angle of sight. "You can't use shape to identify everything," affirms Michael Swain, a former graduate student who is now a postdoctoral associate at the University of Chicago. "For instance, a coat can be hung up, or thrown on the floor—each time it's moved, it changes shape. The calculations are just too extensive to program every possible shape into a computer. But the coat's color will stay the same no matter what its shape."

It was this concept that led to the lab's current work with color perception, which gives evidence that color could be more useful to robots—and humans—than previously believed. "The fact that manufactured goods are colorful is a reflection of how important color is to humans," Ballard points out. "We depend crucially on color probably for all aspects of our daily lives."

Swain was the one who gave the Rochester Robot its ability to pick out the Frosted Flakes by programming into it the color combinations of a variety of objects—cereal boxes, T-shirts, stuffed animals, soup cans—and then teaching it to distinguish among them. "Imagine sending a robot shopping," he says. "If the robot recognizes things only by shape, then what are you going to tell it? 'Pick up four rectangles and three cylinders'? You may want one particular kind of cereal and one specific brand of soup, and the robot may come back with a box of baking soda and a can of beans. With the ability to recognize color, the robot can distinguish one cereal box from another, and the Campbell's from the Heinz."

The downside to depending on color perception, of course, is that the robot could be confused by items packaged in similar color combinations. It has, for instance, mistaken a box of Crunch Berries for an object of different shape but similar color—a bottle of Vivid laundry bleach. Such errors can be eliminated by using color perception in combination with other clues and with other kinds of programmed behaviors, Swain suggests.

But if you have equipped your robot with a number of discrete behaviors, how do you then get these functions to interact? That's one problem Brown and graduate student Dave Coombs have been taking up. While on leave at Oxford University two years ago, Brown wrote a program that simulates...
several visual reflexes working cooperatively. He and Coombs are now trying to implement that kind of collaboration directly on the robot.

Working on the other side of the fence, graduate student Brian Yamauchi, experimenting with largescale behaviors (e.g., arm movements as opposed to eye movements), believes that many behaviors can be made to function effectively independently of each other. In his “Juggler” program, the robot plays a primitive form of badminton (you toss balloons at it, and it uses a paddle to prevent them from hitting the floor). The robot performs admirably, but its various skills are not as cooperative as they appear.

This, admittedly, can pose its own problems: “In Juggler, one reflex is always dominant and cuts off all other reflexes at the knees,” Brown says. “You can get inappropriate responses if one reflex is not paying attention to what another one is doing. What if the robot needs to move back and to the left? We’d like to be able to have it do both at once.”

Cutting down on the information the robot needs to process has been one key to its ability to perform successfully. Robots operating under the assumption that they must represent the entire world in detail are outclassed by the Rochester Robot when it comes to carrying out tasks and learning new skills.

“We give the robot fewer variables to manipulate. We make its choices more obvious, and that seems to work better,” says Ballard.

For instance, grad student Ray Rimey has used the lab hardware to mimic a human’s eye by equipping it with an imitation of the fovea, a very small area of the eye that allows us to focus on objects in front of us. Humans, Rimey says, are able to focus on something the size of a quarter about an arm’s length away; everything else in our visual field is at least 10 times blurrier than the quarter. We may think we have the world completely in focus, but in reality we see clearly only what we are looking directly at—only a tiny fraction of our visual field. Giving the robot’s eye a fovea helps cut down on the information it has to process, speeding up its reaction time to something more like the “real time” in which we humans operate.

Steve Whitehead is working on another way of helping the robot interact with its world. As part of his Ph.D. dissertation on reinforcement learning, he is trying to teach it how to learn new skills by making use of the ones it already has.

The robot’s first task: Pick up a green block.

“I know it sounds simple,” Whitehead says apologetically. “But it’s really quite a difficult problem.”

Since a “hand” was only recently added to the robot’s anatomy and it isn’t quite ready to play with blocks, Whitehead is simulating the experiments. He assigns a number to each possible decision the robot can make. Picking up a red block would give one value, moving a blue block another, stacking blocks another, etc. The robot is programmed to go for the highest number. Picking up a green block has the highest value of any choice the robot could make.

“Just as with humans, where a smile gives pleasurable feedback, so the computer is programmed to respond to a reward signal—in this case the high number,” Whitehead says.

He lets the robot take a trial-and-error approach, closely monitoring its efforts and offering feedback. The robot “remembers” its past rewards, gradually building up its knowledge as a basis for future action. Enough feedback, and the robot learns to pick up a green block more and more quickly.

In another experiment, Brown and Rimey have been coaching the robot to use a cognitive reasoning program to teach itself eye-motion sequences. After running the same sequence several times, the robot learns it and can run the sequence automatically, without the program. This enables the robot to react to changes, even very gradual ones, in its environment: If its eyes move in precisely the same pattern nine times in a row as it outlines objects, and if the next time it encounters an object that compels its eyes to deviate from that pattern, the robot notices the change.

“We use the same intellectual tool that’s basic to computer speech understanding,” Brown says. “With speech, a sequence of sounds is learned; here, it’s a sequence of movements that is both learned and then generated.”

In industry, a robot with this capability could monitor the shapes of products by running an automatic scan over them, flagging down the crumbled cookie box or the punched-in can of motor oil. Researchers project that the same skill might also be used in tasks that involve recognizing faces, interpreting photos, and analyzing medical images.

Such sophisticated applications may seem far removed from the balloons and stuffed animals that lend the robot lab its Romper Room air. But the complex problems of AI seem to yield more easily to the simpler approaches taken by Rochester and the other institutions that have circumvented the usual approaches to artificial intelligence.

“We say bugs aren’t smart, yet we’re still trying with no great success to imitate their behaviors,” Nelson says. “We’re trying to comprehend how a bee flies or, on another level, how a wolf hunts. Until we understand relatively simple behaviors like these, we can’t even begin to understand something like how a musician writes a symphony.”

From cereal boxes to serial music: a long stretch. But, hey, even Stravinsky had to get his start in the nursery same as everybody else, didn’t he?

"W"e’re trying to comprehend how a bee flies or, on another level, how a wolf hunts.”

Softball player Tom Rickey would like to challenge the Rochester Robot to a pitching battle.
By Thomas Fitzpatrick

Whether they're moving through governmental marble halls or listening to the electorate at the pancake breakfast at the VFW, Professor Fenno studies his politicians the way Jane Goodall studies her primates—up close and in their natural habitats.

“Tick...tick...tick.”

Richard Fenno could almost hear the pulsating insistence of the completed manuscript sitting in his desk drawer in Harkness Hall. The Rochester political scientist didn't think that he had hold of the kind of political plastique which once hurled would radically alter the electoral landscape, but he sure had the answer to the hottest political question of the summer of 1988.

George Bush had just selected the obscure junior senator from Indiana to be his running mate. Dan Quayle was the man of the hour. And the journalistic pack was in full yelp. The question was, frankly and desperately, “Who he?”

Fenno knew. Almost alone (as it proved) among the pundits, political scientists, and reporters who are drawn mothlike to the shimmer of the Second Greatest American Pastime, Fenno had studied Quayle. As part of his 10-year project—which analyzes how senators pursue legislative careers and which aims to relate their lawmaking to their campaigns in their home states—Fenno had picked Quayle as typical of a corps of young, ideologically right-wing, pre-Reagan Reaganauts who had achieved some electoral success by running against Washington, Congress, and government bureaucracy in the late 1970s.

Fenno had observed the underdog Quayle campaigning for the Senate in 1980, watched the upset victory over the nationally known Democratic incumbent Birch Bayh, and followed the upstart Hoosier back to D.C.

The Republicans, hooking on to Ronald Reagan's presidential coattails, had captured the role of majority party in the Senate, and Quayle had a clear choice: Hew to the role of perpetual outside-the-beltway kvetcher (see the career of Jesse Helms), or take on legislative responsibility—the nuts and bolts of governing. Fenno watched Quayle opting for the latter.

Spurred by the troublesome and persistent unemployment statistics in northern Indiana, Quayle turned pragmatist, asserted what Fenno calls an “instrumental independence,” and showed a willingness to use government to accomplish something. The Comprehensive Employment and Training Act (as “CETA,” it had long been a red flag to conservative Republicans) was about to expire in September of 1982, and a policy window opened before Quayle—as chairman of the Labor and Human Resources Subcommittee on Employment and Productivity. Windy and Claghornish though Quayle's title may seem (in Washington it is axiomatic that the significance of your job is in inverse proportion to the number of wowser nouns and adjectives tacked to it), it gave him a wonderful opportunity to show his stuff.

Fenno observed Quayle doing exactly that. He forged the Joint Training Partnership Act (JTPA) as a replacement for CETA, struck up an unlikely alliance with the ranking Democrat Edward Kennedy of Massachusetts, steered the legislation through the Labor and Human Resources Committee, encountered initial resistance from the prickly chairman, Utah's Orrin Hatch, but brought him aboard in the end, and held off the active hostility of the Administration's Labor Department.
So successful was Quayle, and so attractive the final legislation, in fact, that the Reagan administration decided to co-opt JTPA completely, and failed to invite Quayle to the bill-signing ceremony. But it was “the most important new piece of social legislation in the 97th Congress,” Fenno wrote later, and besides helping out thousands of laid-off workers like those around Gary, Indiana, it “gave definition to the career of an otherwise unknown U.S. senator.”

That was the story ticking away in Fenno’s desk drawer when the Quayle media frenzy erupted six years later. In Watching Politicians, a 1990 book of essays, Fenno went on to tell, entertainingly and wryly, what happened then. He was, of course, delighted that he had died and gone to political-science heaven (or, in his phrase “won the lottery”). The subject of his completed manuscript had been struck by national political lightning—but, what should he do with his special knowledge? Rush to print? Buy a pundit’s cap and call up John McLaughlin? Hire an agent and try to get on “Good Morning, America”?

Fenno says that he resolved to maintain academic diffidence. Surely, with thousands of journalists on the Quayle trail, attention would be paid to his Senate career, to the legislative talents he developed in pushing through the job-training act. Fenno believed he could weigh in later with concrete data to support a balanced view of the vice-presidential candidate. As the world knows now, nothing of the sort happened.

Journalists badgered the registrar at DePauw University, and somehow found out that Quayle had been a mediocre student. His family connections were probed, and credited with getting him into law school and later into the National Guard during the Vietnam conflict. His two terms as congressman were characterized as “inconsequential,” and Quayle himself characterized as not only an airhead but a “wethead”—more interested in the Congressional gym and showers afterwards than in legislation: Indiana voters had sent not Mr. Smith to Washington, but Bertie Wooster. With the exception of a column by Richard Cohen, and a surprising defense of Quayle by Ted Kennedy during the campaign, virtually nothing about Quayle’s Senate life reached the electorate, and at least half of the Quayle story was missed.

Fenno’s manuscript had it, though, and briefly put the tale is dramatic and edifying: A callow, 29-year-old politician, taken seriously not even by the graybeards of his own party, demonstrates a gift for campaigning, wins election to Congress, is frustrated and bored by being in the seemingly permanent minority there, scores an upset win and moves to the Senate, there to achieve a cunning and significant legislative triumph. It is a tale of development and growth, in flexibility and smarts—in short, The Making of a Senator, the title of Fenno’s Quayle manuscript when it appeared in book form in 1989 after the election.

Fenno is sensitive to the difference between journalism and political science. Perhaps by definition, the former inevitably concentrates on “the short-term, the personal, and so often on the negative,” while the academic discipline focuses on “the long-term, the institutional, the positive.” News covers how things fall apart, while political scientists are concerned with how things work. Understanding that, Fenno is yet critical of journalism, because, “somewhere along the line, the public life of public officials must be taken into account. Is the real key to an assessment of Dan Quayle to be found at DePauw’s Office of the Registrar, or in the committee rooms and on the floor of the United States Senate?”

Maybe Lloyd Bentsen was right, that Dan Quayle was “no John F. Kennedy” (who, by the way, was routinely characterized by the pre-1960 press as a playboy-senator whose rich daddy bought him the seat, and who was more interested in carousing in Washington nightspots than attending to Senate business), but can Quayle be summed up by this headline in the Washington Post: “From Polit-
A Taste of Real-World Politics: The Washington Semester Program

Undergraduates who appear in Richard Fenno's office to interview for slots in the Washington Semester program are sure to notice a framed editorial cartoon on display. It shows caricatures of politicians (you know, rotund and prosperous, frock-coated, string-tied), haranguing each other while John Q. Taxpayer helplessly looks on, naked but for a suspended rain barrel. The caption reads: "Budget Battle!" Timely, and to the point, they may think, after following the endless Congressional sessions, the buzz words and phrases of 1990—"capital gains," "progressivity," "flip-flop on taxes," "the burden of deficit-reduction." Fenno, with undisguised glee, has shown it around the poli sci department, but not for reasons of timeliness. The date on the cartoon is: February 10, 1943.

Plus ça ever-loving change, eh? That's only one lesson Rochester juniors are likely to learn as Congressional interns, spending the spring term writing speeches, note-taking at subcommittee hearings, sorting through constituent mail from farmers, union members, and plain citizens-without-portfolio, and generally taking on an active role in the political process—as well as in their own education.

"The program is essentially a classic quid pro quo," says Fenno, who has been involved in Washington Semester since it started in 1968, and has directed it for a number of years. "Senators really want these kids, and not only because they are a source of cheap staff work. The students have something to give. They are intelligent (we look hard at the GPAs of those we send), they have energy, they are not jaded.

"For the students, of course, it's a taste of real-world politics. They quickly come to realize that there are many constituencies in this country, and since they work for legislators who are not representatives of their own districts, it's a valuable cross-cultural experience as well."

And these are not part-time, go-fer positions. The students don't spend time staring at copying machines or brewing on the Mr. Coffee. The C-Span viewers who have noticed the banks of young people seated behind legislators in hearing rooms, hearkening to whispering confidences, taking up scrawled notes and hustling away, have most likely caught sight of one of the 10 or so Rochester students who go to Washington each year, totaling 176 in the past 22 years. They don't take classes on the side at a university in the DC area, as is the case with many of these college programs; for 10 to 12 hours a day, for over three months, they are bona fide members of a professional Congressional staff—with all of the splendors and miseries that includes. Their full semester's credit comes from their work.

As would be expected, most of the interns are poli sci or history majors, but that's not a requirement. "The system self-selects those who can make politics their life’s work," says Fenno. "We also try to send students who have the entrepreneurial spirit, who willingly take on responsibility, who show initiative. Psychology majors have participated in the program, as well as a surprising number of pre-med and science students. All the expertise required is a consuming interest in politics."

At least one of the interns has found the life very much to his taste. Fresh out of law school in 1986, Bobby Cordaro '83 ran as a Democratic challenger to an entrenched Republican in Wilkes-Barre, Pennsylvania. Cordaro ran an effective race, but lost narrowly. He doubtless has the makeup for a return to the political scene, however, something Fenno noticed right off at the start of Cordaro's Washington Semester. "We knew Bobby was meant for the life when he was the only intern who managed to get himself a parking space under the Sam Rayburn Building."

The interns also get the benefit of real-life political seances with Professor Fenno himself, who periodically checks in on their progress as he sweeps in and out of Washington on the trail of one of his senatorial subjects. Last year he was adding the finishing touches to his portrait of New Mexico's Pete Domenici (The Emergence of a Senate Leader is being published early in 1991), and this spring he will invite the interns to join him in looking over the shoulders of Maine's William Cohen and Arkansas' David Pryor, among others.

Close proximity to politicians and the process might also breed in the Rochester students not a flippant, throw-the-bums-out contempt for the men and women of the American Constitutional system, but rather a new respect. Particularly if they look over Fenno's shoulder, and see with his eyes. They might weigh Fenno's notion that "96 percent of congressmen and senators were returned, in the election of 1990, not merely because incumbents have a financial advantage—although they do—but also because they are representing their districts and states with effectiveness while holding on to their dignity and integrity. The great majority deserved reelection."

The students might also come to agree with Fenno, that recent talk about term-limitation, might also be, unfortunately, "a bad idea whose time has come." Fenno winces at what California voters did to their state legislature in 1990 through a ballot proposition. "They had an assembly and state senate that formed a model not only for other states but for other nations. Then they voted to blow it up. In limiting terms, they guaranteed that in six to eight years there will be no elected representative in Sacramento who knows anything, and the lawmaking will be almost the exclusive province of those who do—lobbyists and organized special interests."

Fenno believes—and the Rochester Washington interns will have to decide from hands-on experience whether or not they go along—that certain 18th-century politicians (Jefferson, Madison, Monroe, Hamilton, Jay, that crowd) did not want a government that worked too efficiently. That the checks and balances they inserted into the Constitution were meant to make legislating an arduous, painstaking, and time-consuming process. If the interns are lucky they will get to witness something along the lines of the Great Budget Battle of 1990, which to Fenno was not reflective of a "Washington mess," but of "intelligent and well-motivated people disagreeing over real issues and real principles of governance."

For the last lesson they are likely to learn from an immersion in Washington politics, Rochester interns could skip ahead, to page 93 of Fenno's Watching Politicians: "One returns to Capitol Hill asking of our representative institution not, 'How come you accomplish so little?' but, 'How come you accomplish anything at all?"
meant that this researcher had to be more than just an academic fly-on-the-wall. If there was an envelope to be stuffed, Fenno pitched in; if a phone had to be manned Fenno was willing to limber his index finger and spin a rotary dial. In every case he gradually won the confidence of advance men, staffers, "The Man Who..." his own self—and became privy to their frank estimations of the lay of the political landscape.

Home Style's observation of politicians in their own habitats won Fenno the Woodrow Wilson Foundation Award and the D. H. Hardeman Prize, and has become a classic text of political science at a time when the discipline is becoming more abstract, intent upon modeling and statistical evaluation. Fenno's way is qualitative, depending upon the sharp and savvy ability of the researcher in the field to take note of words and deeds, and the sometimes shaky relationship between the two.

And how these pols do talk! Like Warren G. Harding or Earl Long they can still bloviate (which Gore Vidal has defined as the ability "to
They can even show an anarchic and zany streak. "Staffer: What are you going to say at the next meeting? Congressman: I'm going to ask somebody to give me a haircut. Or, I could walk in and hang from the chandelier. No, I guess I'll walk in, undress, and say, 'Any questions?'"

Fenno does not believe that political scientists should "leave the journalists in charge of anecdotes," particularly if they are linked, as they almost invariably are, to public-policy outcomes. That congressman who watches the "Wallaceite" in their pickups stream down a road in his district might wind up voting one way or another on gun control, but you know he is not going to be unmindful of back-home consequences whichever way he goes. For Fenno, as for fellow scholar Raymond Wolfinger, "The plural of anecdote is data."

Fenno manages to combine narrative skill with a lucid and diverting prose style to make his books absolutely accessible to the general reader: "Someone mentioned the morning hour of handshaking, hawdling, and hijinks with 20 people in a small country store." Ron Shelton could have put that sentence into a character's mouth in the screenplay of Blaze. And it would be wise of the would-be politician, the party chairperson, and the political consultant to take Fenno's works as an ongoing political handbook for our times.

If you think of yourself as a candidate, or are casting about for one to encourage or hook onto, better pay heed to Fenno's three requirements for a successful politician. Before ideology, wisdom, or breadth of perspective, a politician needs: (1) "incredible stamina" — the energy to get up at 5:30 for the factory gate and keep going past the last evening confab for a peek at the 11 o'clock news; (2) "sheer competitiveness" — it's not enough to want to win, you must "hate to lose"; and (3) "the ability to keep from taking himself too seriously."

This last may be the most important of the three. As Fenno observes, on Capitol Hill "each House member seems to be a king or queen in his or her empire — isolated from everyday life, fawned over by a staff, pampered by Capitol Hill employees, sought after by all manner of supplicants." If public officials do not have a sense of humor to remind themselves of their own ordinariness, voters have a way of supplying the lack thereof at election time.

If one is to follow these extraordinary creatures around, it may be said, these three qualities are also required of the political scientist. After the campaigning politician dropped off in his Holiday Inn bed, after all, Fenno was still at it, transcribing his notes of the day, and preparing to keep pace with the entourage when the sun came up.

He will never see 60 again, but compact, rail-thin, Fenno crackles with the controlled intensity of a playmaking guard, and the metaphor is to the point. He has written that a "participant observer" on a campaign must be able to "move without the ball," and perhaps as a reminder to keep that faculty honed, he has a team picture of the 1984 Boston Celtics nailed to his office wall.

As for a sense of humor, well, during his undergraduate days at Amherst (Class of 1948) and graduate study at Harvard (doctorate, 1956), Fenno breathed the same Massachusetts air as did such legendary pols as Eddie Boland, Tip O'Neill, and Larry O'Brien, none of whom could ever be accused of long-faced solemnity. Across from the Celtics on Fenno's wall there's a reproduction of the famous Jamie Wyeth portrait of JFK, neck craned at a quizzical angle, that ironic smile starting to form on the lips — the one that hinted, "We 'statesmen,' we're all just a bit absurd around the edges, aren't we?"

Fenno himself has never been a candidate for public office, "nor will I ever be." He is registered with no political party, and how he himself votes is his own business. It is difficult enough to retain a scholarly neutrality in the "we-them" atmosphere of a campaign, and, just as a politician cannot afford to get too far out in front of his constituents, Fenno has to stay clear of the ideological vanguard and cast a cold eye on Republican and Democrat alike.

But neutrality is a neat trick in these conditions, and often it is neither possible nor desirable. "When I have invested time in politicians, of course I want them to win," he cheerfully admits. "It does my projects no good to have to keep scrapping research because I have chosen people fated to be one-termers."

Sometimes the academic participant-observer steps over the line. One of the House members (identified only as congressmen "A," "B," "C," and "D") chosen for Home Style was Barber Conable, now president of the World Bank, then the representative from

Fenno and the vice president — whom he discovered before Bush did.
Rochester’s own 30th District (and in between, Fenno’s colleague as a professor in the College of Arts and Science’s Department of Political Science). His research on Conable complete, Fenno in 1974 sensed that the congressman was so deeply immersed in House business that he failed to appreciate the Democratic challenge to his seat by a popular vice mayor of Rochester. After a brief deliberation on scholarly detachment, Fenno telephoned Washington with this message: “Barber, you’re in trouble. You get your tail up here and start campaigning now.” Conable dropped everything, caught the shuttle, and took root in Rochester and environs for the rest of the campaign. He won, “in the fight of my life,” with 57 percent of the vote.

...did it partly for the sake of the research,” Fenno says, but equally so, one suspects, for his regard for the man. Conable is one of the two congressmen, the other being current Speaker of the House Tom Foley, whom Fenno regards as “the best of the breed.” At any rate, Fenno’s relationship with Conable deepened into friendship, and that meant the end of this congressman as a research subject.

Something of the same occurred with Dan Quayle. With the manuscript tucked away in 1988, Fenno unabashedly if privately rooted for the Bush-Quayle ticket. Research is a competitive game as much as politics, and Fenno was not at all reluctant to claim “timely credit” for having picked the right horse. And indeed, why should he not?

(After he published, in 1990, what many consider his masterwork, The Presidential Odyssey of John Glenn, he encountered some resistance from one of those organizations that buys books for public libraries, which doubted that readers “would be interested in a losing campaign.” Since, as Fenno has written, “running for president is a fairly common senatorial activity,” something could conceivably be learned from the story of a man, who in his own words, “wanted to run for president in the worst way, and that’s how I went about it.”)

After the election of the Bush-Quayle ticket, Fenno scouted out publishers, most of whom wanted him to tart up his book by including juicy details of the private, off-guard Quayle, and pontifications about how Fenno expected him to perform as vice president. But Fenno refuses to be either a political tout or a pundit—he knows what he knows by watching politicians in real life, either moving through marbled governmental halls or listening to the electorate at the pancake breakfast in the VFW hall. The Congressional Quarterly Press agreed to take The Making of a Senator just as it had been the night Bush startled Fenno and the nation by the choice of Quayle.

Fenno did not get interviewed by Joan Lunden, but David Broder (“the one columnist political scientists read”) wrote a long and laudatory review in the Washington Post, and Fenno got in some appearances on C-Span and other media outlets. On one of these, a New York radio call-in show, Fenno showed the wit and competitiveness that makes him a natural for politics. The host put it to him: “Professor, isn’t it opportunistic of you, coming out with this book on Quayle now?”

Fenno grinned back a one-word answer: “Yep.” The interviewer laughed, and was so bowled over by Fenno’s honesty that he went on: “Did you hear that, audience? The professor admits he’s opportunistic. That’s great. I want everybody to go out and buy his book.”

That’s good advice for anyone who wants to understand our institutions, and the politicians who make them go. If we believe, with Thomas Jefferson, that democracy is impossible without educated citizens, we could do worse than clearing some shelf space for The Federalist on one end and the works of Richard Fenno on the other. It would be a start toward understanding these interesting political times. Like it or not, as John Kennedy suggested, we live in them.
Contentment at Prout's Neck: "The Life that I have chosen gives me full hours of enjoyment for the balance of my life. The sun will not rise or set without my notice and thanks," wrote the artist in 1895.
In 1883, at the age of 47, Winslow Homer left behind the art circles of New York City and moved to the isolated coast of Maine, there to paint the great marine works that are considered to be his unique contribution to Western art.

An exhibition organized by the University's Memorial Art Gallery highlights the flowering of Homer's genius during the years he lived in remote and rocky Prout's Neck, Maine. The first-ever exhibition to concentrate on this period in his life, it takes its inspiration from important new scholarship on the Gallery's painting of the artist's cliff-top studio-home (see page 24).

Now on tour, the Homer show opens on February 8 in Washington at the Smithsonian Institution's National Museum of American Art, where it will be on view through May 27. On June 22 it moves to the Sterling and Francine Clark Art Institute in Williamstown, Massachusetts, remaining through September 2.
Detail: Watching from the Cliffs
Carnegie Museum of Art

Weatherbeaten
Portland Art Museum
On a Lee Shore

Museum of Art, Rhode Island School of Design
(Left) Detail: Watching the Breakers, A High Sea
Canajoharie Library and Art Gallery
(Right) Detail: Eastern Point, Prout's Neck
Sterling and Francine Clark Art Institute

West Point, Prout's Neck
Sterling and Francine Clark Art Institute
Detail: *Cloud Shadows*
Spencer Museum of Art, University of Kansas

Sunlight on the Coast
Toledo Museum of Art

Detail: *The Fisher Girl*
Mead Art Museum, Amherst College
Homer at Home

A Prout's Neck neighbor used to say that you could sometimes see the local artist on his way home after a day of sketching, stepping backward along the path so as not to miss a moment's observation of the descending sun.

That was Winslow Homer: determinedly going his own way for the sake of his art.

In 1883 at the age of 47, suffering from what may have been painter's block, this self-taught artist had removed himself from the center of the American art world, closing up his New York City studio, closing out what had been a thriving career as a magazine illustrator, and seeking inspiration and refuge among the barren cliffs of remote and rocky Prout's Neck, Maine.

There he remained—in all seasons, in all weathers, with only occasional forays to other venues—for the rest of his life. And there his genius flowered.

Perched atop a granite cliff, the converted carriage house that served Homer both as studio and home was the center of his life during the two-and-a-half fruitful decades that secured him his place as America's premier painter of the sea.

It was also the subject of one of his most unusual landscapes—the Memorial Art Gallery's haunting, mist-veiled Artist's Studio in an Afternoon Fog, the painting that inspired the Gallery's current traveling exhibition "Winslow Homer in the 1890s: Prout's Neck Observed."

Gallery curator Patricia Junker (now at the Elvehjem Museum of Art in Madison, Wisconsin), who organized the exhibition, refers to this painting as the closest the reserved (some say "reclusive") artist ever came to doing a self-portrait. "It's one example in which we find Homer looking inward," she says. "Most of the time, he looked outward from his studio—at nature and the environment."

The studio, small, spare—but encompassing everything the artist required—had at one time served as an outbuilding to the rambling cottage (known as the Ark) that during vacation months sheltered several bustling generations of the Homer family.

A local architect, John Calvin Stevens, accepted the commission to convert the building to a private—but comfortably nearby—retreat for the bachelor artist. As his major alteration, Stevens added to the facade a cantilevered second-story balcony (sturdily braced, Homer reported, "so as to hold a complete Sunday school picknick"). It offered a panoramic view of cliff and ocean.
Years later, when Stevens did some other work for Homer, he requested an art work in lieu of payment. Writing, “I am surprised and pleased at your bill,” Homer offered Stevens the painting of the studio designed for him by “a brother artist.” The Gallery acquired it in 1941 from the architect’s estate.

It was from Stevens’s balcony that Homer took much of his inspiration, sitting there for hours at a time motionlessly observing the changing sea (an extreme of patience that baffled his sister-in-law Mattie; when visitors to the Ark asked what Winslow was doing over there she would reply crisply, “Doing? He isn’t doing anything”).

Inside the studio, Stevens provided for Homer just what he wanted, the barest minimum to fulfill his personal needs: primarily a downstairs workroom with a small sleeping space under the roof above. Compared to the sumptuous homes and spacious studios of other major artists among his contemporaries, these Spartan quarters were “as modest as a compact car beside a Rolls-Royce,” in the words of Homer scholar Philip Beam.

The efficiency of its upkeep, as he intended, freed the artist to spend his time in uninterrupted pursuit of his work. “Normally,” writes Beam, “he insisted on absolute privacy while he was working; members of his own family used a prearranged signal if an interruption was necessary.” One of the rare visitors to the studio, John W. Beatty, director of the Carnegie Institute in Pittsburgh, left this description of its spare appointments:

“The interior of Homer’s studio was as plain as the exterior. It was a mere workshop. At one side was a large table covered with tubes of paint, brushes, and other materials. In the center stood a small stove, to heat the room. On the walls were fishing rods and other articles for fishing and hunting. A few sketches, as I remember, hung on the walls.”

It was Beatty who reported that Homer had discovered an ingenious use for the overhanging veranda—as a display area for studying large-scale paintings in progress. To get the long view, he hung his oversize canvases from the railing and stepped back to eye them from the shoreline path, from which, he assured Beatty, he “could see the least thing that was out.”

Homer’s letters reveal his content with the life he had chosen. “My home here is very pleasant. I do not wish a better place,” he assured his brother in 1888.

Glorying in the no-nonsense North Atlantic winters, he wrote to his father: “This is my birthday Feby 24—St. Matthias day, Sea shines—clear sky—clear conscience—Storm bound & telegrams down.”

Even the down side to the bitter weather had its redeeming moments. Witness this report to the elder Homer:

“I made a mistake in not getting a larger stove. It is very comfortable within ten feet of it. [But it does not] heat the room within two feet of the floor, & water freezes anywhere within that space. I wear rubber boots & two pair of drawers—Water is scarce—I break four inches of ice to get any water, . . . P.S. Great storm last night.”

To all of which he added: “I thank the Lord for this opportunity for reflection.”

A cozier view of life in the studio is revealed in a letter to Mattie, dated December 29, 1891, thanking her for his Christmas present and extolling in the completion of what turned out to be one of his finest paintings, The West Wind:

“I do not live next door to the Post-Office & I cannot be as prompt as I would like in acknowledging such a fine present. I have proof that there is something fine in that wine, as I had taken a glass and was peeling vegetables for my dinner & thinking of the picture I had just finished & singing with a very loud voice: See! the Conquering Hero comes & I sung it, ‘Sound the Parsnips, Beat the Drum!’

“I have just sent the picture off.”

Still in residence at Prout’s Neck, Winslow Homer died in his studio there in 1910. Shortly afterwards, the artist and critic Kenyon Cox summed up the Prout’s Neck years in this way:

“If he had died at 50, he would be remembered as an artist of great promise and as the author of a few pictures in which promise becomes performance. It is because he lived to be 74 that his career is the great and rounded whole we know.”

“There is certainly some strange power that has some overlook on me & directing my life,” Homer once observed to his brother Charles. “That I am in the right place . . . there is no doubt about.”

Most of the information for this article came from the exhibition catalog, Winslow Homer in the 1890s: Prout’s Neck Observed, published by the Memorial Art Gallery.
Richard Leone's Complex World

"Most of the trouble I've gotten into," declares the head of the Port Authority of New York & New Jersey, "I've gotten into by telling people that things aren't as simple as they'd like to believe."
By Jeremy Schlosberg

His busy schedule confounds your attempts to make an appointment; his unelaborative manner quells your effort to flesh out his resume; his reticive conversational style, in fact, all but defeats your very desire to ask him questions.

He: “At the time I went to the Woodrow Wilson School [at Princeton University] I thought I wanted to be in the foreign service.”

You: “The foreign service . . . meaning, some kind of diplomatic career?”

He: “You know—the foreign service.”

Oh.

If you are looking for a chatty subject, Richard Leone ’62 is not your ideal interview.

Perhaps this would be different were you a writer for The Wall Street Journal. Or perhaps Leone, he with the Princeton doctorate and the intriguingly varied career, wants more challenging questions than anyone else you’ve ever interviewed. Or, perhaps, being as brief as possible is his way of accommodating this interruption of a work week that combines two full-time jobs handled by a man who confesses that he is “sort of notorious for making vacation plans and then canceling them” because he can’t or won’t or simply doesn’t want to leave his work behind.

Or maybe, for all his intellectual acumen, the 50-year-old former Princeton professor and New Jersey state treasurer either does not apprehend or (more likely?) does not care what sort of impression he makes. It wouldn’t be out of character. Back in 1978, when Leone was a candidate for the U.S. Senate in New Jersey, he suffered accusations of being arrogant and abrasive. “While Leone can be charming,” wrote one local newspaper reporter at the time, “he is also known to be moody, patronizing to those less intelligent than he and scathingly critical of those who fail to meet his standards.” (Leone’s campaign, by the way, was unsuccessful; he was defeated in the Democratic primary by a former basketball star with his own Princeton credentials, Bill Bradley.)

And yet, despite the lack of ease in the encounter, you come away from a conversation with Leone feeling some-how invigorated, as if your mind had been scrubbed a little cleaner. Chief executive of The Twentieth Century Fund, a 71-year-old New York City foundation, Leone is quick-witted and perceptive; there are even occasional bursts of self-effacing humor. A deep and thorough thinker, he refuses to simplify issues and yet communicates the fact of complexity in a clear manner. “Most of the trouble I’ve gotten into,” he notes, “I’ve gotten into by telling people that things aren’t as simple as they’d like to believe.”

And so your journalistic inclination to describe someone or something as either This or That is muddled. Maybe a lasting friendship spanning decades would entitle you to attempt a succinct description of the man’s character and personality; otherwise, you suddenly think, who are you to say?

So let’s stick to the facts—as many, that is, as can be pulled out of Dr. Leone, since he rarely volunteers more information than was requested. In any case, Leone was born in Webster, New York, in 1940. His father worked for Page Airways, eventually as director of operations; his mother was a teacher turned housewife. Thoroughly happy in his hometown, Leone says he “never really considered any place other than Rochester” when it came time for college. His university years proceeded without any clear sense of career. He began with an eye on physics. He left as an English major, although he also took some economics courses “just because I liked them.”

With that mixed bag of a background, he proceeded to New York City, where he spent a year as “an unsuccessful playwright,” he says. Implying that his talent didn’t warrant a longer trial, he decided in 1963 to enroll at Princeton’s Woodrow Wilson School to study international relations. He received a master’s there in 1965 and a doctorate in 1969. Leone was, in fact, the first-ever recipient of a doctorate in Public and International Affairs from the Wilson School.

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His political career ended with a flourish—a run for the Democratic slot on the ballot for U.S. senator. Leone downplays the incident today as something he "rarely thinks about"; he dismisses his decision, in jest, as "a moment of madness." The idea of running grew from some conversations with friends (one of whom was David Garth, a renowned political consultant) late in the fall of 1977. "At the time it seemed like it might be fun," he says. By the middle of May, a couple of weeks before the primary, Leone was 28 points behind Bradley in the polls (there was one other Democrat in the race as well) and had run out of money for television ads down the home stretch. "Raising money was not one of my strengths," he says.

After the Senate run, Leone became a partner in the Princeton-based financial consulting firm Leone & Ruth. In 1980, his career took a new trajectory when he was recruited to become president of the New York Mercantile Exchange, where future contracts are traded in commodities like coffee and potatoes.

The job came via a headhunter. With no Wall Street background or expertise in commodities, Leone says he does not know how he came to be offered the position, which had been vacant since the middle of 1979. Leone turned it down twice before accepting it. His major accomplishment on the Merc Exchange was the introduction of an oil futures and options market, which had never before existed. "It was just about universally considered impossible by the established firms and the industry," he says. "It was kind of fun to go against the grain like that."

Rather than discuss the logistics of his accomplishments, however, Leone seems always to step back to more generalized conclusions. "I like to think about and solve difficult problems," he says, continuing, "It's an unfortunate personality trait. I've never been happy in things that seem routine, which is one of the reasons I think I tend to move around a lot."

From the Exchange he went in 1982 to the presidency of an Amerada Hess Corporation subsidiary; in 1985, he became a managing director of Dillon, Read & Co., a New York City investment-banking firm. Then, in 1989, he was recruited, again by a headhunter, to become chief executive of The Twentieth Century Fund, where he remains, for now. The Fund is one of hundreds of well-endowed but low-profile organizations in New York that were founded in the great era of American philanthropy—in this case, in 1919, by the New England retailing magnate Edward Filene. The Fund still lives off the original endowment.

Leone directs a staff of people who are ever on the lookout for people and projects worthy of grant money in the Fund's charter areas of economics, international affairs, and public policy. The money usually goes to support books, papers, task forces, or conferences. He enjoys the opportunity the job gives him to ponder weighty issues, going against the grain of conventional wisdom whenever possible; he hopes at this point to stay there for a while.

Actually, Leone last year figured out a way to move on to a new job without leaving his current one, when he was elected chairman of the Port Authority of New York and New Jersey. He had been appointed to the Port Authority's 12-member board of commissioners two years earlier by New Jersey Governor Edward Kean. His election as chairman came as "a complete surprise" to him, he says.

A nonpaying post, the Port Authority chairmanship is perceived as an opportunity for a private sector businessperson to give something back to the public sector; this person often takes a fair amount of time off from his paying job. Not so the hardworking Leone, who has more or less attempted to continue his Twentieth Century Fund work despite the pressing demands of the new position. "It's like a liquid," he says, of the chairman's post. "It fills every space I allow to be unfilled by anything else."

In many ways, the work Leone will attempt to do with the Port Authority complements many of his concerns as Twentieth Century Fund chief. The three or four big projects he sees on the Port Authority's agenda—including improved mass transit links to New York area airports and the rebuilding of a sizable amount of existing infrastructure—are dependent upon leadership's ability to commit resources to long-term solutions rather than quick fixes. This, in turn, is dependent upon communicating the social necessity of a goal that conflicts with our culture's propensity for immediate gratification. "It's not like people didn't see over the years that Kennedy Airport was getting harder and harder to get in and out of," he says, as an example. "But it's very hard to get people to say, 'Maybe we should give up a little bit now so that it stays a first-rate airport in the future.'" The price paid for such shortsightedness is clear: Kennedy in recent years has been ranked number...
one internationally as the worst airport to land in or take off from.

There are, notes Leone, bigger examples of this sort of problem almost everywhere you look. Take education, he says. "The Japanese haven’t gotten rich because they discovered oil. They’ve gotten rich because they invested in the future of their people.” In the private sector, American business has likewise been shooting itself in the foot by its ongoing emphasis on immediate return. "We all have a lot more in common with the people who ran the S&Ls than we want to admit,” he says. Our recent cultural tendency has been to assume that our own oversights and transgressions will become somebody else’s problems by the time they catch up to us.

(Leone is happy to point out an economic advantage that the Rochester area enjoys: the presence of companies such as Kodak, Xerox, and Bausch & Lomb that have never been involved in the quick-fix mentality, that have always invested in their own people and in product development.)

While Leone is not alone in his disappointment with the greed-oriented, head-in-the-sand mind-set that steered us through the 1980s, he does stand out in his underlying attitude of optimism. "I think that the public has moved a lot on this in the last couple of years,” he says. While we are, he feels, as far away as we may ever have been from a consensus in this country on major matters of domestic and foreign policy, he believes that the pendulum will swing back. The idea of short-term sacrifice for long-term good used to be an American characteristic; there’s no reason to assume we can’t reacquaint ourselves with the idea, whether by choice or by necessity.

“People have difficulty being optimistic in times of uncertainty, but I really think they should be,” he says. He says he keeps hearing people worry about how terribly the ‘90s are starting out, as if the ‘80s had been one long party. He hastens to remind us that in 1982, the prime rate was somewhere near 20 percent and unemployment was double where it stands today. “We have this tendency to exaggerate everything, probably because of the media.”

“In boom times,” he continues, “people think the trees grow to the sky. In down times, people think there will never be another tree.” Actually, upturns and downturns are merely characteristic of our business cycles. “We’re seeing a media interpretation of it that’s not wrong but does tend to emphasize the doomsday aspect of it.”

Interestingly, Leone does not take the media to task on the issue. “For all I know, it may be that this exaggeration is necessary.” Perhaps, he suggests, it’s what gets people excited enough to take risks during growth spurts, and weeds out marginal activity on the down side. On the other hand, he notes, they don’t seem to require a similar boom-and-bust cycle in Japan or Germany.

This drive to reduce complex issues to black-and-white polarities does, in any case, for better or worse, characterize our country’s approach to nearly everything we do. It’s almost as if the more complex the world grows, the simpler we’d like things to be.

“If people weren’t attracted by simplicity,” notes Leone, “Ronald Reagan would never have been president of the United States for two terms.”

"It’s not like people didn’t see that Kennedy was getting harder and harder to fly in and out of. But it’s hard to get people to give up a little bit now so it stays first-rate in the future.”

New York–based freelancer Jeremy Schlosberg has reason to observe with interest the complex world of Leone’s port authority.
The Story of George Eastman-San

The Japanese, it so happens, love comic books as much as we Americans do—perhaps even more—and read them with an intensity that we save for the Sunday cartoon pages. On the Tokyo trains, it’s not uncommon to see otherwise mature commuters immersed in manga the size of the Brooklyn yellow pages.

That’s why, when the Eastman Wind Ensemble toured Japan last year—under the sponsorship of Eastman Kodak Japan, among others—Kodak distributed comic-book versions of the George Eastman story to the 45,000 people who turned out to hear the ensemble play. The idea was to tell Japanese concertgoers, in an entertaining way, about the connections among George Eastman, Eastman Kodak, and the University, including, of course, its Eastman School of Music.

At left is a page from the book. Roughly translated (reading, Japanese-style, from right to left), it talks of Mr. Eastman, who “loved music and strongly wished that many people could enjoy the beauty and pleasure of music,” and—in frames four, five, and six—his gifts of the Eastman Theatre, Kilbourn Hall, and the Eastman School itself. The rectangular strip in the lower right-hand frame bears the name of the school in Japanese. (To explain the blank-faced query in the upper right: That frame has to do with the intense curiosity aroused by an Eastman gift to M.I.T., which he originally made as the anonymous “Mr. Smith.”)

According to Toshio Nakano, manager of public relations for Eastman Kodak Japan, Japanese newspaper announcements of the comic books have produced numerous requests from readers eager to learn more about the industrialist/philanthropist who had such strong ties to our University.

The very formal Mr. Eastman would have been interested to see himself through Asian eyes. He’s the nattily attired chap in the argyle sweater, here proclaiming his love for music.
Fiscal Fitness

The University's investment report, released annually in the fall of the year, in its most recent edition displays heartening signs of improving fiscal fitness.

The endowment, which had posted only slight gains since 1985, enjoyed a banner season, earning a total return of 15.5 percent for the fiscal year ending June 30, 1990. The total as of that date: $589,007,400 — up $50,928,955 from the year before.

"We now have a strategy that allows us to pursue investment returns aggressively around the world," reports Richard Greene, executive vice president and treasurer of the University.

"The goal is a broadly diversified portfolio — one that produces adequate yield without sacrificing total return, one that takes advantage of specialty niches, and one that we hope will produce above-market returns while keeping overall risk at tolerable levels."

While Rochester's endowment is estimable — ranking 20th in the nation as of June 30, 1989 (the most recent figures available) — it isn't the limitless resource it once seemed to be, cautions Greene. Endowment income funds only $41.8 million of the University's core budget of $168 million for 1990-91.

For that budget, the main sources of revenue, from largest to smallest, are net tuition (that is, tuition minus financial aid — 43.7 percent); endowment income (24.7 percent); research (20.2 percent); gifts (5.4 percent); and government appropriations (2.8 percent).

This year's budget increase, at 3.7 percent, is smaller than any annual budget increase of the 1970s and 1980s, for several reasons. While tuition continues to rise here and elsewhere, its rate of growth hasn't matched that of financial aid. At the same time, colleges everywhere face public pressure to hold the line on tuition increases. Research funding, too, is rising at a lower rate than in the 1980s. Growth in endowment income has been hampered by a volatile stock market; at Rochester, the reins are being tightened further by a decrease in the percentage drawn from the endowment's yearly earnings to help fund operating expenses. That figure is $1.1 million less in the 1990-91 fiscal year than in 1989-90.

The bottom line: The endowment is an important — but limited — resource. At its current level, it isn't the be-all and end-all of funding for the University. Says Greene, "In the future, we simply can't rely on it at the rate we have in the past several years."

Shaping the Undergraduate College

Broadening of the range of courses students must take before declaring a major. Adoption of a four-year, college-wide program for ensuring writing competence. Strengthening of the role of faculty in advising undergraduates.

These are some of the topics on the table these days at the River Campus. With the concept — and in fact the reality — of a Rochester undergraduate college now well established, faculty of its parent school, the College of Arts and Science, are engaged in drawing up plans for ways in which the new college can enhance the quality of undergraduate education.

Among proposals currently under discussion: greater involvement of graduate students in undergraduate teaching (as a supplement to faculty, not, it was emphasized, as a substitute for teaching by professors); institution of a more comprehensive writing requirement; creation of a "writing center" where students can go for specialized help with writing problems; and adoption of a "College Requirement" of seven types of courses to be sampled before the declaration of an undergraduate major.

These proposals are contained in the preliminary report of a faculty Commission on Curriculum. Also making preliminary recommendations was the faculty Commission on Academic Support Systems, which has endorsed formalized group-study methods, "special-interest" housing programs, and the central role of faculty in advising, and has proposed a standing committee to plan faculty-student programs, recommended dormitory renovations to facilitate "bridges between residential and academic life," and suggested raising faculty advising responsibilities to the level of major departmental committee assignments.

A third faculty commission, on enrollment, has been exploring ways for faculty, in its words, "to be energetically and enthusiastically involved in recruiting and retaining students for the College."

Creation of the new college followed a unanimous vote by the faculty of the College of Arts and Science and its subsequent endorsement last spring by the Board of Trustees. The faculty commissions have been at work since then and are expected to make their final recommendations in February.

Toward an Understanding of Diversity

Most American colleges and universities, as is now well recognized, have long since advanced beyond bland "white bread," and cultural diversity has become a hot topic on campuses across the country.

Among those trying to facilitate an understanding of this diversity is the Ford Foundation, which last fall awarded a total of $1.6 million to 19 American colleges in support of campus efforts to increase multicultural awareness.

One of the 19 awardees, Rochester is using part of its $25,000 grant to support student research projects dealing with the subject. To date, three seniors — Elizabeth Dunn, Kristin Fitzpatrick, and Marney Roemmelt — have received $500 each for their studies this semester. Dunn, an anthropology major, is examining "Gender Issues as Political Action in China and Poland." Roemmelt, a religion and classics major, is examining "Gender Issues in Wicca, a Non-traditional Religion." Fitzpatrick, a double major in English and German, is studying cultural differences between East and West Germany.

"Most of us have little understanding of the diverse cultures, attitudes, and experiences that make up our own societies," Ford Foundation President Franklin A. Thomas said in announcing the grants. "Unfortunately, this ignorance about other cultures breeds insensitivity and intolerance in young and old alike. The minority population under the age of 18 in the U.S. has risen from 15 percent in the 1950s to 36 percent today, and the number is still growing. As the face of America changes, education must help American students learn to live and work together."
Teacher of the Year

Mary Cappello decided when she was about 8 years old that she wanted to be a teacher "because I didn't like the way Sister Mary Conrad was running the class I was in."

Unlike Mary Conrad's pupils, Cappello's students do like the way their teacher is running the class. Cappello, assistant professor of English in the College of Arts and Science, was named the 1990 "Teacher of the Year" by the Students' Association's Academic Affairs Committee. A specialist in 19th-century American literature, Cappello, in addition to expository writing courses, is teaching a course this semester in "Classic American Literature" in which students are re-examining "classic" texts by white males through readings also of the work of women, African-Americans, and Native Americans.

What's the main thing she wants students to get out of her classes? "I want them to learn to respond thoughtfully to what they read even if they cannot 'relate' to it. I also want them to be able to analyze assumptions that are implicit in the way they speak, write, and think. Students say and write many things that they don't really mean because they don't yet realize the extent to which language is imbued with all kinds of values."

If you ask her what she thinks might make her an effective teacher, she cites colleagues in her department: "It's filled with great teachers, and I learn a lot from them by listening." But, she goes on, "I never think my classes have gone as well as they could have. I take my students seriously but I try to remember the importance of play in the learning situation. I think my classes are at their best when we can talk about all those things that aren't allowed at the proverbial dinner table."

$8.5 Million Approved for $47-Million OMEGA Upgrade

Congress has appropriated $8.5 million in initial funding for an upgrade of the OMEGA laser at the engineering college's Laboratory for Laser Energetics (LLE), the largest unclassified fusion laboratory in the world.

This upgrade will enable LLE to conduct the largest ever direct-drive inertial confinement fusion (ICF) effort in order to study the conditions necessary to ignite a fusion reaction. The work will complete a key step in the decades-long effort to harness the fusion of atoms to supply a clean, virtually limitless source of energy.

Already one of the world's most intense lasers, OMEGA will be expanded from 24 to 60 beams, and its energy output will be raised from its current level of 2 kilojoules to 30 kilojoules in the ultraviolet (351 nanometers). The total cost of the upgrade, which is expected to take three or four years, was originally estimated at $47 million.

When the work is completed, scientists will be able to heat targets to high temperatures (say 100 million degrees) and compress them to greater densities than is currently possible, making LLE the world's first ICF ignition-scaling facility.

"The upgrade will allow us to study the conditions necessary to ignite a target," says Professor Robert McCrory, LLE director. Scientists will be able to evaluate the scientific feasibility of a "direct-drive" fusion approach, where laser beams illuminate, heat, and compress a target directly. In the "indirect drive," intense laser light is converted to X-rays before hitting the source; indirect drive requires more energy than direct drive.

"This University is the only place in the world that is seriously pursuing a direct-drive approach to fusion," says McCrory. "Direct drive could be a much more energy-efficient approach than the indirect drive currently followed by the national laboratories. It's crucial that it be investigated thoroughly."

A Prelude for the National Cathedral

With more than one hundred works that have been performed in at least 40 countries and featured on some 20 recordings, Warren Benson, professor of composition at the Eastman School, is one of the country's most prolific composers.

Last September, at ceremonies for the opening of the National Cathedral in Washington, D.C., Benson's "Meditation on I am for Peace" received its world premiere. The work was performed by "The President's Own" – the United States Marine Band, the nation's oldest musical organization, which also commissioned the piece—with President and Mrs. Bush in the audience.

(The event also happened to be the first of two world premieres of Benson's works in the space of two weeks: The composer's "still: A Love Song for Solo Cello" was performed by Eastman School cellist Steven Doane at Lincoln Center's Alice Tully Hall in October. Currently, the composer has 10 commissions pending through 1993.)

Benson describes "Meditation on I am for Peace" as a modified choral prelude based on a 1676 text by Benjamin Franklin's grandfather, Peter Folger. The subject of the text is the Golden Rule, which Benson views as a universal message found in some form in every culture and every religion:

"If that the Peace of God did rule with power in our heart, then outward war would flee and rest would be our part. If we could love our brethren and do to them as we would they should do to us, we should be quiet straight away. But if we a-smiting go of fellow servants so, no marvel if our wars increase and things so heavy go. Thus I, in love to all, leave these few words with thee, I am for peace and not for war. . . ."
Six Appointed to Endowed Chairs

The University was still in its infancy when its first "named" professorship was established: the Munro Professorship, honoring John Munro, one of the University's founders. A Board resolution noted that Mr. Munro's "labors, councils, and liberality in the establishment of this University have deserved the profound gratitude of his friends, and now have earned for him a distinguished place among those who will be associated with its early history."

Endowed chairs honor Rochester's leading faculty, and also support their work in the most practical of ways—in salary, research assistance, laboratory facilities, and scholarly travel. The chairs also give permanent recognition to the benefactors, or to those whom the benefactors wish to recognize.

Since 1851, 70 additional endowed chairs have been created at this University, among them the two most recent—the Richard L. Turner Professorship in the Humanities, in the College of Arts and Science, and the Louis Lasagna Professorship of Experimental Therapeutics, in the School of Medicine and Dentistry.

The first incumbents of these new chairs have been announced within recent months, along with the newest occupants of four previously established professorships. The new appointments:

- **Henry R. Luce Professor of Cognitive Science (CAS):** F. Jeffrey Pelletier, professor in both the philosophy and computer science departments and also director of the University's Cognitive Science Cluster, an interdisciplinary group of faculty working to understand how people and animals perform various cognitive activities such as thinking, perceiving, learning, and using language. Much of Pelletier's current work focuses on computational linguistics, the sophisticated effort to program a computer so that it can "understand" ordinary language, with all its nuances. Editor of two book series, Pelletier holds a Ph.D. from UCLA and formerly taught at the University of Alberta in Edmonton.

- **Rush Rhees Professor (CAS):** Martin Gorovky, chair of the Department of Biology, an internationally known authority on cell and molecular biology who has been a member of the Rochester faculty since 1970. He is currently studying one of the most fundamental questions of biology: how cells use genetic information. Gorovky, who earned his bachelor's and doctoral degrees from the University of Chicago, has co-authored more than 80 publications and serves as a reviewer for a number of prestigious scientific journals. More than a dozen students have received their doctorates under his guidance; many are among the world's top students.

  The professorship is named after Rush Rhees, the University's third president.

- **Richard L. Turner Professor in the Humanities (CAS):** John Guy, a leading specialist in 16th-century and early modern British history, who joined the CAS history department last fall. A British citizen (born in Australia) and Cambridge graduate, Guy has written or co-written eight books (the most recent: *Tudor England*, published in 1988) and 30 articles and is co-editor of two book series.

  Nancy R. Turner established the Richard L. Turner chair to recognize her husband's deep interest in the humanities. Chairman, president, and chief executive officer of Schlegel Corporation, he was a University trustee from 1979 until his death in 1986.

- **Louis Lasagna Professor of Experimental Therapeutics (SMD):** Dr. John Lasagna, who holds a joint appointment in the departments of neurology, pharmacology, and medicine. A neurologist, he is nationally known as the principal investigator of the multicenter clinical trial of the drug deprenyl in slowing the progression of Parkinson's disease.

  A former Rochester faculty member, Lasagna helped develop and nurture the discipline of clinical pharmacology and is credited with catalyzing the development of new drugs. Leading the fundraising effort to establish the chair is Alejandro C. Zaffaroni '49G, chairman of the board of Alza Corporation.

- **Frank P. Smith Professor of Surgery (SMD):** Dr. Eugene D. George, newly named chief of neurosurgery at the Medical Center. Since 1979 he had been chief of neurosurgery at Walter Reed Army Medical Center and, since 1983, also chair of the Division of Neurosurgery at the Uniformed Services University of Health Sciences, Bethesda, Maryland. He received his M.D. in 1964 from the State University of New York at Syracuse.

  A charitable trust to establish the Smith Chair was set up in 1981 by Dr. Frank P. Smith '41M, emeritus professor of neurological surgery at the medical school.

researching and devising economic policies. Another Australian native, Pagan earned his doctorate at the Australian National University. He is a co-editor of the *Journal of Applied Econometrics* and is author or co-author of two books and numerous articles.

In 1967, Joseph and Marie Wilson created a life income trust to establish a series of distinguished professorships. Chairman and chief executive officer of Xerox Corporation, Joseph Wilson '31 was chair of the University's Board of Trustees from 1959 to 1967 and honorary chair until his death in 1971.

- **Marie Curran Wilson and Joseph Chamberlain Wilson Professor of Economics (CAS):** Adrian Pagan, one of the world's foremost econometricians, specializing in a field involving the estimation and use of mathematical and statistical models for economic forecasting and policy analysis. His work is credited with significantly advancing economists' understanding of how to design and use statistical models in
Number One, Worldwide

For some years now editors of physics journals have been inviting Zhe-Ye Ou to act as a referee for manuscripts submitted by hopeful scientists from around the world.

Although it’s not unusual for rising young professors, authors themselves of well-researched papers, to be asked to evaluate the work of others, Ou until recently has always turned down such requests. With good reason: He was no professor—just a student, albeit a prolific one.

By the time he earned his doctoral degree last spring from the Department of Physics and Astronomy, Ou had already published 27 scientific papers, including five in the prestigious Physical Review Letters. “Twenty-seven publications before the Ph.D.,” comments his adviser, physics professor Leonard Mandel, “is just about unprecedented.”

The New York Academy of Sciences would seem to agree. It has awarded Ou its Minoru and Ethel Tsutsui Distinguished Graduate Research Award for 1990. The honoree is selected from among outstanding graduate students nominated from the world over.

Ou studies the behavior of photons, the fundamental particles of light, and has conducted several experiments in the field of quantum optics. Two years ago Ou and Mandel measured, more accurately than anyone else ever has, the time interval between the arrival of two photons at a given point (down to an accuracy of about one billionth of a millionth of a second).

The recipient of a bachelor’s degree from the University of Beijing in 1984, Ou is now a postdoctoral research associate at the California Institute of Technology under the guidance of H. Jeffrey Kimble ’73G, ’78G, another one of Mandel’s high-achieving former graduate students.

Simon School Dean Search

A committee has been formed to search for a new dean for the Simon School following the resignation last fall of Paul W. MacAvoy. Currently on a year’s leave at Yale, MacAvoy has informed President O’Brien that he does not wish to return to the deanship as of the 1991-92 academic year. He plans to continue teaching at the school, where he is also John M. Olin Professor of Public Policy and Business Administration.

During MacAvoy’s tenure the school nearly doubled the size of its full-time M.B.A. program, established a substantial endowment, and began construction on new teaching facilities. Business Week magazine recently named the school one of the top-20 business schools in the United States.

Charles I. Plosser, who holds a joint appointment as Fred H. Gowen Professor of Economics and Finance at the Simon School and as professor of economics and finance at the College of Arts and Science, has been serving as acting dean.

Knight ’61 Elected Trustee

Ronald B. Knight ’61, a Xerox Corporation executive, has been elected to the University’s Board of Trustees. A former member of the Trustees’ Council, governing body of the Alumni Association, Knight has served also as co-chair of the Strong Memorial Hospital Corporate Campaign. At Xerox, he oversees worldwide strategic pricing, forecasting, and strategic business planning. In addition to his Rochester degree, he holds an M.B.A. from the University of Rhode Island.

The odds of a recession occurring are about 35 percent, Plosser told an audience of 1,000 in the Eastman Theatre. What, as he saw it, could tip the balance? “A few more bad events—like war in the Persian Gulf.”

The American economy has been duly affected by the serious problems in the Northeast, including the real estate crisis in New England and unusual stresses on the financial and banking industries, says Plosser, who is acting dean at the Simon School and Fred H. Gowen Professor of Economics and Finance.

As to whether the downward trend will continue, he ventured, “My best guess is that the answer is no.”

Plosser also predicted modest growth of 0.7 percent in real gross national product for the first quarter of 1991. Substantial growth, he added, is unlikely to reappear until the second half of the year.

As for interest rates and unemployment: Short-term interest rates during the months ahead should continue to fall as the Federal Reserve responds to pressure to increase the money supply to shore up a weak economy. Rates will begin to rise toward the end of 1991, as the economy begins to pick up steam. Unemployment rates, which tend to lag behind the economy, will likely peak at about 6.8 percent to 7 percent in third-quarter 1991.

Cigarette Smoke and Childhood Asthma

In a study published in the November issue of the American Journal of Diseases of Childhood, pediatrics professor Michael Weitzman reports that children who are black and/or poor contract asthma at twice the rate of other children. Weitzman concludes that environmental factors—especially cigarette smoking by their mothers—can trigger asthma in these youngsters.

“What is thought of as a genetic disease actually has a significant environmental component,” says Weitzman, director of the Medical Center’s division of general pediatrics. “The study doesn’t discount the genetic component,” he acknowledges, but it does show that “exposure to the environmental triggers can determine who develops the disease.”

In addition to cigarette smoking, the study cites teenage pregnancy, low birth weight, and crowded living conditions.
ditions as factors that increase the risk of asthma in youngsters.

When the social and environmental factors are considered, Weitzman says, the statistical differences between asthmatic black and white children disappear.

"What we have left are the environmental factors. It's not that black women smoke more than white women. It's that poor women smoke more. We might be able to prevent this disease if we can persuade them to stop smoking, that it's not just for their own well-being but for their kids."

Why Is Bypass Surgery Riskier for Women?

Coronary bypass surgery—which replaces a diseased blood vessel in the heart with a healthy one, usually snipped from the leg—is a life-saving procedure that can prevent heart attacks. Still, researchers don't know why the procedure seems to pose a greater risk for women than for men—as indicated by the death rate for women that, while still relatively low, is twice that for men: 4 percent versus 2 percent.

Kathleen King ’76GN, ’84GN, an assistant professor at the School of Nursing, studied 464 women who had had bypass surgery at Strong Memorial Hospital during the period from 1983 to 1988. “Most studies suggest that women suffer a higher mortality rate than men because they are older when they have the surgery, or have high blood pressure or diabetes, or because they are physically smaller with smaller arteries, and that can make the surgery technically more difficult,” King reported at a conference of the American Heart Association in Dallas.

“In our study we looked to see if these factors, along with some others, would predict mortality. We found that they did not. For our sample of women, the mortality rate was 4.3 percent and the only condition that was related to mortality was pre-existing kidney disease.

“Until we better understand why women may not do as well, it is not justifiable to withhold surgery from anyone just because she happens to be a woman,” King asserted, pointing out that only about one-fourth of the estimated 353,000 bypass surgeries performed in 1988 were in women.
Jackson (Michigan) Citizen Patriot

Predators in the wild often stalk a weakened animal because it's easier to catch. Some bacteria seem to behave in the same way, leaving healthy people alone while attacking only the hurt or sick. Such bacteria are "opportunists," says Barbara Iglewski, professor of microbiology at the medical school.

When someone suffers an injury like a severe burn or grows ill with a disease like cancer, the body's defenses against infection may be so overworked that the "opportunists" slip by and find a niche where they multiply and make that person sick.

Molecular biologists are now studying traits specific to some opportunistic bacteria. "Characterizing these traits may lead to developing new vaccines or therapies," Iglewski says.

Fortune

The news keeps telling us, according to Fortune, that educational spenders on boards of education across the country remain unable to invest their billions in ways that affect learning positively. A mega-study frequently alluded to is research by Rochester economist Eric Hanushek demonstrating that educational quality is largely unrelated to educational spending. A recent Hudson Institute "briefing paper" by Lewis J. Perelman, also widely publicized, confirms Hanushek's findings.

Sarasota (Florida) Herald-Tribune

A quarter century after Loretta Ford, dean emeritus of the School of Nursing, developed with physician Henry Silver the concept of the nurse practitioner, these professionals are at work throughout the country and the world in a great many areas of health care.

"They've brought nursing into the 21st century," Ford told the Florida paper. "They're very committed to the care of people. This is not for self-aggrandizement; it's to serve people."

The idea of the nurse practitioner began at the University of Colorado in 1965 with a pilot program of advanced training for community-health nurses—an effort directed by Ford and Silver.

"At a developmental level, we took on a project to show what nurses could do," says Ford. "Of course, these were things nurses had done many years before. In a sense, we were reclaiming what was ours."

Last July, Ford was the guest of honor at a symposium marking the 25th anniversary of the Colorado program. At the meeting, she joked that most of the early critics of nurse practitioners are now retired.

Associated Press

Some 750 freshmen and transfer students in Rochester's Undergraduate College took to the streets last September in what the Associated Press termed "an unusual orientation program" that combines socializing with community service.

Among the 12 or so volunteer projects the students worked on: building a home for a low-income family through the "Habitat for Humanity" program, working at a homeless shelter, helping to move a day-care center, and clearing neighborhoods of litter and graffiti.

"I never did anything like this before," Francine Ciccarelli '94 of Osterville, Massachusetts, told the AP reporter. "I'm learning a lot on this project. I definitely will come back."

The program is in its second year, according to Sande Sommers, coordinator of community services programs at Rochester. She added, "We really hope that students get an understanding that there's more to a college experience than just being on campus."

London Daily Telegraph

Rochester scientists say they have developed a technique to reduce the energy loss in electricity transformers by two thirds, reports The Daily Telegraph.

Transformers made from a class of materials known as amorphous metals are more efficient than conventional transformers (the devices used to transmit electric currents), but have been difficult and expensive to manufacture. Although they cut energy loss, the metals become brittle when heated by traditional methods.

Now, James Li, the engineering college's Albert Arendt Hopeman Professor of Engineering, and his Rochester colleagues report that they have overcome the heating problems. Instead of using a furnace, they heated the metals with a high electric current in pulses of one thousand million current pulses per second.

USA Today

"Though initial distress after divorce is understandable, chronic problems are not an inevitable outcome for children," Rochester psychologist Joanne Pedro-Carroll told a meeting of the American Psychological Association reported in the national daily.

Pedro-Carroll directs the Children of Divorce Intervention Program in which youngsters from kindergarten through sixth grade get special help at school. Starting in Rochester some eight years ago, the program has spread to about 900 schools nationwide. Its goal is to provide support for kids, helping them identify and express their feelings while learning to solve divorce-related problems.

Among the new findings on 430 "alumni" of the program from 50 schools in Rochester: Parents say that children are much better able to voice feelings and cope with the divorce; teachers report fewer problem behaviors and more academic gains; and children report that group participation has made them less anxious and helped them solve their own problems.
SPORTS

B & L Regatta: Another Winner

The Genesee River was alive with boats on Sunday, October 15, when some 700 rowers from 23 colleges and rowing clubs took to the water for the second annual Bausch & Lomb Invitational Regatta.

By all accounts the outing was a spectacular success, attracting an estimated 15,800 spectators (suspected of being the largest turnout ever for an intercollegiate event in the Rochester area) and producing a first-place finish for the Yellowjackets in the women's open fours and a third-place berth in the men's lightweight eights.

National champion Harvard outstroked its Ivy League rivals Yale, Penn, Cornell, and Brown to capture the George M. Angle Cup, named for the retired University executive who has worked actively with the Rochester rowing program from its infancy.

The crews rowed two races - a three-mile head race in the morning and a 1,500-meter sprint in the afternoon. "We're endurance athletes, and those are both endurance events," said Ciaran Buckley of Yale's men's open four. "We're not used to doing two races a day. It was a challenge."

The weather nearly posed another challenge. A week of rain and fast currents had filled the river with debris, which a corps of volunteers managed to clear just in time for the Sunday races. "The current was still fast," observed George Henry, captain of Harvard's Angle Award-winning open eight. "We're not used to that; the Charles River is stagnant." The fast current was reflected in the winning race times, all of them noticeably faster than last year's winners.

Summing up the day, Richard P. Miller, vice president for external affairs and regatta committee head, pronounced it "a phenomenal success." Said Miller, "Attendance was beyond expectations, and the level of competition was terrific. Bausch & Lomb has agreed to support the regatta again, and all systems are go for next year."
True Blue (and Gold) at Oak Hill

Ask any of the golfers on Don Smith’s team why they chose Rochester and, in addition to “academics” and a few things like that, the answer invariably comes back in two words: “Oak Hill.” Considering that Oak Hill Country Club’s 36-hole, worldclass golf course is home turf to the Yellowjackets, that response is hardly surprising. The team’s blue-and-gold golf bags are a familiar sight on Oak Hill’s fairways, where student-golfers strive to perfect their shot-making skills.

“When I talk to golfers back home I have to keep in mind that I am privileged to play on this course,” says team member Lance Holbert ’91. “I don’t want them to think I’m bragging.”

Rochester’s golfers get to tee off on one of the country’s most desirable courses—it has hosted three U.S. Open Championships. They also enjoy the benefit of Smith’s top-notch coaching—he’s been named an NCAA Division III District II Coach of the Year three times in the past five seasons and the UAA Coach of the Year for the past three. Even so, these players don’t come north to play golf! Most of us came to Rochester so we could mix academics with our golf,” he says.

The Yellowjackets’ love for their home course is unquestionable, but they are also proud of their team’s distinction within Division III. Rochester has made nine straight appearances at the NCAA Division III playoffs, finishing in ninth place in each of the last two years. The team has also won the University Athletic Association championship for three years running, so Rochester’s golfers have some big-tournament play to look forward to each year.

“It’s pretty much a given that we’ll be at the Nationals,” declares Joe Tommaso ’94, who made an impressive showing in his first season with the Yellowjackets last fall. “At a Division I school I might not ever have a chance to play in a tournament of that size.”

But as Smith points out, “It’s tough to make the team at Rochester.” Competition is steep; only the five best players get to compete in all the tournaments. What sets the top five apart from the rest?

“Golf is about emotional control, mental discipline, and confidence. It’s a sport that places a lot of stress on a player for a long period of time. A good golfer has to hold it together out there,” says Smith. The sport demands what he calls a “relaxed intensity,” and he sees it as his job to cultivate that in his players.

Smith, who has also coached Yellowjacket football and baseball, acknowledges that motivating golfers is different from motivating other athletes. “A football player who’s at ease can’t play his game and win; a golfer has to be at ease to play well,” he says.

“When the pressure’s on,” says team member Todd Jones ’92, “you have to resist the temptation to just jam the tee in the ground and whack it.”

With positive thoughts driving their efforts, the Yellowjackets hope to finish in the top four at the NCAA championships in May. As Jones puts it, “We were so close last year. If we can draw on that experience, we can finish in the top four. We’d really like to have one of those plaques.

“Coach deserves it.”

Fall Sports Wrap-Up

Men’s Cross Country: The Yellowjackets ran away with the New York State title for the fourth consecutive year, captured the NCAA regional title, and posted a perfect victory in the UAA Championships. Then they capped off their season with a fourth-place finish at the NCAA Division III Championships in Grinnell, Iowa.

Jim Dunlop ’92 (who was profiled in the Winter issue of the Review) finished third at the NCAA Championships—the best individual finish by a Rochester runner in the last five years. Teammates Joe Mello ’92 and Chris Reed ’92 also did well, finishing among the top 25 runners. All three came home with All-American honors, marking the first time ever that Rochester has produced three cross-country All-Americans in one season.

Women’s Soccer: Coach Terry Gurnett, who led the Yellowjackets to their first two NCAA Division III national titles, in 1986 and 1987, was honored as the Division III Women’s Soccer Coach of the Decade.

This year Gurnett’s Jackets clinched the UAA Championships for the third consecutive season (with a 4-1 record; the loss came against Brandeis), securing the title when Emory and Washington battled to a tie in Atlanta.

The squad then advanced to the NCAA playoffs, at 13-2-1. In the first round Rochester defeated William Smith (which had beaten the Jackets 3-0 in the season-opening Flower City Tournament). In round two, Rochester took Cortland State through overtime before falling on penalty kicks.

Men’s Soccer: Another UAA championship team, the 6-1 Yellowjackets beat out Brandeis for their third straight soccer pennant. They made it to the NCAA playoffs but lost 2-0 to Cortland State in the first round, finishing the year at 11-6.

Women’s Volleyball: The team received a bid to the ECAC Northern Division (Upstate New York and New England) playoffs and hosted a 4-team tournament in early November, where they were beaten by the eventual champ, Bates College, in the first round. At season’s end, Pam Delp ’91 was named a Second Team All-American by the American Volleyball Coaches Association, becoming Rochester’s first women’s volleyball All-American.

Football: The Yellowjackets’ so-so (5-5) season produced one all-time record-breaker: Carmen Malatino ’91, who shattered both single-season and career rushing records at Rochester. His season-end 1,033 yards smashed the long-standing mark (38 years) of Jim Secrest ’45, ’48M, who ran for 1,002 yards in 1942. In total, Malatino gained 2,339 yards in his career, thereby surpassing Sam Guerrieri ’86 as the all-time Jacket rusher. In other honors, Craig Chodak ’93 was named to the Kodak/American Football Coaches Association All-American team as punter.

Fall Scoreboard

Men’s Cross-Country: 3-0
Women’s Cross-Country: 0-2
Field Hockey: 6-11
Football: 5-5
Men’s Soccer: 11-6
Women’s Soccer: 14-2-2
Men’s Tennis: 5-1
Women’s Tennis: 5-4
Women’s Volleyball: 30-16
University of Rochester Alumni Association Tours are designed to provide worry-free basics—transportation, transfers, accommodations, some meals, baggage handling, and professional guides—and still allow you time to pursue your individual interests. Escorts drawn from University faculty and staff accompany each tour to provide special services and educational enrichment.

Alumni Association Tours are open to all members of the University community and their immediate families. Other relatives and friends are welcome as space permits (these unaffiliated travelers are requested to make a $100 gift to the University).

Prices listed are current best estimates, subject to final tariffs and significant fluctuation in international exchange rates.

1991 TOUR PROGRAM

Romantic Treasures
May 1–14

Twelve-day cruise sailing the waters of the Mediterranean Sea aboard the luxurious *Royal Princess*. Ports of call in 9 cities: Barcelona, Cannes, Livorno, Rome, Messina, Athens, Mykonos, Dubrovnik, and Venice. Option to extend your holiday with a post-cruise in Barcelona. From $3,590 from Rochester and most major cities. (Vantage Travel)

Mozart’s Europe
May 18–June 4

Follow Mozart’s journey from Vienna to visit King Friedrich Wilhelm II in Potsdam in the spring of 1789, intersecting with the lives of Haydn, Beethoven, Schubert, Mendelssohn, and Bach. Accompanied by Eastman School professor Marcia Baldwin, the music/opera program includes 10 international-calibre concerts with performances at the Vienna State Opera, the Leipzig Gewandhaus, and the Dresden Semper Opera. Unique experiences such as private concerts, authentic-instrument demonstrations, discussions with musicologists, meals in places where Mozart dined, and exciting excursions are part of the program. 18 days from $4,200. (Voyager Tours—operated by Norman Eagle ’46)

Seine & Saone
June 30–July 12

Cruise on two of France’s most scenic rivers, the Seine and the Saone aboard the deluxe sister ships the M/S *Normandie* and the M/S *Arlene*. Enjoy 2 nights in Paris with a special illumination dinner cruise through the heart of the “city of light.” Then, explore the colorful Normandy region, stopping at the historic towns of Vernon, Les Andelys, and Rouen. After a thrilling ride through the French countryside on the world’s fastest train, the “TGV,” cruise the Saone through the picturesque Burgundy region visiting the towns of Macon, Tournus, Chalon-sur-Saone, Seurre, and Saint Jean-de-Losne. Also enjoy 3 nights in cosmopolitan Switzerland. From $3,795. (Alumni Holidays)

Classic Kenyan Safari
July 12–27

Travel through Kenya while enjoying fine service and accommodations often reminiscent of the romantic luxury of a bygone era. Expert guides accompany your visits to 3 of Kenya’s greatest parks: Tsavo West (2 nights), Taita Hills (2 nights), and the Masai Mara (3 nights), plus 3 nights on the incomparable Kenyan coast and time to enjoy the friendly African capital of Nairobi. $4,495 from JFK on K.L.M includes practically everything. (Explorers World Travel)

Scandinavia
July 24–August 6

Discover the splendors of Scandinavia on this 2-week holiday which includes city tours, a spectacular day cruise of the fjords, as well as a round trip Baltic minicruise. You will visit Copenhagen, Denmark; Oslo, Ulvik, and Bergen, Norway; Stockholm, Sweden; and Helsinki, Finland. $3,099 from Newark; $3,260 from Rochester. (Vantage Travel)

Scotland
August 1–11

Clans and tartans, kilts and bagpipes, old monasteries and noble castles, malt whisky and the Highland fling. Where else but the wild and glorious kingdom of Scotland? Delight in the spectacular beauty of the Scottish Highlands, cruise the waters of Loch Ness, ride the scenic Kyle of Lochalsh Highland train, and explore the legendary Isle of Skye. Enjoy the thrilling pageantry of the Edinburgh Military Tattoo and an optional 3-night London extension. Join Gordon A. McDougall, executive director of the Alumni Association, on this memorable 11-day grand tour visiting Edinburgh (2), Ballater (1), Inverness (2), Lochalsh (2), and Glasgow (2). $3,195 from New York or Boston. (Travel Concepts)

Russia
August 1–14

Cruise on the brand-new M/S *Narkhom Pahomov* through the historic waterways connecting Leningrad and Moscow. Although Soviet citizens have been able to cruise this portion of Northwestern Russia for the past several years, this region is just now being opened to Westerners. Combine a 5-night cruise from beautiful Leningrad to fascinating Moscow with 3 nights in Leningrad, 2 nights in Moscow, and 2 nights in Berlin, including visits to Petrodvorets, Kizhi Island, and Uglich. From $3,095. (Alumni Holidays)

Danube
October 15–28

Experience a fascinating array of cities in 7 different countries—Austria, Czechoslovakia, Hungary, Yugoslavia, Bulgaria, Romania, and Turkey—through an area of old-world charm that has remained virtually unchanged for years. Follow the Danube on its 1,800-mile course through the continent, beginning with 2 nights in Vienna and continuing to Duernstein, Bratislava, Budapest, Belgrade, and Bucharest, plus 3 nights in the romantic city of Istanbul. From $2,795. (Alumni Holidays)

Brochures with full details on each of these tours are available on request to the Office of Alumni Affairs, Fairbank Alumni House, 685 Mt. Hope Ave., Rochester, NY 14620, (800) 333-0175 or (716) 275-3684.
Orienteering: Not a Lost Cause

Combing the woods in search of just one thing — confirmation that you aren’t lost — might seem like a strange way to have fun. But for orienteers like Georg Nadorff ’85, ’88G, spotting an orange-and-white marker dangling from a tree is more than just a thrill (or a relief). What you have here is a competitive sport.

Outfitted only with a topographic map and a compass, and a dogged sense of direction, an orienteer has just one goal: to make his or her way over rugged outdoor terrain by finding the speediest route from one marker to the next.

Though some orienteers stick strictly to doing their thing on foot (a variation known as foot-o), other adventurous souls, like Nadorff, have taken to orienteering on cross-country skis (ski-o), and in canoes (canoe-o), as well. Still little known in the United States — there are only about 5,000 active orienteers in this country — orienteering is big time overseas.

Given the popularity of the sport in Europe, one might assume that Nadorff’s recent move to Switzerland had more to do with his avocation than his vocation, but he says it was an equally good move professionally: Today he’s an optical engineer with Leica Aarau, a subset of the world’s largest optics conglomerate — and he lives in close proximity to the world’s best orienteers.

“What I am now is a tiny squirrel in a big forest of competitors,” he reports after spending a full month of “o-vacation” in Sweden and Norway, where orienteering is a national summer sport.

“It’s an excellent physical and mental challenge,” says this devout o-man, who was one of three skiers to represent the United States at the 1989 Ski-Orienteering Pre-World Championships in Scandinavia. (Though they finished in the bottom third, his team managed to beat the British, the Poles, and even some of the Swiss.)

Considering that he didn’t take up orienteering until after he finished college, Nadorff’s participation in the Scandinavian event was an accomplishment in its own right. While working on his master’s degree in optics, he spent a year as a co-op student in St. Paul, Minnesota. It was there that he first consorted with compass-reading competitors and it was there that he learned to race a canoe.

But he was no stranger to competition, nor even then. As a Rochester undergraduate, he was a member of the three-time state champion swim team. “The swimming,” he says, “helped me with discipline.” And he adds, “I also learned in college that if you want to get things done you can’t sleep too much — just enough to get by.”
That last practice enabled Nadorff to build his own cedar-strip canoe, a project that took some 300 hours to complete. Regrettably, the canoe, which Nadorff still refers to as his “pride and joy,” was demolished when it ran awry in a rapid back in Rochester.

But true orienteers don’t abandon ship, even when all seems lost. He says he’ll be building another boat—as soon as he can find the 300 hours of sleep to give up.

At Epidemiology’s Epicenter

Eric Noji ‘81M recalls that, after the 1971 earthquake that rocked the San Fernando Valley and leveled his high school, his father was so shaken that he moved the family to Oregon.

Nowadays—after more than a decade in seismically stodgy burgs like Rochester and Baltimore—the younger Noji spends much of his time studying “building collapse fatalities,” in his words, aiming to help architects and engineers create structures that stand firm on terra firma.

His work is part of a larger, emerging field of “disaster medicine” —a discipline which Noji, in his new post at the United States Centers for Disease Control, is helping to form. As acting chief of the Division of Environmental Hazards and Health Effects, Noji directs a staff of 70 epidemiologists—M.D.s, Ph.D.s, and veterinarians, primarily devoted to investigating natural and man-made disasters across the nation and worldwide. He has been on the job since June 1990, having taken a leave of absence from his faculty post in emergency medicine at the Johns Hopkins School of Medicine.

When the Review caught up with him, he was between stops in Ethiopia (at the Pan-African Center for Emergency Preparedness and Response) and San Francisco (for an “earthquake casualty modeling” meeting).

Noji’s office, he explains, studies the aftermath, as it relates to public health, of such environmentally hazardous events as the San Francisco quake, Mt. St. Helens eruption, Three Mile Island, Love Canal, Agent Orange, the Times Beach dioxin exposure, and (fortunately as it happened, on a smaller scale) the Tylenol murders.

The Atlanta-based Centers for Disease Control—part of the Public Health Service, itself a branch of the Department of Health and Human Services—aim to work with state and local governments, as well as foreign countries, in planning for and responding to disasters like these. “We’re very involved in aiding communities, both during a disaster and after, with healthcare needs like supplies and medication,” Noji says. “We’ll work with the Red Cross and federal agencies, for instance, so that they can supply appropriate medical care.”

He adds that his division is “getting into preparedness more and more,” where the federal government can get more bang for its disaster-aid buck.

And where is he off to next? Indianapolis—in the New Madrid Seismic Zone, where, he points out, climatologist Iben Browning predicted a 50-50 chance of a major earthquake soon—to teach emergency rescue teams how to deal with “crush syndrome” victims and victims of asphyxiation.

In this case, as the bumper stickers say, we’d rather be in Rochester.

At Epidemiology’s Epicenter

Eric Noji ‘81M recalls that, after the 1971 earthquake that rocked the San Fernando Valley and leveled his high school, his father was so shaken that he moved the family to Oregon.

Nowadays—after more than a decade in seismically stodgy burgs like Rochester and Baltimore—the younger Noji spends much of his time studying “building collapse fatalities,” in his words, aiming to help architects and engineers create structures that stand firm on terra firma.

His work is part of a larger, emerging field of “disaster medicine” —a discipline which Noji, in his new post at the United States Centers for Disease Control, is helping to form. As acting chief of the Division of Environmental Hazards and Health Effects, Noji directs a staff of 70 epidemiologists—M.D.s, Ph.D.s, and veterinarians, primarily devoted to investigating natural and man-made disasters across the nation and worldwide. He has been on the job since June 1990, having taken a leave of absence from his faculty post in emergency medicine at the Johns Hopkins School of Medicine.

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Of Grass Roots and Bath Salts

It was 7:15 p.m. on Election Day 1990 in Buncombe County, North Carolina. The polls would close in 15 minutes. The woman was soaking in the bathtub in her apartment. A volunteer for Democratic senatorial candidate Harvey Gantt banged on her door and demanded to know if she had voted.

“No! — and I’m in the tub,” she yelled. “Well,” urged the volunteer, “why don’t you just slip on your robe and get right over to your polling place?”

Now that’s getting out the vote.

The man behind this all-out effort?

James La Rue ‘90 (above at left with Gantt), who since early August had been orchestrating Gantt campaign activities in Buncombe and two other rural counties in western North Carolina. On election day he had 235 people out and about in Buncombe County handling the phone banks, offering rides, and pounding on doors in the cause of scaring up voters—preferably on the Democratic side.

Holder of a brand-new diploma in political science, La Rue became involved with the Gantt campaign through a political action committee called “Participation 2000.” Rather than giving money directly to favored candidates, in this case the liberal ones, this PAC instead trains neophyte politicos to act as the candidates’ campaign organizers. La Rue was one of 40 young people—among them 10 recruits from Eastern Europe—who were given 10 days of expenses-paid training and then dispersed to work on campaigns across the country. (Some of the other trainees helped out, for instance, in the variously successful gubernatorial campaigns of Democrats Dianne Feinstein and Ann Richards.)

“As far as I know,” reports La Rue, “this is the only PAC in the country whose sole purpose is training campaign workers. And I think it’s fair to say that the people who donate to it get a pretty good return on their investment. For example, I was paid $1,000 plus expenses to work 70 hours a week, seven days a week from August until early November. To me, that seems like a better investment than spending the same amount—or probably more—on some 15-second TV commercial.”

La Rue figures he, too, gained from the experience—even though his candidate lost by about 5 percentage points to incumbent Jesse Helms. “When I went in, I was more anti-Helms than pro-Gantt, but I found Harvey to be a great candidate and a good person to work for. He had courage. In North Carolina, you don’t come out and say you’re for gun control, but Harvey did—and he never waffled.

“One of the best things about the campaign was the variety of people who helped out who’d never been involved in the past. Campaign workers are often segregated by race and age. But Jesse managed to offend so many people that we had white and black, young and old, environmentalists, and even apolitical artists coming together to oppose him.”

La Rue says that the broad-based coalition he worked with even prodded him into reevaluating some of his own positions. For example, he volunteers, “I’m less homophobic than I was before the campaign.”

La Rue, who comes from a political family (his mother was the first woman to be elected to the city council in Lexington, Virginia, and his sister once served as campaign manager for Representative Louise Slaughter and is now a legislative aide in Congress) is disappointed but not discouraged by the election result: “Jesse was just better able to figure out what buttons to push,” he says.

Now he plans, after a year of grass-roots experience working for the Rochester-Monroe County Democratic Committee, to go on to graduate school in a—no surprises here—political science program.

“I’ve been involved in politics almost as long as I can remember,” he says. “I was about 15 years old before I realized that all families didn’t discuss politics every night at the dinner table.”
Driving Her Way to the Top

What kind of car does the first woman president of the American Association of Motor Vehicle Administrators drive? Pat Buyse Adduci '58, AAMVA's new leader and New York State's motor-vehicle commissioner since 1985, steers a Ford Tempo when she's cruising around the state on official business and a Mazda 626 when she's out cruising with her family.

And how did Adduci, an English major at Rochester, manage to run various stereotypes off the road and build a successful career for herself in a field that traditionally has been dominated by males? (After all, it's guys who grow up eating, sleeping, and breathing cars, right?)

"Well, when I was five years old, I did not wake up one day and decide I wanted a career in motor-vehicle administration," she admits cheerfully. Instead, starting in the mid-1970s, she found herself in the driver's seat of one government job after another, steadily shifting gears on her way up to her current positions.

She began her career in government service—and her record of taking on jobs previously monopolized by males—in 1974, when she was appointed the first woman city clerk in Rochester. In that office, Adduci did things like licensing every dog to marriages and acting as the city's first records manager.

After running for the office the fall of 1981, she moved up to become the first female Monroe County clerk.

In that job one of her responsibilities was supervising the county's three motor-vehicle offices. That's when Adduci attracted the attention of New York's Governor Cuomo, who reportedly was impressed (at least enough to have local offices stay open beyond the hours when everybody else was working). The governor nominated Adduci for the position of motor-vehicle commissioner in 1985, and when the State Senate confirmed her for the job, she became the first woman in the United States (or Canada, for that matter) to serve as a top motor-vehicle administrator.

During her tenure, New York has recorded its five safest years of highway travel. Last year's, in fact, was the lowest rate of highway fatalities ever: 2.13 deaths per hundred million miles traveled (in 1971 the rate was 4.9). "We've reduced the rate in spite of the fact that drivers are traveling more miles every year," Adduci says.

Adduci is not new to finding herself in mostly male territory (she copes by using humor a lot, she says. "Ironically, I was in the last class at the University to spend any time on the Prince Street campus. We women moved to the River Campus in my sophomore year, to the great dismay of the River Campus professors, who seemed to worry that they couldn't be quite as candid in their expressions in class," she jokes. She's been sharing the road with men ever since.

His Master's Voice

Back in the late '60s, as a graduate student at Eastman and principal trumpet for the Utica (New York) Symphony Orchestra, Bob Ludwig '66E settled on the unlikely career of a recording engineer.

"One of my goals as a trumpet player back then was to perform Bach's B Minor Mass," he recalls. "I thought I'd have to work years and years to get to that. But then, one day, it was on the Utica Symphony program. We played it; I did it."

Not only had he hit his musical high note years ahead of schedule—he'd also grown tired of "playing ladies' luncheons to raise money," as he puts it. Opportunity knocked (or rather, drummed a syncopated beat) during one of the Eastman School's first Arranger's Holiday Workshops, directed by the late professor of conducting and ensembles Rayburn Wright '43E and jazz musician and arranger Manny Albam.

Ludwig's assignment for the workshop was to work as assistant to Phil Ramone of A & R Recording. "At that time he was just starting out, but he went on to produce all the big Billy Joel hits, as well as recordings by Streisand, Chicago, Paul Simon. . . At the end of the summer he asked me to come work for him in New York. I learned mastering as part of an apprenticeship program at A & R."

Ludwig went on to become vice president and chief engineer of Masterdisk (he's held that job since 1976), one of New York's leading mastering studios, producing master tapes for CDs, cassettes, and LPs.

For the uninitiated, mastering is "the last creative step and the first manufacturing step in the record-making process," according to Ludwig.

"The producer and the artist go out and make the original recording, which is taken into a studio and remixed onto two tracks. Then the question becomes, 'Does this sound as good as it can sound?' The answer usually is no. So they take the two-track tape and bring it to a mastering facility like ours.

"Our job is to try to get as much musically out of that tape as possible. To do that, we have very specialized consoles with highly sophisticated equalizers and compressors and level-controllers and various effects that we can add.

"After that—young everyone agrees that the recording sounds as good as it can—our job is to make the very best transfers for the CD and the cassette master."

Today, he works with some of the biggest rockers in the business: Sting, McCartney, Dire Straits, Phil Collins, Paul Simon, and "The Boss" (Bruce Springsteen, who else?—on every one of his records), as well as jazzmen Chuck Mangione '63E and Lewis Soloff '65E (former Blood, Sweat, and Tears Trumpet), drummer Steve Gadd '68E, and classical flutist Carol Wincenc, among others. On one particularly hectic day, he was at the console with heavy-metal rockers AC/DC in the morning and experimental composer John Cage in the afternoon.

Last year, Mix magazine readers voted Ludwig "Mastering Engineer of the Year." "Between Masterdisk and myself we've won seven of these awards," he admits. "Only one other mastering facility has ever won any."

After this—and the B Minor Mass—what next?

Starting the Civil War

Historian Nat Brandt '51 doesn't mince words when it comes to titling his books on popular history: his 1986 volume The Man Who Tried to Burn New York, the just-published The Town That Started the Civil War, and the forthcoming The Congressman Who Got Away with Murder, all of which promise—and deliver—what they call in the trade a good read, based on annals of the American Civil War.

Brandt also doesn't mince many words when he recalls the Rochester professor
who inadvertently led him to the authorship of these well-received and critically praised volumes.

The professor was Arthur J. May, noted for his dramatic classroom presentations (and famed to this day, for, among other things, his unabashedly idiosyncratic pronunciation of “eastern,” “westen,” and “modern”). May could be, as more than one frightened freshman has attested, an intimidating presence.

“I shall never forget sitting in the front row of May’s history class on the very first day of my freshman year,” recalls Brandt. “He came into the classroom, was very precise, and began to lecture from his notes just as the buzzer rang to start the class. Yes, he was a real martinet. But when he spoke, he made his subject just come alive. Right then and there, on that first day, I decided to major in history.”

History buffs, it seems, have been cheering that youthful decision. Published by Syracuse University Press, Brandt’s most recent book has been both a Book-of-the-Month Club and History Book Club selection. His earlier volume—a failed West Pointer who was the last Confederate to be hanged for spying—won him the 1987 Douglas Southall Freeman History Award.

Brandt eased into Civil War history through a series of writing and editing jobs starting out at CBS News. “I began at the bottom, as a copy boy, and worked my way up to being senior news writer for both radio and TV.” He then moved into the print media, eventually holding editorships at The New York Times, American Heritage, and Publishers Weekly before turning freelance.

“Even throughout my career in newspapers and magazines, I was writing articles dealing with history,” he says. “I’d do pieces on the 100th or 200th anniversary of something for the Sunday papers, which, as you know, like to fill their pages with features. I became fascinated with the Civil War, in particular, when I worked for American Heritage.”

What is it about the Civil War that still exerts such fascination for all of us more than a hundred years later?

“For one reason, for me, it’s because there’s such an enormous supply of interesting, dramatic Civil War stories—and I like to tell a good story,” Brandt suggests. He has found a rattling good one in The Town That Started the Civil War, an account of the rescue in 1858 of a captured runaway slave by an impromptu posse of students, professors, and other good citizens of Oberlin, Ohio, who succeeded, after a tense siege, in freeing the captive with a minimum of violence.

Brandt admits that the title of the book may be a bit of an exaggeration, but “it bears a kernel of truth, indeed more than a kernel. The case really involved all the issues that led to the Civil War.”

Retrieving the Obscured

“I didn’t have no family before I was married,” recalled Aliene Walser, who, married at 14, during the 1940s worked long arduous hours in a Southern cotton mill to help support her eight children.

“My mother died when I was five, my father died when I was six, and I was switched here and yonder and everywhere. My mother’s sister was mainly responsible for raising me. . . . Honey, I can’t tell you what a bad experience that was, living with my aunt. I’d wake up crying for my mother and daddy at night, and she’d turn the cover back and whip me.”

Walser’s story is one of dozens of tales of working-class women’s lives—narrated mostly in their own words—that Janet Ballotta Zandy ’73G has collected in her anthology, Calling Home: Working-Class Women’s Writings (Rutgers, 1990).

Now a professor at the Rochester Institute of Technology, Zandy points to her own working-class origins (she grew up in New Jersey, where her father was a chemical plant worker), in explaining why she spent some 10 years of her life—without benefit of research funding—in compiling the book. It was an attempt, she says, to “bridge back” from academic to her working-class roots. “I wanted to use both my experience and my education to serve as a witness for working-class people who don’t get their stories out.

“They are just as complex as anyone else,” Zandy notes, “but the economic circumstances of their lives offer fewer opportunities for expression.” And, as she points out in her introduction to the book, “The life experiences of working-class women are not affirmed or valued in the dominant culture, or considered fitting topics for literature. . . . Their lives are obscured and erased; their work is barely visible.”

Calling Home is Zandy’s effort toward rectifying that neglect. Its 366 pages are made up of essays, stories, poems, songs, and letters, written, for the most part, by working-class women themselves: “I Lived in Some Dumps Near the Yards,” the memoir of a young factory worker who later became a union organizer; “I Am a Hard Woman Because I Have Had a Hard Time Out Here,” an oral history of a black woman from South Carolina who moved to Detroit to eke out a living after her mother died and her father was killed by a gang of white men; “I Want You Women Up North To Know,” a poem about the working conditions (horrendous) of poor women who stitched fancy baby clothes to be sold to wealthy women in the North.

Calling Home has received favorable notice in both The Nation and The New York Review of Books and is currently being used in a course at Brown University.

Contributed by Nancy Barre, Kathleen Ferguson Chapman, Denise Bolger Kovnat, and Wendy Levin
RIVER CAMPUS

Career Moves

Joyce Gitleman Barrow '49, appointed senior benefits researcher, Con Edison, New York City.
Louise Burton Beller '57, appointed director of rehabilitation services, Beverly Manor Health Care Center, Ridgecrest, Calif.
Donald Stedman '59G, associate v.p. for academic affairs, University of North Carolina, appointed dean, School of Education, University of North Carolina at Chapel Hill.
Don Steele '59, named manager of industry relations and compensation, Carolina Telephone.
Warren Swansan '61, promoted to operations manager, Advanced Solid Rocket Motor Program, Space Center, Miss.
Roxann Reddick Bustos '63, '64G, appointed assistant head of public services, Reese Library, Augusta (Ga.) College.
John Reed '63G, promoted to rank of distinguished professor, department of English, Wayne State University.
Bill Clark '65, appointed director of training and development, Helene Curtis Industries.
Philip Yurecka '66, appointed v.p. for institutional advancement, Saint Leo (Fla.) College.
Jack Crow '68G, appointed director, Center for Materials Research and Technology, Florida State.
Harvey Green '68, appointed associate professor of history and granted tenure, Northeastern University, Boston.
Peter Fitz Randolph '70, appointed dean of student affairs, St. Lawrence University.
William Tucci '74, named assistant treasurer, The Bank of New York's Harrison Operations Center.

Honors/Elections

Donald Fisher '45, named to board of directors, Clifton Springs (N.Y.) Hospital.
Janet Fairfield Avery '47G, named Employee of the Year, Nathan Kline Institute for Psychiatric Research.
Lloyd Conover '50G, received the Third Century Award from the Foundation for a Creative America.
Arthur Beane '51, elected president, Historical Society of Greece, N.Y.
Alan Adler '53, recognized, for receiving a U.S. Patent, at Western Connecticut State University's annual faculty honors convocation.
Harold Langlitz '54G, elected to board of trustees, St. Peter's Hospital, Albany, N.Y.
Albert Schultz '55, Vennema Professor of Mechanical Engineering and Applied Mechanics, University of Michigan, Ann Arbor, awarded the H. R. Lissner Award, American Society of Mechanical Engineers, for outstanding accomplishment in bioengineering.
George Hoerner, Jr. '58G, professor and head of the department of chemical engineering, Lafayette College, elected fellow, American Institute of Chemical Engineers.
George Stricker '60G, received the 1990 American Psychological Association Award for Distinguished Professional Contributions to Applied Psychology as a Professional Practice.
Gail Moer Forster '62, art therapist, Walter Reed Army Medical Center and adjunct professor of art therapy, George Washington University, received Department of Defense Special Service Award for her video on art therapy with HIV-positive patients.
Peter Braun '70, a partner in the law firm of Phillips, Lyle, Hitchcock, Blaine, & Huber, joined board of directors, People, Inc.
Patricia Quinn '70, adult opportunities coordinator, University of Wisconsin-Eau Claire, elected chairwoman, university senate.
Timothy Dalal '71G, '73G, '76G, Bellcore scientist, awarded the 1990 Outstanding Statistical Application Award, American Statistical Association, for his disaster-spawned statistical research regarding the space shuttle Challenger.

John McCabe '75, elected secretary/treasurer, board of directors, American College of Emergency Physicians.

Richard Josephson '77, elected fellow, American College of Cardiology.

Robert Paquette '82G, associate professor of history, Hamilton College, awarded fellowship from the American Council for Learned Societies.

Lt. Stephen Kass '86, awarded Navy Achievement Medal for superior performance of his duties, exceptional leadership, and professional abilities.

Elizabeth Ward '86, actuarial associate, Aetna Life and Casualty, named associate, the Society of Actuaries.

Margaret Best-Krizan '88, awarded the Gladys L. Mersereau award, Delta Gamma Society International, given to nonmembers whose education was interrupted and who require financial aid in order to complete the requirements for teacher certification.

Books Published


Susan Sutton Smith '72G, editor, The Topical Notebooks of Ralph Waldo Emerson (University of Missouri Press). She is a professor of English at Oneonta State.

Andrea Davids Kane '77, author, My Heart's Desire (Pocket Books, Simon & Schuster).

James Oberly '77G, '82G, author, Sixty Million Acres—American Veterans and the Public Lands Before the Civil War (Kent State University Press). He is an associate professor of history at the University of Wisconsin–Eau Claire.


Advanced Degrees
Robert Eisman Goldstein '57, Ph.D., counseling education, University of North Texas.

Cathryn Milton Hay '63, Ph.D., education, Kansas State University.

Wayne Morrison '80, M.S., mechanical engineering, Carnegie Mellon University.

Merry Jo Oursler Velasquez '80G, Ph.D., biomedical sciences, Washington University, St. Louis.

Jeanine Khoury '82, M.B.A., Pace University. She is a financial controller for the securities division of Manufacturers Hanover.

Charles Tornatore '82, M.S., public health, Yale University School of Medicine.

Suzie Weaver '82, Ph.D., psychology, Brandeis University. She is a doctoral fellow at the Murray Research Center, Harvard University.

Sue Armstrong '83, M.S.N., Yale University School of Nursing. She is a certified nurse-midwife at Prince George's Hospital Center in Maryland.

Daniel Humiston '83, M.D., Albany Medical College. He is a resident in internal medicine at the University of Cincinnati Medical Center.

Ronald Stern '83, ordained as rabbi, Hebrew Union College-Jewish School Institute of Religion.

Paul Sylvesti '83, J.D., George Mason University School of Law.

Theodore Baum '85, J.D., Albany Law School.

Doreen FitzPatrick John '86, D.V.M., Cornell University.

Allen Hall '87, J.D., Albany Law School, Union University, named associate, Hinman, Howard, & Kattell, Binghamton, N.Y.


EASTMAN SCHOOL OF MUSIC

Career Moves
Carol Buerklin Doran '62GE, '78GE, granted faculty tenure and appointed to a newly established position in worship and pastoral music, Colgate Rochester Divinity School.

Robin Eaton '73E, appointed head of the vocal department, Metropolitan School for the Arts, Syracuse, N.Y.

Arlene Shrut '75E, '77GE, appointed full-time assistant professor and head of accompanying program, Syracuse University; and released Songs of the Harper, Dorian CD.

Key
RC — River Campus colleges
G — Graduate degree, River Campus colleges
M — M.D. degree
GM — Graduate degree, Medicine and Dentistry
R — Medical residency
F — Fellowship, Medicine and Dentistry
E — Eastman School of Music
GE — Graduate degree, Eastman
N — School of Nursing
GN — Graduate degree, Nursing
FN — Fellowship, School of Nursing
U — University College
GU — Graduate degree, University College
Performances/Recordings/Publications
Katherine Collier '70E, '73E, performed chamber music recitals at the University of Chicago, the University of Northern Illinois, and on a live radio broadcast on WFMT in Chicago, last winter.
Luther Henderson '71E, '73GE, performed as guest conductor with the Milwaukee (Wis.) Music Under the Stars Orchestra and vocal artist Marilyn Walton, last summer.
Donald Zimmer '75E, violinist, performed Beethoven's "Triple Concerto" on the opening subscription concert of the Chattanooga Symphony Orchestra.
Ross Crolius '79GE, a member of the New York Metropolitan Opera Chorus, presented a vocal recital in May at the Shepherdstown (W. Va.) Presbyterian Church.
Louis Goldstein '80GE, associate professor of music, Wake Forest University, played a program of American music, in conjunction with a traveling exhibit from the Whitney Museum, at the North Carolina Museum of Art, Raleigh, N.C. He also performed Copland's Piano Fantasy last spring on his tour of the Netherlands and Prague, Czechoslovakia.

Honors/Elections
Earnest Harrison '42E, '46GE, elected honorary member, International Double Reed Society. He is a professor emeritus at Louisiana State University, where he taught oboe for 20 years.
Renee Ross Fleming '83GE, opera singer, awarded the largest cash prize in classical music, the $25,000 Richard Tucker Music Foundation Award.
Paul Dickinson '87E, awarded 1990 Broadcast Music, Inc.'s award to student composers for his "Symphony for Wind Ensemble."

Advanced Degrees
Steven Rheinbein '76E, D.M.A., percussion performance, University of Iowa. He is director of jazz studies and percussion and assistant director of bands at the University of Nebraska, Omaha.

SCHOOL OF MEDICINE AND DENTISTRY
Career Moves
Laurence Jacobs '65M, professor of medicine (endocrine/metabolism), appointed associate dean for student affairs at the University's School of Medicine and Dentistry.
Richard Green '70M, '76R, associate professor of surgery, appointed chief of vascular surgery at the University's Medical Center.
Stanley Chapman '72M, promoted to the rank of professor, School of Medicine, University of Mississippi Medical Center.
Guy Eshelman, Jr. '87M, joined Cornerstone Family Health Associates, Lititz, Pa.; and approved for membership on the medical staff at Lancaster General Hospital.

Honors/Elections
Samuel Gross '55M, specialist in the treatment and research of childhood cancer, named national winner, Leukemia Society of America's annual award for outstanding services in education and research.
Richard Burton '64R, professor and chair of the Department of Orthopaedics, University Medical Center, elected v.p. of the American Society for Surgery of the Hand.
Beverly Helbling Wood '65M, '71R, named fellow, American College of Radiology.
Jonathan Dehner '70R, named fellow, American College of Radiology.
Bruce Hillman '73M, named fellow, American College of Radiology.
Neil Schachter '82R, named fellow, Academy of General Dentistry.
Eleanor DeWitt '83R, elected president of medical staff, Soldiers and Sailors Memorial Hospital, Penn Yan, NY.

Books Published

SCHOOL OF NURSING
Career Moves
Lt. Comdr. Jane Piver Bussey '72N, assigned as assistant division officer of a surgical ward, Fleet Hospital Five, Operation Desert Shield, Saudi Arabia.
Nancy McGinn '88GN, appointed associate v.p. of nursing, Rochester General Hospital.

Honors/Elections
Catherine Gilliss '79FN, elected fellow, American Academy of Nursing; and named distinguished alumna, Duke University School of Nursing.
Jane Tuttle '79N, '84GN, assistant professor at Yale School of Nursing, named 1990 Outstanding Nurse Practitioner of the Year, Connecticut Nurse Practitioner Group, Inc.
Gail Ingersoll '83GN, '87G, assistant professor of nursing and chair of the Division of Health Restoration at the University's School of Nursing, inducted into the American Academy of Nursing.
Mary Lou Pulcino '90GN, nurse practitioner at Rochester General Hospital, awarded honorable mention for her health promotion proposal, U.S. Department of Health and Human Services' Award for Innovations in Health 1990.
students who fall outside the range of significant financial assistance. If current trends continue, private higher education will have open admission for the poor (until the money runs out), while the state offers highly selective low-cost education to the wealthy.

The combination of public and private education in New York is a fact of life. We have a historical heritage of significant private higher education both in quantity and quality. Private higher education enrolls 40 percent of all the students, grants 52 percent of all the bachelor's degrees, 67 percent of all the graduate degrees, and 83 percent of all the first professional degrees. (Private higher education also graduates more minority students than SUNY and CUNY combined.) One can see why the Bundy Commission saw a single system of public and private.

I suggest that New York policy makers and citizens should ask themselves these questions: (1) Are the current funding arrangements for public and private higher education in keeping with the principle of a single system, (2) do they constitute sensible public policy, and (3) are they economically plausible in the current budget distress?

It would seem to be sensible public policy to maintain the system not only because of the supposed virtues of competition in higher education, but because it would be impossible in the best of economic circumstances for the State of New York to duplicate the resources of even a single Columbia or Rochester.

At this writing the state has not passed its new budget; the stone wall has not yet fallen on us. But, beginning with the threatened position of Bundy Aid, there are visible and ominous cracks.

Dennis O'Brien
AFTER

Words

JOHN W. BARTLETT '57

1991: Director, Office of
Civilian Radioactive Waste
Management, United States
Department of Energy

By the looks of his resume, Bartlett is about as well qualified as any mortal for the job of disposing of, in his words, "this stuff nobody wants." Before the Senate approved his appointment in April 1990, he served as a consultant to Secretary of Energy James Watkins. Before that, he directed energy and environmental programs for The Analytic Sciences Corporation in Reading, Massachusetts, and before that he worked in nuclear-waste technology for Battelle, Pacific Northwest Laboratories.

Even his doctoral dissertation in chemical engineering ("The Critical Point in the Drying of Beds of Particulate, Non-Porous Solids," for those of you who understand such matters), completed at RPI in 1961, was directly related to some of the key questions he's grappling with nowadays, he says. And while you may not find it on his job description, one of the main qualifications for Bartlett's position is a robust sense of humor—something he has in abundance.

"I have a big sign on the wall right next to my office, with a headline quoting Senator Bryan of Nevada: 'Fed Nuke Boss Is Liar.' " "I'm not, but that's the way it is," he says sporting.

During a stint on the Rochester chemical engineering faculty from 1963 to 1968, Bartlett is said to have written an entire exam in verse—a midterm, in December 1963, that began, "'Twas the night before Christmas...." (Not a trace of the concoction exists, but several faculty and staff members swear by the story.)

Nowadays, he sticks to prose. "I have a major speech almost every week," he says. "My principal job is to report to government officials and the public at large on the progress of plans for disposing of waste." Current hopes are to bury it 1,000 feet deep on 1,400 acres at Yucca Mountain in Nevada (hence the "liar" epithet from that state's junior senator).

"The site would accommodate the waste from all 110 nuclear power plants in the United States throughout their operating lifetimes," says Bartlett. "Most are licensed for 30 to 40 years, so Yucca Mountain would serve our needs through about the year 2030."

Will nuclear power be around for the next few decades or so? "I think it has to be, if the United States is to grow economically," he declares. "There are limits to what we call 'renewables' as well as to conservation. And with all the emission and pollution problems of fossil fuels—among them, the greenhouse effect—it's imperative that we make nuclear power part of our energy strategy for the future."

Does he actually like his job? "Very much. It's an enormous challenge. It may sound a bit highfalutin, but I feel that, basically, I'm making a contribution to the national welfare."

1957: 'A Very Talented Guy'

As an undergraduate, Bartlett was a gregarious sort—much as he is today—serving as senior class president, a member of Delta Upsilon, editor of the yearbook, and editor of the Rochester Indicator, published by and for engineering students.

(His professional bent was foreshadowed in a 1955 article on nuclear power.) He also served as musical director of the Quilting Club, a theatrical group known for its political spoofs. In his senior year, the Q-Club's production, set in the far Northwest, was entitled "My Fair Lady."

Bartlett's roommate at Delta Upsilon, G. Michael Howard '57, now professor of chemical engineering at the University of Connecticut, remembers him as "a very talented guy—musical, creative, and able to organize a group to get a job done."

"I'm not in the least bit surprised that he's a success and that his interpersonal skills have led him into technical management. When I read that he'd been approved for the post, I thought, 'Hooray!' What with political pressures—NIMBY, that kind of issue—things have languished for far too long."
Volunteers for the Annual Fund

Introducing the Parents Fund Council

Charter members shown here are (seated, left to right) Frank Franzino, Paul Hudon, Carol Kline, Susan Isenberg, Rhea Fox, and Nancy Witmer; (standing, left to right) Harold Fox, Kathryn Franzino, Dennis O'Brien, Michele Hudon, Bruce Isenberg, Jerome Kline, Robert Witmer, Anne Lathrop, and Walter Lathrop.

Most parents know that tuition doesn’t support the full cost of a Rochester education. Last year, parents contributed over $80,000 to the Annual Fund—a 30 percent increase from the year before.

This year, we welcome the new Parents Fund Council, whose members will spearhead the annual Parents Fund campaign and who advise the University on the effort.

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Winslow Homer's "Coast in Winter," from the Memorial Art Gallery's touring exhibition, "Winslow Homer in the 1890s": For the last 25 years of his life America's great marine painter lived in remote and rocky Prout's Neck, Maine. There—in all seasons, in all weathers—he studied the North Atlantic sea that was to him (as phrased by Homer scholar David Tatham) "at once elemental in its simplicity and incomprehensible in its complexity." For more on Homer and his paintings of the elemental and the incomprehensible, see page 18 inside.