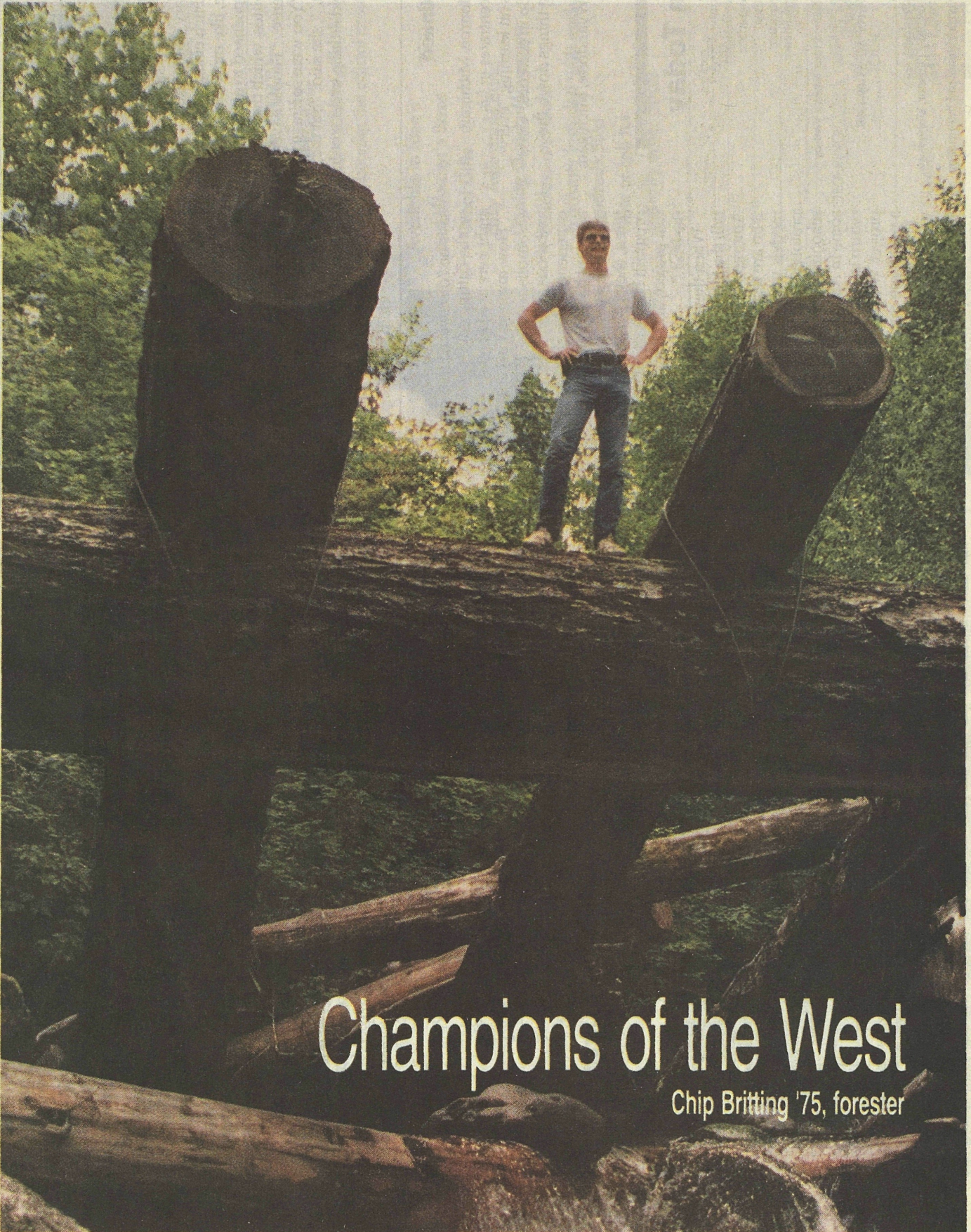


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The University of Michigan

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Champions of the West

Chip Britting '75, forester

Michigan Today

The University of Michigan

December 1991 Vol.23, No. 4



The early Romans' raid on the ir Sabine neighbors is a legendary instance of warring to capture brides—a widespread form of lethal conflict among Romans and other primates. Needing wives, Roman bachelors led by Romulus abducted Sabine women and married them.. In David's 1799 painting 'The Sabine Women', Hersilia, the Sabine Romulus chose for himself, urges peace between the Romans and her kinsmen, who have come to recapture their women. Hersilia's intercession resulted in a truce under which Sabine women could willingly remain in Rome.

WHY WE FIGHT

Men may find battle sweet for the same reasons that humankind has a taste for sugar

Why do we fight? During World War II, the federal government produced a documentary film series to answer that question for the war at hand. But why does humankind fight in general? To answer, "It's human nature," is a simplistic response—except when it's the preliminary answer of an evolutionary biologist like Bobbi S. Low.

Habits of thought and behavior have evolved over the course of millions of years, Low says, giving primates a taste for fighting that is just as natural as our preference for candy bars over rhubarb leaves. But no one has ever mobilized a war effort by saying, "We're just doing what comes naturally."

In her early career Low, who is associate professor of natural resources, concentrated on the lower animals, investigating the habitat preferences of red kangaroos in Australia and the ways ground squirrels forage for nuts.

"Some scholars who focus on humans—demographers, sociologists, anthropologists and the like—don't realize how diverse behavior is in nonhuman species," Low says. "Yet a recent study shows, for example, that 40 percent of ground squirrels' success in foraging comes from learning—from squirrels watching their

mothers rather than from genetics. In almost every animal species we find enormous variations in patterns of behavior."

In recent years Low has linked biology to human domains that have traditionally been the hunting grounds of anthropologists and other social scientists; her research has included reproductive behavior, family conflict, and the use and misuse of natural resources.

One of the reasons Low gives for shifting her focus is a distinctly human one. "I was a single parent trying to truck my infant son out to the wasp site where I was conducting research. It was clear that was not going to work. I needed research I could do on the computer at midnight after I finally got him to sleep."

In the following interview conducted by Kate Kellogg of U-M News and Information Services, Low explores the human taste for lethal conflict.

MICHIGAN TODAY: Is it likely that there is a gene that predisposes humans to wage war?

BOBBI LOW: No scientist has produced evidence of

a "war/conflict gene" in any species. The more reasonable position is what I call the behavioral/ecological argument of ultimate causality: that lethal conflict exists because individuals and families have profited from assuming the risks of lethal conflict under specific conditions over evolutionary time. This has been true of many species of mammals, including hominids.

When you look at the effects of being a mammal, of being male or female, you find male and female primates usually living with the males' kin, with the males searching for mates elsewhere. Put all that together and, clearly, warlike behavior doesn't require a gene at all. Several studies have shown that capturing women or the resources needed to get women were the main causes of war between early communities. Joseph Manson of our Department of Anthropology and Richard Wrangham of Harvard assessed warfare in 87 hunter-gatherer societies and found that reproductive matters were at the root of most of those wars. Women were direct causes of war in 45 percent of the sample, and conflict over

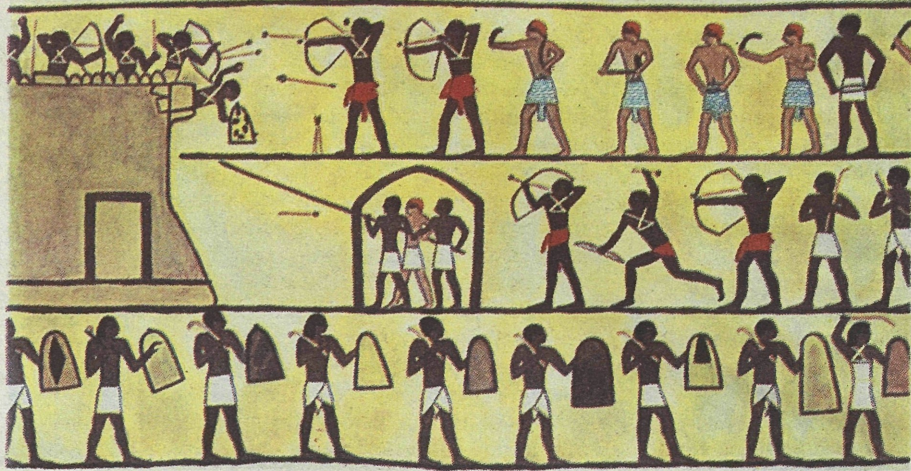
WHY WE FIGHT



Kupferstichkabinett, Basle

The battles that Henry V inspired his men to fight were waged at close quarters and involved tremendous carnage. The drawing above is of a 15th-century clash between Swiss and Germans.

Egyptian warriors attack a besieged city in 1900 BC. The compartment holding three men is a forerunner of the battering ram.



Wall painting (from the tomb of Khety, Beni-hasan, Egypt)

material resources used to obtain brides were causes in another 39 percent.

A recent study by Napoleon Chagnon of Yanomamo Indian warfare along the Amazon suggests that there are direct reproductive advantages to men who participate in revenge raids, and reproductive costs to men who avoid warfare. A man who kills a foe during a skirmish establishes himself as a *unokai*, "brave warrior." But a Yanomamo who behaves in ways perceived as cowardly on raids becomes the butt of jokes; other men make sexual overtures toward his wife. A *unokai* is likely to have one more wife than a non-*unokai*; *unokai* average 4.5 children, compared with 1.6 for non-*unokai*.

Preindustrial societies are important to studies of lethal conflict because they show us a link. Much warfare in preindustrial societies is indistinguishable from much inter-group aggression in other species; it differs only in scope. Numerous preindustrial human societies are like the societies of other primates in that related males travel and work in small parties of varying sizes. Manson and Wrangham showed that conflict escalation among such groups can be fairly low-cost and thus is likely to occur.

MT: Is fighting for mates exclusive to males?

BL: Males are much more often in a position to gain from such conflict than are females. Risky behavior in females generally centers on protecting young rather than getting mates, because their reproductive success depends more on seeing their offspring thrive than on producing large numbers.

Male mammals, on the other hand, profit from risk-taking because the number of offspring they produce varies widely and may depend upon their ability to dominate other males. For example, to try for a first mating a male red deer must grow large, develop antlers and fight for dominance and control of good feeding grounds. The initial cost is great, but the cost associated with each subsequent mating is small.

MT: And in our species?

BL: Since related men, rather than women, have tended to live together, women would face conflicts of interest if they fought in wars. In many preindustrial societies women's husbands and brothers might have found themselves warring against one another. It's worth noting that matrilineal societies like America's Cherokee and the Ashanti of Ghana occasionally have produced women warriors.

MT: In an essay on lethal conflict you say that in addition to acquiring wives, "kin selection" was another driving force in organized violence. Does this mean that our ancestors in pre-industrial societies tried to improve their lineage by waging war?

BL: Not consciously. More likely, they were either trying to protect their own kin from invasion by outside groups or were seeking to add to their group's resources. But kinship was at the core. In fact, ethnicity in modern societies is one remnant of this type of kin selection.

MT: The evolutionary underpinnings seem clear when you discuss hunter-gatherer societies. But what do you make of the great leap from kin groups killing for cattle and brides to modern nations destroying each other for less tangible resources?

BL: That leap is best explained by showing how groups of humans get themselves into what biologists call "novel evolutionary environments." War between human groups began over resources directly related to matters affecting the survival of their genetic line. Gradually, over thousands of years, the fighting forces grew into armies and became hierarchical, with increasing divergence of rank and interests of the persons involved. From related men who might squabble over a bride or herd of cows, we now have administrative groups sending others to fight. The short-term payoffs of the behavior have changed; natural selection may not be at work; the environment is now "novel" from an evolutionary standpoint because the conditions surrounding a certain type of behavior have changed. Human technology has caused



A Spanish painting depicting the Crusades. From 1100 to 1300, seven European expeditions—fueled by religious, nationalistic and mercantile passions—unsuccessfully attempted to wrest land, wealth and influence from the Muslims in the Near East and North Africa.

many such changes in recent evolutionary history.

Our relatively modern problems with sugar illustrate this phenomenon. Humans evolved to eat accessible, sweet-tasting foods—mainly fruits—and to avoid bitter plants because many of them contain alkaloids that do us harm. Then we developed technologies that have made sweet-tasting things disastrous for us. People make their livings producing candy bars that cause tooth decay and obesity—not to mention malnutrition because we're missing the fiber and vitamins that were in the original fruits.

So we got ourselves into a novel evolutionary environment by breaking that link between the proximate payoff of eating good-tasting things and the ultimate payoff of good health and successful reproduction. But even if we perceive this, most people don't say, "OK, I don't like candy anymore."

As far as lethal conflict is concerned, the growing complexity of human societies and the growth of weapons technology have produced another novel evolutionary environment.

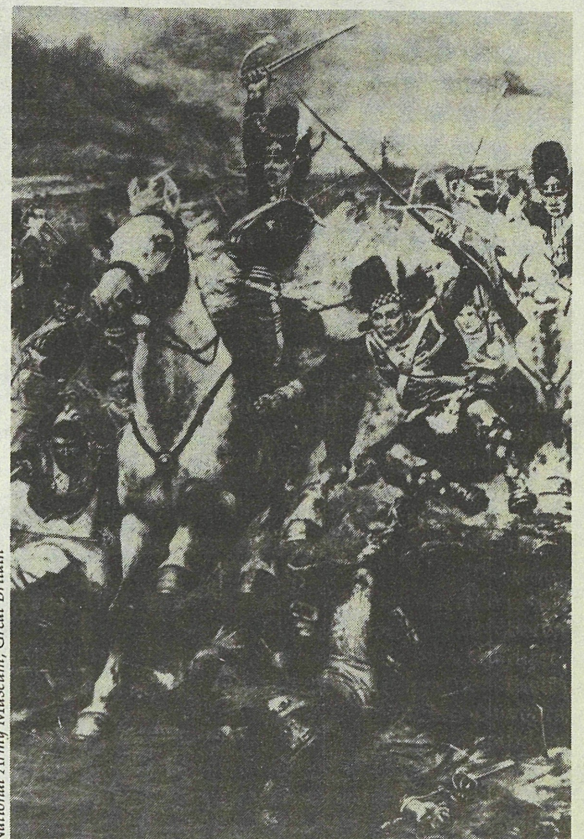
MT: Why isn't sending masses of warriors out to fight viewed as an evolved form of natural selection, with the elite now trying to preserve or enrich the state or nation rather than the tribe?

BL: It might be; we don't have the evidence. The payoffs haven't necessarily disappeared—just changed. The benefits of war are no longer directly connected to the reproductive success of those who fight. And the front-line grunt is not as likely to enjoy those benefits—the control of lands and resources obtained in modern war—as are those who play only administrative roles in wars.

MT: If reproductive advantage is no longer an issue, what forces take the place of the biological



Prussian officer and grenadier in their 18th-century 'Go Blue' uniforms. Stressing duty, service and iron discipline, the Prussians trained their officer corps from boyhood, each noble family being required to contribute one son.



National Army Museum, Great Britain

With the cry, 'Scotland forever!' the Gordon Highlanders and Scots Greys charge Napoleon's advancing army at Waterloo. They destroyed the French attack but suffered great losses.

“driving cues” behind war to motivate participants who make no financial profit from it?

BL: Those cues are not easily articulated. Everything is phrased in terms of “national need,” “national security,” “the glory of our country versus theirs”—even the notion of “peace in our time” can be held up to justify war, as it was in World War I. Except for some rebel leaders fighting wars of national liberation, modern combat soldiers may never benefit directly from their contributions to a conflict. Yet troops consent to fight in wars for which the reasons aren’t always clear. Perhaps it has to do with being a very social primate—to refuse to fight might represent a default on one’s agreement with one’s peer group.

As for those with the power to decide when and why to go to war, the reasons fall into rather limited “ecological” categories, according to studies I’ve reviewed on the causes of modern war. Most conflicts still arise over economic and territorial resources, but there is huge variation in specific causes of wars in modern times, ranging from political aspirations to misperception or distortion of information.

MT: Regardless of socioeconomic status, several modern armed forces comprise intelligent individuals who have been taught to value freedom of the will. How do their leaders maintain solidarity when soldiers ultimately question the costs-versus-benefits of their high-risk situations?

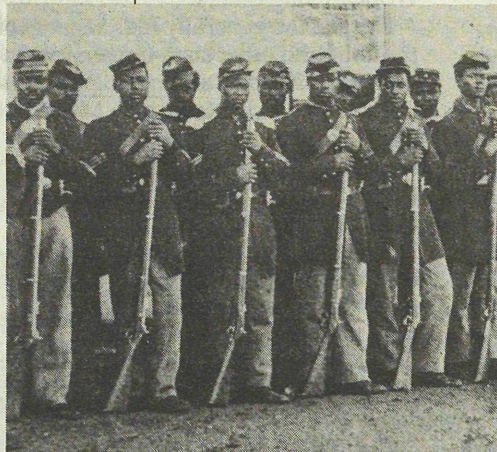
BL: Military training certainly plays on past kinship structures of warring groups. In the armed services, everyone’s hair is cut the same, they wear uniforms; sometimes they call each other by kinship terms and live together.

Shakespeare captured the essence of this strategy in Henry V’s exhortation to his men before the battle of Agincourt:

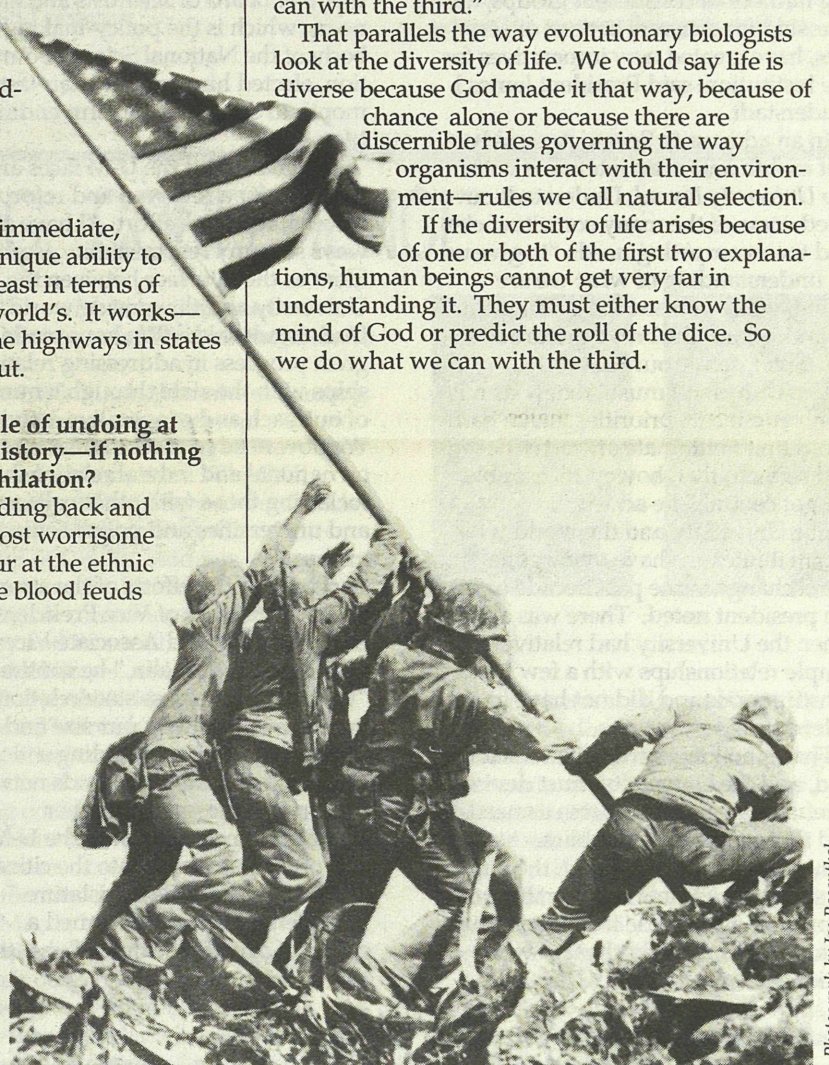
*We few, we happy few, we band of brothers;
For he today that shall shed his blood with me,
Shall be my brother; be he ne’er so vile,
This day shall gentle his condition. . .*



Napoleon knew the importance of esprit de corps; he introduced fancy uniforms for lower ranks, often pinched the ears of his soldiers during inspection, or claimed to recognize them from earlier battles.



Members of the U.S. Colored Infantry knew the benefits victory held for them in the Civil War.



Six U.S. Marines raised ‘Old Glory’ on Mount Suribachi, Iwo Jima; only three of them survived the battle begun Feb. 23, 1945. Six thousand Marines died there, but their victory, ‘means a Marine Corps for the next 500 years,’ the secretary of the Navy said.

Ex-military officer David Hackworth, who has written on U.S. military strategy in the Viet Nam war, argues that a significant portion of the combat casualties in that war resulted from failure to maintain tight, “familial” combat units. Although Hackworth’s writings are controversial, I suspect there is something to his charge that the men were not allowed to develop the reciprocity necessary for their survival in jungle warfare.

MT: We have evolved enough to be having this conversation about the evolutionary “cues” behind warmaking and how they may be outmoded. Does that make you optimistic about our species’ ability to evolve “beyond war”?

BL: No organism has evolved to forego all behaviors that offer short-term profits for the sake of long-term interests. On one hand, our finely honed social and predictive intellect helps us apply brakes to the nuclear arms race. Yet if we realize that natural selection simply works in genetically selfish ways, we see that long-term costs and benefits to groups are discounted compared with immediate, short-term costs and benefits of the individual.

Most of human history was spent in small close-knit family clusters. Even the empires that have risen had substructures that were kinship-based. We could end war, as well as solve problems like pollution, if we could just say, “All right everyone, from now on, the world is our family.” Then we would have very different perceptions about costs and benefits. The fact that we haven’t done this is telling.

That’s one important reason for looking at our evolutionary history. Our past may help us recognize why saying to our children, “The world is our family” doesn’t work immediately.

MT: What can work?

BL: I think we must play on our immediate, selfish interests, along with our unique ability to think ahead. That is, to think at least in terms of our children’s future, if not the world’s. It works—that’s why there is less litter on the highways in states with bottle bills than those without.

MT: Do you think we are capable of undoing at least some of our evolutionary history—if nothing else, out of fear of our own annihilation?

BL: It would be wonderful if holding back and negotiating became the norm. Most worrisome are the smaller conflicts that occur at the ethnic level. Those clashes—such as the blood feuds

among the Serbs and Croats, Iraqis and Kurds, the Catholics and Protestants in Ireland, the Jews and Palestinians in Israel—have prevailed throughout history. But today such subgroups are not fighting each other with clubs and stones.

Besides the new weapons technologies we’ve added more and more layers to our conflicts, placed more economic and political concerns between the individual risks and rewards. I think the growing complexity of war is our greatest danger: Killing each other hardly seems a real risk anymore. We truly are in a novel evolutionary environment.

MT: Many people have found a great deal of glory and purpose in modern war. How do you think they respond to a biological interpretation of it?

BL: There are people who view any sort of biological approach to human behavior as genetic determinism or reductionist, as overlooking the richness of detail of human existence. They say to us biologists, “You’ll reduce our notion of ourselves to being merely some smart primate.”

I like to answer them by recounting an episode from Aubrey Mennen’s retelling of the Indian epic *Ramayana*. The hero Rama has been banished by his father, and during his wanderings he meets a holy man. He asks him what three things matter most in life. “God, human folly and laughter matter most,” the sage replies. “But since the first two pass our understanding, we must do what we can with the third.”

That parallels the way evolutionary biologists look at the diversity of life. We could say life is diverse because God made it that way, because of chance alone or because there are discernible rules governing the way organisms interact with their environment—rules we call natural selection.

If the diversity of life arises because of one or both of the first two explanations, human beings cannot get very far in understanding it. They must either know the mind of God or predict the roll of the dice. So we do what we can with the third.

Photograph by Joe Rosenthal

SEEKING ALTERNATIVES TO WORLD CONFLICT



Low collected this wooden throwing club and shield while researching anything that ate grass in Northern Australia.

Photo by Gregory Fox

Rationales for group conflict “have become somewhat complicated over the millennia,” Bobbi S. Low says in calculated understatement. She discusses these complications in “An Evolutionary Perspective on Lethal Conflict,” a chapter in a book of essays, *Alternative Approaches to World Conflict*, by 13 U-M scholars. The book is being edited by U-M political scientists Harold K. Jacobson and William Zimmerman, with funding from the Carnegie Foundation,

and will probably be published by the University of Michigan Press. The essays represent an effort “to reassess the paradigms that have long governed the thinking of students of international politics,” Zimmerman writes in the introduction. The paradigms range from J. David Singer’s history-based examination of conventional wisdom—primarily American—about the prevention of war, to Donald J. Munro’s outlook through the prism of Asian philosophy.

In his analysis of wars since 1815, Singer found prompt and vigorous aid of a victim of armed attack made no difference in the likelihood that another war would follow. Neither did the “peace-through-strength” proposition bear out, he found. “Relative capabilities do little to differentiate between war and non-war distributions,” Singer concluded.

In keeping with the Confucian and Maoist approaches, the Chinese have traditionally muted conflict with a clearly defined ethic based on social roles and ritual, Munro says, and only in the post-Mao era have the Chinese challenged the idea that one social group could define reality for all others.

Other U-M contributors include:

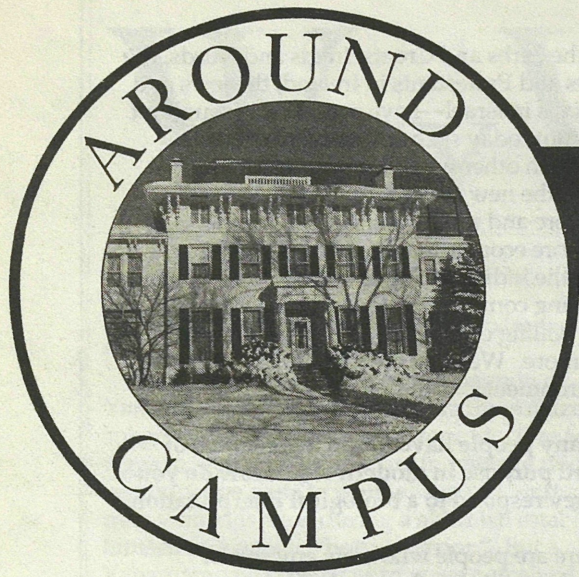
- Helen Weingarten, associate professor of social work, who presents a five-level scheme of conflicts that,

in the marital arena, can culminate in a family war of the sort caricatured in the recent film, *The War of the Roses*. Within families and among nations, a dispute can lead to conflict when the opponent is seen as “less human than oneself,” she says.

- Political scientist Donald Jay Herzog, who notions that peace is pure and clean, while war is purifying; the diplomatic corollary is that U.S. goals in a conflict must not be compromised.

- John C. Campbell, associate professor of political science, challenges the commonly accepted view of the Japanese as harmonious people who make decisions by consensus. “Institutionalized or regulated conflict,” rather than cooperation, regulates the interaction of Japanese organizations, Campbell says.

Although Low is the only biologist to contribute to the collection, her study of the origins of conflict may help explain a theme common to several papers. That is, Zimmerman points out, the realization of “how marginal the differences are between some relations between states and some relations within states. Partly this is because the most violent conflicts are often those where ethnicity and kinship are key determinants.”



STRATEGIC OUTLOOK

'New imperatives' for the University

By Jane R. Elgass

The increasing visibility and vulnerability of the University and its growing number of constituent groups, all pressing for different actions or services, have created new imperatives for the institution, said President James J. Duderstadt.

In an address to Senate Assembly last month and in an interview with the *University Record*, Duderstadt outlined some of the many constituencies and their competing needs "to give us an understanding of what we are doing, what we need to be doing, and to understand the broad picture so we can better define our roles."

The University must "renew its mission, redefine its priorities, make hard choices and eliminate any activities and services that, however desirable, are not central," he added.

The University and the world with which it interacts have undergone rapid change in the past decade or two, the president noted. There was a time when the University had relatively simple relationships with a few major constituencies and did not have to "plead its case."

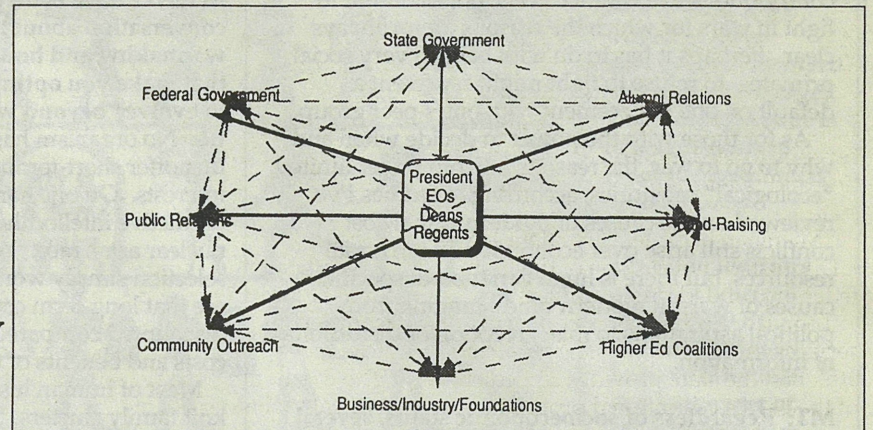
That is no longer true, Duderstadt said, and the University must devise careful strategies to address its needs and those of its many publics. At the same time, Duderstadt said, the University must assume a leadership role in presenting the case for higher education in general at both state and national levels.

Duderstadt, a nuclear engineer, has been directly involved in national activities as a member of the National Science Board since 1985. The 24-member board of scientists and engineers, which is the policy-making body of the National Science Foundation, elected him as their chair last month to complete the term ending in May.

The challenges the U-M faces are the basis for a renewed and refocused external relations effort. "I have always seen my responsibility as president as the interface between the University and the outside world," Duderstadt said. "We have made great progress in addressing relationships with the state through a number of outreach and cooperative activities. We now need to focus similar efforts on national and federal relationships, including those with other colleges and universities and policy-setting groups."

"Through the efforts of the strong and proven team of Vice President Dick Kennedy and Associate Vice President Keith Molin," he continued, "we have a first-class state relations program that reflects our size and complexity. We are building a statewide alumni and friends network to carry the message of higher education's needs for both the U-M and other state schools to the citizens of Michigan and the Legislature."

Duderstadt also has formed a group of private sector leaders—the



The University's broad external relations effort is designed to help its top executives manage the complex interactions among its diverse constituents, President Duderstadt told the University community in November.

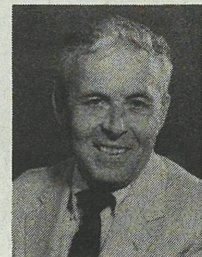
Michigan Business Higher Education Roundtable—to strategically address educational issues on a statewide basis. The group this year is focusing on K-12 education and the state's business climate.

Duderstadt is chair of the Presidents Council of State Universities. The 15-member group is working to shed differences and pursue a coordinated approach to problems faced by all the state's public universities.

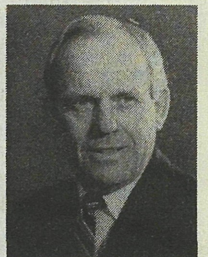
The U-M also is active in a number of communities around Michigan, with Detroit leading the list. Activities there include the reopening of the Rackham Educational Memorial Building office, and a number of intensified service projects by faculty from the Schools of Education, Public Health and Social Work, among others.

Despite the generally high regard for the U-M and other state universities in Michigan, support among taxpayers is not strong, Duderstadt said. Many people do not realize, he stated, that skimping on quality in higher education can have a negative impact on them later on.

"Many seem to put a premium on cost, the lowest possible cost for education," the president said. "Down the road that may mean that an excellent



Kennedy



Molin

heart surgeon is not available to treat a family member. Those who rally against tax increases may face the prospect of a plant closing because it did not adapt to changing technologies, many of which are created in university research programs. Our citizens need to realize that we are creating things that help them, both directly and indirectly. This is the message we have to deliver."

Duderstadt said that the University "has taken a more active role in recent years in setting the priorities of Congress and federal agencies with respect to higher education, particularly in the areas of student financial aid and research support. We now are probably the most influential educational institution in Washington. We are as well-positioned as any to effect change, but also are at risk because of our increased visibility."

Pivotal efforts at the national level, Duderstadt reported, include work on the reauthorization of the Higher Education Act with respect to a new direct student loan program "that we hope will be an important mechanism for the support of middle-income students during the 1990s."

Duderstadt also noted that the efforts of Vice President for Research William C. Kelly in supporting faculty applying for research funding have paid off dramatically: for fiscal year 1990 the U-M ranked first nationwide in externally funded research expenditures among public colleges and universities and third place overall among all educational institutions.

Efforts also are targeted at international activities. Next fall Duderstadt and other U-M leaders will travel to a number of Pacific Rim countries in an effort to develop partnerships and exchanges. A similar trip is planned for Europe.

Jane R. Elgass is executive editor of the *University Record*.

'We can't stand still or go backwards'

"The University," President Duderstadt says, "has a number of constituents whose only common link is that they expect a great deal from us. They perceive us in vastly different ways, depending on their vantage point, on their needs."

—Students and parents are concerned about the cost and quality of education.

—Business and industry seek high-quality graduates and useful research and service.

—Patients in the University's hospitals seek the best and most compassionate care.

—Federal, state and local governments have complex and varied agendas that can both sustain and constrain the institution.

"And the public itself sometimes seems to have a love-hate relationship with higher education," Duderstadt notes. "They take pride in our

quality, revel in our athletic accomplishments. They also harbor suspicions about our costs, integrity, intellectual standards, aspirations and commitments."

Over the years, Duderstadt says, society has assigned to universities a number of roles beyond the traditional triad of education, research and service: health care, economic development, cultural centers, entertainment (athletics), providers of continuing professional education, enablers of social mobility and change, participants in national security activities, explorers of space and the oceans.

The president notes that universities now are being asked to assume additional roles: revitalizing K-12 education, securing economic competitiveness, providing models for a multicultural society, rebuilding cities and preparing for internationalization.

"Our University," the president says, "has traveled a great distance in the last half century. Perhaps part of our problem is that we have taken on too much, tried to be too many things to too many people."

"I agree with those who say we must look more closely at what we do. But even as we do that, we also must accept that higher education is evolving along with society. We can anticipate and shape change, but we can't stand still or go backwards," Duderstadt says.

"We have entered a time when we must look ahead, recognize the forces of change that are at work. We cannot take our position for granted. We have definitely come to a point when we cannot passively wait for salvation from others. We must stand up for ourselves and reach out to all those who can help us on our way."

University must build 'fourth leg of support'

Two years ago, the University made history when for the first time tuition revenue exceeded the state appropriation and federal support exceeded state.

"Michigan became," President James J. Duderstadt notes, "one of the first federally funded public universities."

Today, excluding such auxiliary services as the Hospitals, housing and athletics, the state provides 25 percent of the U-M's educational programs resource base. Tuition and fees account for 30 percent, federal support for 30 percent, and private support and endowment income for 15 percent.

Students and their families are unable to absorb much more in the way of tuition increases, Duderstadt says. "The likelihood of increased federal funding is at risk and carries new restrictions," he notes. The erosion of state support is not likely to be arrested in the near future. The University, therefore, will have to look to building its "fourth leg of support—private gifts—to a level comparable to our other sources of support."

"It has become essential," the president says, "that we raise private funding on a scale unprecedented for a public institution."

The University has set a goal of doubling the amount of annual gifts from \$95 million per year to \$200 million per year by 2000, and building the endowment from \$500 million to \$2 billion.

The University also is "aggressively pursuing very difficult reforms—reducing costs and improving productivity, efficiency and service orientation, and is implementing a massive 'total quality management' program" (see accompanying story).

U-M embarks on quality effort

This fall the University formally embarked on a quality-management effort based upon the Total Quality Management concept developed by W. Edwards Deming, the American innovator who guided Japan's modern industrial boom.

One of the U-M's first steps was the appointment of a Quality Council and a Design Team by Provost Gilbert R. Whitaker Jr. and Farris W. Womack, vice president and chief financial officer.

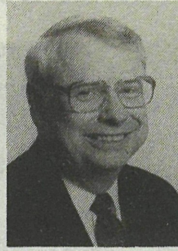
Whitaker and Womack note that "a quality approach will be an important component of the University's ability to achieve its goals in the next decade. The role of the Quality Council will be critical to the success of that effort."

The 20-member Quality Council, a policy group, will provide the guidance, direction and resources necessary for the development and implementation of a quality approach at the University.

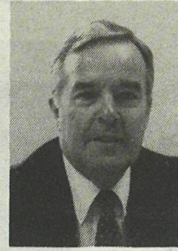
The 16-member Design Team will draft the specific U-M approach—a road map for units to adjust to their own needs. While quality management is becoming common in industry, it is, for the most part, untried in universities. The Design Team will be responsible for creating a quality management style tailored to the special needs and goals of an educational institution, particularly in terms of establishing a common vocabulary with which all members of the University community can be comfortable.

Qualtec, a subsidiary of Florida Light and Power, provided initial guidance in formulating the University's quality approach, including a four-day training session for the Design Team.

Whitaker notes that the quality effort is the "first organized training effort for the entire University community. It will affect all employees across the board and that, in itself, has great value for the University. We feel it also will be valuable for our employees themselves."



Whitaker



Womack

Several quality approach projects already are under way. They will continue their programs and eventually become part of the Universitywide effort. A quality approach at U-M Hospitals has been operating for three years. The Information Technology Division has a year-old effort, and one has been active in the College of Engineering for the last eight months.

The Design Team has completed the following first-draft "mission" and "vision" statements to provide a foundation for quality approaches around campus:

Mission: To serve the people of Michigan and the world through pre-eminence in creating, communicating, preserving and applying knowledge and academic values, and in developing leaders and citizens who challenge the present and enrich the future.

Vision:

—To be a source of pride for the people of Michigan.

—To have a place in the dreams of every potential student and faculty member.

—To have a place in the heart of every member of the University community.

—To have an international image as a community that honors human diversity—and a reality to match the image.

—To be a community of scholars in which ideas are challenged but people are welcomed and nurtured.

—To be the employer of choice.

—To be a campus that is an ideal learning environment for faculty, students and staff; an ideal workplace for non-teaching staff; and a campus in which the responsibility of staff for

P.C. CONFERENCE

By Peter Seidman
U-M News and Information Service

Two Michigan alumni were among the scholars, journalists and students who gathered at Michigan Nov. 15-17 for a conference titled "The P.C. Frameup: What's Behind the Attack."

The conference, organized by a group of faculty, students and campus ministers, was intended to address the "political correctness" (P.C.) controversy and its social, cultural and political issues, and throughout the weekend, these issues were hotly debated before several large audiences.

Political correctness is widely perceived as a sort of mandatory left-wing conformity that critics say threatens to shut off open debate on campuses across the nation. But conformity, according to Todd Gitlin '65 MA, is "always the rage." So why, he asked, has the anti-P.C. movement arisen now? Gitlin thinks it has a lot to do with the end of the Cold War.

"Americans have never been clear about their identity," said the professor of sociology at the University of California, Berkeley, and author of *The Whole World is Watching*, an examination of 1960s radicalism. "For half a century, they solved the problem with the Cold War. The Cold War told us who we were not."

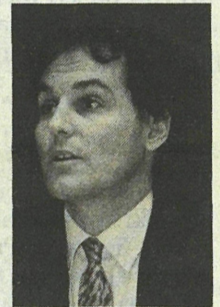
"Since 1986 we've gone through a sequence of enemies—anti-terrorism, Noriega, the drug crisis, Saddam Hussein—that seem to come from nowhere; they have been deserving of general loathing, but seem to automatically surge into popular consciousness."

Leftist campus reformers, derisively labeled and dismissed as "politically correct," are the latest in this string of enemies, Gitlin argued during a panel discussion on the media's role in fostering the perception of a P.C. crisis on campuses. Universities, filled with the "high falutin'" types reporters like to deflate, are "fair game," Gitlin said.

Gitlin questioned, however, the accuracy and efficacy of blaming white males for every national woe linked with race, class and sexuality. If white



Gitlin



Lee

males are [seen as] the problem," he said, "then I don't see anything but catastrophe ahead of us." Targeting white males, he added, is a call for "semi-genocide."

"The amazing truth of American political culture of the last 20 years," Gitlin said, "is that the right owns the White House while the left is fighting over the English department."

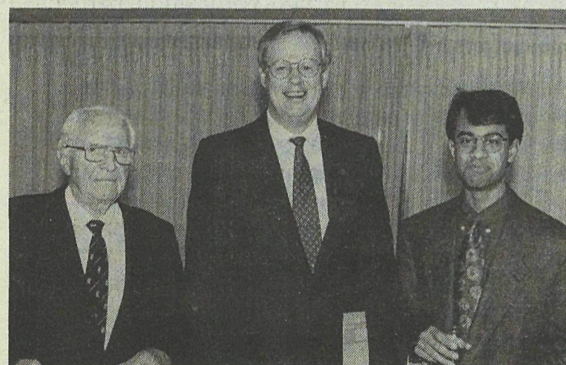
According to another alumnus on the panel, Martin Lee '75, the real source of censorship in national political debate is neither campus reformers nor political correctness, but "media correctness," which imposes stricter limits on public discourse.

"It was not 'media correct' to have opponents of the Gulf War on television. It is not 'media correct' to have African Americans on the 'MacNeil Lehrer News Hour' or 'Nightline,'" said Lee, a founder of Fairness and Accuracy in the Media (FAIR), a New York-based group that critiques the news media from a left perspective in its newsletter *Extra*.

"Media folks exercise the only P.C. that matters in this country," Lee continued, "and that P.C. is political clout."

"We hope that people came away realizing that this is not a dualistic issue with only a right and a left, but that there are multiple ways of looking at a problem," said Richard A. Campbell, assistant professor of communication and a conference organizer. "We hope that the conference complicated the issue and we think it did."

Culture a two-way street, says '91 Power Scholar



Power, Duderstadt and Agnani

Photo by Bob Kaimbach

Agnani, of Libertyville, Illinois, studied both Greek and Sanskrit at the U-M, before studying English literature. He is completing an honors thesis on Plato's *Symposium* and Shakespeare's *A Midsummer Night's Dream*, and he plans to continue work involving modern and ancient literatures at Cambridge.

The Power Exchange Scholarships were established in 1968 by the Power Foundation of Ann Arbor. Two scholarships are awarded annually, for one U-M graduate to go to Cambridge and for one Cambridge graduate to study at U-M. The scholarship provides all expenses a student will incur, including travel.

Eugene B. Power (K.B.E., hon.), president of the foundation, is a former U-M Regent and an honorary fellow of Magdalene College, Cambridge. President James J. Duderstadt, past winners of the Power Scholarship and trustees of the Power Foundation attended the announcement of this year's award last month in Power's office in Ann Arbor.

"It is because I intend to be an academic of a particular kind, one who works between cultures as much as within a culture, that my study at Cambridge would have a vital impact on the future direction of my intellectual activity," said Sunil M. Agnani '90, upon receiving a Power Exchange Scholarship for two years of study beginning next fall at Cambridge University in England.

A comparative literature major in LSA's Residential College, Agnani said, "The notion of multiculturalism may be recent, but all traditions have always interacted with other traditions. Cultural flow is a two-way street, and each tradition incorporates aspects of others."

Lots of fascinating facts are on very old paper, such as why it's wise to feed pearls to chickens

IN TOUCH WITH ANTIQUITY

By Laurie Fenlason

In 1983, three senior scientists at Bell Labs were charged with improving the company's fiberoptic cable network of transatlantic phone lines, pioneered in the late 1960s. The trio decided to attack the problem along a line so unconventional that it took them out of their laboratories and to the door papyrologist Ann Hanson '57.

Hanson, who has a master's degree in ancient history from the U-M and a PhD in classics from the University of Pennsylvania, recalls the scientists' unusual request. They wanted to explore some ancient scientific investigations that hadn't been pursued since the Renaissance, so they asked her to translate Greek alchemical treatises that combined "spooky stuff" with the kind of material expected in a trade manual. The texts were copied on papyrus toward the end of antiquity, although their origins reach back as early as 250 BC.

The modern scientists were looking for a formulation that might sustain an electrical current for longer distances, and their curiosity had been piqued by "various transformations of glass that had been done in antiquity—what we would now call alchemy," Hanson says.

Although Hanson's translations produced little in the way of useful formulas for altering glass, over the two years of her collaboration the group became well-versed in the production of phony gemstones, gold plating and the best way to enhance the milkiness of a pearl: feed it to a chicken.

Hanson, former associate professor of Greek and Latin at Fordham University and visiting member of the U-M Department of Classical Studies in 1989-90, says the project was typical of the pleasures of her field. "What's fun about papyrology is it gives you a direct touch with antiquity. It's like listening to one side of a telephone conversation. It brings out the voyeur in all of us."

As an example of papyrological fun, Hanson cites her first publication, assigned to her as a senior by Prof. Herbert C. Youtie, one of the foremost figures in the field from the late 1930s.

"The first thing Professor Youtie gave me turned out to be a petition from a man to the chief of police in his village more than 1,800 years ago." The letter said:

I want you to know this ahead of time. I'm afraid the situation may become dangerous. My next door neighbor, who has grown old, frequently digs through [our common wall] and I find him in my house when we get home.

While Hanson's papyrological expertise has led her all over the globe, she often returns to the U-M papyrus collection, which she calls "the mother lode"; it is the largest collection of such documents in the Western hemisphere and one of the most prized in the world.

Established largely through the efforts of U-M philologist Francis G. Kelsey in the 1920s, the collection numbers more than 7,000 inventory items, the earliest dating from around 300 BC.

Michigan has long been a leading publisher of papyrological documents; nevertheless, a large portion of the collection remains unpublished, providing fertile ground for aspiring and established scholars.

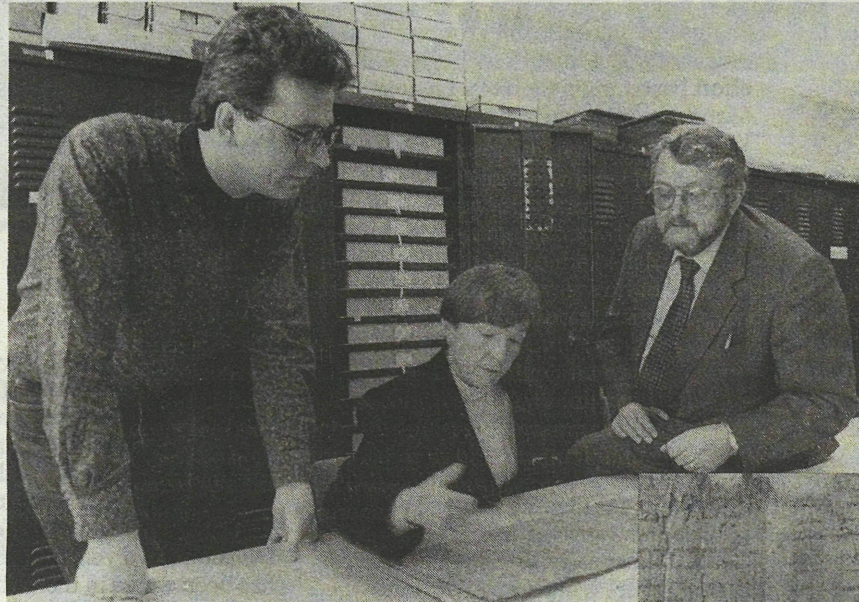
Hanson is currently preparing for publication one of the larger archives in the collection—200 tax documents from the village of Philadelphia in what is now the Fayum district of Egypt. The material dates from 29-66 AD, during the reigns of Roman emperors Tiberius, Caligula, Claudius and Nero.

"It's the earliest look we get at how the Romans were taxing the provinces," Hanson says. "I've worked with this archive so long, I can tell you by name who's a good credit risk and who's not."

While Hanson is concerned primarily with documentary papyri like tax rolls and census records, the collection also contains a number of literary papyri, one of which is currently under publication by Ludwig Koenen, the Herbert C. Youtie Professor of Papyrology and chairman of the Department of Classical Studies.

The new papyrus contains some 40 lines of a once-famous play by Euripides in which the hero, Kresphontes, separated from his mother at birth, returns to take revenge upon his uncle Polyphontes. Polyphontes had killed Kresphontes' father and two older brothers some 20 years earlier and claimed Kresphontes' mother, Merope, as his wife.

"We had narrative of the Kresphontes myth in other sources and an account of the content of the play, but the text itself was totally lost except for 11 small fragments known from other papyri and



Traianos Gagos of Greece (l) discusses with Hanson and Koenen a tax roll from the ancient Egyptian village of Philadelphia, dating from 50-51 AD. The document contains notes by the local tax collector of changes in citizens' tax status.

Photo by Bob Kaimbaert

quotations in other literature," Koenen says. The Michigan Kresphontes fragment contains the entrance song sung by a chorus of old men:

Aiai! Woe! Oh, old men, come here bearing the ancient weight of your knees, your long-lived limbs! Strike your staves against the ground!

Their song blends with the off-stage mourning song of Merope. In it, she compares herself to Prokne, the daughter of Pandion, famous for her wailing. When Prokne's sister was raped by Prokne's husband, Tereus, the sisters took bloody revenge. They killed Prokne's son, Itys, cooked him and offered his flesh to Tereus to eat. When Tereus discovered the crime, he tried to capture the two women, but they were changed into birds before he could reach them:

Chorus: Alas! Alas! Oh, old age!

Merope: Oh, unhappy daughter of Pandion, flying around in dishonor and singing shrill songs in crazed love of melody with a modulated voice, out of your mind, separated from your son, whom you bewail with longing, sigh now(?) the dreadful cry, "Itys!"

The new lines were recovered in the 1980s on a papyrus that had been used to wrap the head of a mummy preserved in the third century BC. Conservators in Vienna soaked the layers of scraps and glue in hot water to separate the literary fragments from other layers containing tax receipts and loan contracts, a painstaking process that often reduces legibility.

A 1973 UNESCO resolution prohibits the removal of artifacts from the countries in which they are unearthed, but papyrologists continue to discover new papyrological material—such as the Michigan Kresphontes fragment—as they restore the wrappings of mummies exported before 1973.

To interpret these documents today, a papyrologist must piece together jigsaw-puzzle pieces of faded paper written in different handwriting, rendered in often arbitrary spellings, and documenting unfamiliar laws and customs of 2,000 years ago.

"Papyrology, strictly, is deciphering and creating the first transcript," Koenen says. "But in practice it's a circular process: You read what you can, develop theories, try to figure out details, then try to read some more. It can be like climbing a mountain. You come to a certain point and then there's just no way you can go any farther. Someone else must break the trail beyond."

One result of the need for collaboration is the intense collegiality that scholars of the first generation early in this century dubbed the *amicita papyrologorum*, or friendship of the papyrologists.

"From then on, it's almost been forbidden to write a nasty review of a colleague's work," Koenen confides. "If you have to reject someone's conclusions, you don't mention a name. You just direct your criticisms at 'the editor.'"

Pondering the future of papyrology, Koenen foresees a shift from concentration on Greek material, much of which has been published, toward Demotic (a script employed in the Egyptian language), Coptic and Arabic.

"By focusing on the Hellenistic and Roman pieces

An ancient tax roll. Even most persons who can read ancient Greek can't decipher papyri, Koenen notes. "Take scholars of English literature," he suggests, "and confront them with this year's tax laws and records, and you would see the difficulties we face."

in our collections, we've gotten only part of the story," Koenen explains. "Our information is biased and needs to be corrected by information in the other languages that deal with the same facts from another point of view.

"Moreover, as scholars decipher and publish papyri from a more comprehensive slice of the ancient world, they will provide other scholars with the hard data to develop a model for other ancient cultures. This information will allow them to examine social issues in other civilizations from which fewer data survived."

Laurie Fenlason is the U-M's national information officer in Washington, D.C.

The Arid Sands Of Egypt And Time

Unless they have been carbonized in a fire, most of the documents in papyrus collections are still fairly flexible and can be handled without damaging them. To extend the life of the Michigan collection, U-M conservators apply techniques borrowed from paper or manuscript preservation.

With funding from the Hewlett Packard Corporation, the U-M hosts visiting scholars who are building a computer data base of all papyrological documents published so far. The data bank will make Greek papyri computer-readable and instantly accessible to scholars.

Many of the most important papyri in the U-M collection are mounted between sheets of glass, allowing scholars access to the writings on both sides of the fragment. Efforts are under way to transfer the remainder of the collection to acid-free storage folders. Most important is protection against sharp fluctuations in temperature and humidity.

It's difficult to predict what ideal conditions would be for papyri, says Carla J. Montori, director of the University Library's preservation office. "These things were buried for centuries in the arid sands of Egypt and have only been brought to light, literally, in this century. We don't know how long they're going to last in their current environment. The climate of Michigan is nothing like the climate of Egypt, so it's hard to say."

By Jane Myers

For nearly all of his long and productive 87 years, Obert C. Tanner has lived and worked not far from his birthplace in Farmington, Utah.

But Tanner's love for the free exchange of ideas has made his name, if not a household word, a "campus word" at the universities where his gifts support lectures by leading thinkers. In addition to Michigan, these institutions include Harvard, Princeton, Stanford, Yale, the University of California and the University of Utah, as well as Cambridge and Oxford in England.

The Tanner Lecture on Human Values, held each year at the U-M under the auspices of the Department of Philosophy, has brought to campus such figures as the recent Nobel laureate Nadine Gordimer, Pulitzer-Prize-winning novelist Toni Morrison, psychologist Robert Coles and a long list of philosophers, economists and others (see sidebar).

The selection of the Tanner Lecturer is handled differently at different schools, but at Michigan the choice is strongly felt to be, as Stephen Darwall, chairman of the Department of Philosophy, puts it, "a responsibility of the University community at large" because the lectures "have proven to be an inestimable enhancement to the University's intellectual life for students and faculty alike."

Next year's Tanner lecturer, Israeli novelist Amos Oz, is active in the peace movement in Israel. Oz has gained special praise for his 1991 exploration of female character in the novel, *To Know a Woman*.

Obert Tanner himself was a professor of philosophy at the University of Utah for nearly 30 years, having earlier served as an instructor in religious studies and as acting chaplain at Stanford University. At the same time he ran O.C. Tanner Company, which he founded in 1927 and still heads, and which today has annual sales of \$150 million. The firm provides service emblems and jewelry for 12,000 corporate customers and employing 2,000 people.

In a 1988 article written for the *Deseret News* in Salt Lake City on the occasion of Tanner's receiving a National Medal of Arts, his colleague Prof. Sterling McMurrin commented on Tanner's unusual combination of both business and academic careers.

"Not since the father of Greek philosophy, Thales, who in the sixth century BC managed to corner the wine industry in the Eastern Mediterranean, has a philosopher pulled off such a coup," McMurrin said. "At the university he was Obert Tanner the champion of academic freedom; downtown he was O.C. Tanner the manufacturing jeweler. Many of his colleagues and students were not aware that Obert and O.C. were one and the same person."

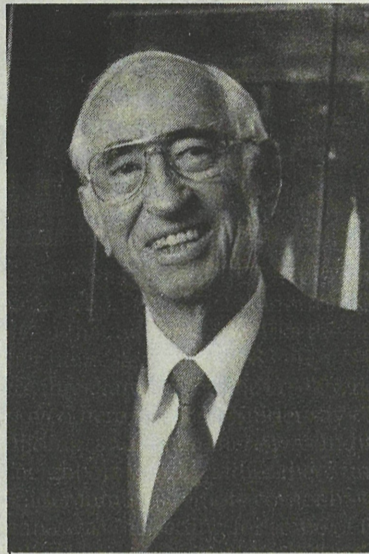
Tanner's daughter, Carolyn Tanner Irish '62, an Episcopal priest in Washington, D.C., says her father "combines an interesting quality of shyness with an amazing self confidence; he has never doubted that he could do what he set out to do. He's a very positive, a very optimistic kind of person. When he gets an idea he likes to see it through."

The Rev. Irish, who earned her U-M degree in philosophy, is also a graduate of the Virginia Theological Seminary and Oxford University. She returned to the Ann Arbor area to serve as vicar of the Church of the Holy Cross in Saline from 1985-88. The fact that her family is part of the Mormon tradition while she has become an Episcopalian might be problematic in some families, but not the Tanners. "My parents are very supportive and ecumenical," she says. "I hope I have inherited that openness in my own life and ministry."

The Tanners' generosity grew out of a desire to honor the memory of a son, then 10 and one of six children in the family, who died when Tanner was at

The Tanner Behind the Lecture

It took 26 centuries before another philosopher could match Thales in business acumen



Tanner

Stanford. "Stanford University is a memorial to the son the Stanfords lost," the Rev. Irish notes, "and I think that may have helped my parents see that, within the context of their loss, they could create something of enduring value for others."

The Rev. Irish, who was present when Tanner Lecturers Carol Gilligan and Toni Morrison delivered their addresses to full-house audiences at Rackham Auditorium, says her father would have enjoyed hearing the difficult debate of important ideas on those occasions. "Lots of times when you're talking about values, you're talking about pain," she says.

"A real engagement of values can't be quiet, it can't be non-controversial. My father has always felt that a university campus was a good place for exploration and challenge. It's that wrestling he most values."

Among his many generous gifts to others, the Tanner Lectures, especially, she says, have "given him a lot of joy." Although he's no longer physically strong, he still cannot resist the lure of ideas. This year when the University of California presented Tanner Lectures at Berkeley and Los Angeles, bringing the presidents of Germany and Czechoslovakia, respectively, to speak, Tanner couldn't stay away. "This 87-year-old man got on a plane and went to both of them," she says.

The Tanner Lecturers at Michigan 1977-1992:

1977: JOEL FEINBERG — Social and political philosopher from the University of Arizona

1978: SIR KARL POPPER — Philosopher of science, perhaps best known for his work on scientific theory, especially the idea that scientific theories are never verified, but only survive attempts at proving them false.

1979: EDWARD O. WILSON — One of the pioneers of sociobiology, which seeks evolutionary explanations of some social phenomena.

1980: ROBERT COLES — Educator noted for his work with children, especially their moral and spiritual development.

1981: JOHN RAWLS — Philosopher of morals and politics.

1982: THOMAS C. SCHELLING — Economist whose ideas on the strategy of conflict have cast new light on strategic interaction in economic and political contexts.

1983: HERBERT A. SIMON — Winner of the Nobel Prize in economics in 1978, known for his work on the decision-making process within economic organizations.

1984: NADINE GORDIMER — South African novelist who has explored apartheid.

1985: CLIFFORD GEERTZ — Anthropologist who has created a greater appreciation for the way rituals express and confirm shared values and understandings.

1986: DANIEL C. DENNETT — Philosopher best known for his work at the boundaries of brain science, cognitive psychology, artificial intelligence and philosophy.

1987: ALBERT O. HIRSCHMAN — Economist whose work has spanned the history of economic thought, economic development (especially in Latin America) and organizational theory.

1988: TONI MORRISON — Author of several highly lauded novels incorporating the African American experience in the United States.

1989: CAROL GILLIGAN — Psychologist who has written extensively on how the issues of justice and care characterize the relationships of many women, both personal and professional.

1990: RICHARD RORTY — Modern pragmatist in the tradition of American philosophers who stress the social and cultural bases of thought and meaning.

1991: CHRISTOPHER HILL — Historian of 17th-century England who has helped shed light on the roots of modern liberal democracy in the political experience of the English Civil War.

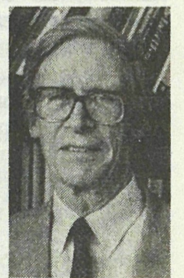
Lectures from 1980 on are available in annual bound volumes (\$32 each) from the University of Utah Press, 101 University Services Building, University of Utah, Salt Lake City 84112. For information, call (801) 581-6771.



Wilson



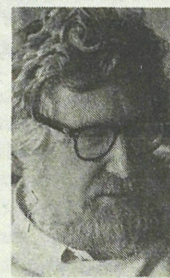
Coles



Rawls



Schelling



Geertz



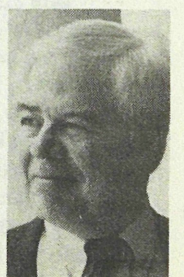
Morrison



Hirschman

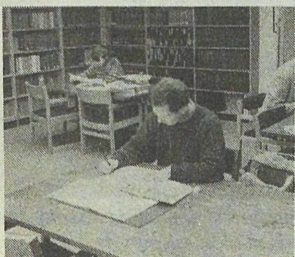


Gilligan



Rorty

Michigan's Involvement



The Tanner Philosophy Library in Angell Hall.

The University of Michigan was one of the six institutions at which the Tanner Lectureships were first endowed in July 1978, when U-M President Robben W. Fleming, Derek C. Bok, the president of Harvard, and Richard W. Lyman, president of Stanford, served on the initial

advisory commission. Sally Fleming was named a consultant along with Obert C. Tanner's wife, Grace Adams Tanner, and several others. Currently President James J. Duderstadt is a trustee, and Anne Duderstadt is a consultant.

In addition to the lectures, the Tanner name is also attached to a dozen libraries and reading rooms on U.S. and British university campuses including Michigan. In 1970, Tanner endowed Michigan's Tanner Philosophy Library with funds to pay for books and periodicals, and it now houses 3,200 books, 1,800 volumes of bound journals and 300 departmental dissertations, along with a collection of reference works. The library provides convenient access to course materials and a means of introducing both undergraduate and graduate students to research materials.

Prof. Stephen Darwall, chairman of the Department of Philosophy, says the library on the first floor of Angell Hall "is always a beehive of activity. I find students and faculty hard at work there at all hours."

CHAMPIONS OF THE WEST

Sam Walker '92, an English and creative writing major, came to *Michigan Today's* offices last spring with a proposal. He had compiled the following statistics about U-M graduates with the aid of Barbara Gomez, a computer systems consultant in U-M's Office of Development:

- U-M graduates are 350,000 strong—the largest and most widespread alumni/alumnae group from any institution of higher education on the planet.

- The University has addresses for approximately 305,000 degree holders (all of whom, by the way, should receive this publication), but the whereabouts of at least another 40,000 are unknown.

- U-M grads live in all 50 states and in 141 foreign countries, from Alabama (where there are 796) to Wyoming (193), from Afghanistan (10) to Zimbabwe (12). (Alumni totals are as of August 1990.)

- Most U-M grads (70 percent) live in Michigan (124,506), California (23,015), New York (14,102), Illinois (13,749), Ohio (11,407) and Florida (9,057).

What about Michigan grads who live far from the madding crowd, Walker asked. Had *Michigan Today* ever contacted any of them?

No, we hadn't, and besides, how could we reach them? "I'll visit them," replied Walker,

who had interned with *The Atlanta Journal and Constitution* in the summer of 1990. He explained that he had won the \$1,000 Arthur Miller Award in Creative Writing in spring '91, and wanted to spend part of his prize touring the Western boondocks. So why not interview Michigan alumni and alumnae along the way?

The idea seemed fine, but probably beyond the energies of even a veteran solo journalist. But what harm in urging Walker to go ahead? He began by sitting down with Gomez, who identified rural Zip Codes on our mailing list. Walker began contacting graduates in those areas and came up with 10 willing graduates west of the Mississippi, each living more than an hour from any place that could be considered urban. Taken together, their home states—North Dakota, Oregon, Montana, Arizona, New Mexico, Colorado and Louisiana—contain less than 4 percent of Michigan's living alumni and alumnae.

As he was drawing his route on a map, Walker was struck by the "massive empty spaces—the gaps between towns and highways that jog the imagination." But to the West he went like the pioneers, and like the contemporary Americans who have followed them into the remote quiet of the shrinking wilderness. From July 5 to August 23, he drove more than 12,000 miles in his Ford Bronco, meeting the individuals he introduces you to in the profiles that follow, each of whom gives new meaning to the words of our fight song, "the Champions of the West."

Walker

LINDA COOKE '61 Belle River, Louisiana

After graduating with a teacher's certificate, Linda Cooke taught third grade in Lansing for three years, married her husband, Pete, and had a daughter. Then their life on the Mississippi started.

"We decided we wanted to do something different," Cooke recalls. "I guess it was a whim as much as anything. We both liked adventure and had been getting ourselves into boats through books. We bought an old houseboat in 1965, and launched it on the Ohio River at Cincinnati. We planned to go down the Mississippi and follow the Gulf Coast to the Yucatan Peninsula, and then come back. But we learned that the people we sublet our apartment to took everything we owned and split, so we had nothing to go back to."

The Cookes drifted down the Mississippi for two months. "Our daughter was getting bigger," Cooke recalls, "and we were getting crowded, so we detoured to Simmesport, Louisiana, where there were locks that led into the Atchafalaya Basin. We found a place in the basin with solid ground."

The Atchafalaya Basin is a 500,000-acre swamp stretching from Simmesport to the Gulf of Mexico; it also is the flood basin for the Mississippi. "When the snow melts up north and the Mississippi gets too full, they open the locks at Simmesport and divert water into the basin," Cooke says. The diversion dumps rich sediment into the basin, turning it into a zone of fertility. "Everything grows like crazy here. We decided the area was really neat and gave ourselves a year to figure out how to support ourselves. If we couldn't, we'd go back to Michigan."

After selecting their solid ground, the Cookes lived in a tent for three months while they built a 12-foot by 12-foot floating camp boat out of scrap wood. "We lived in that for a couple of years, then built a larger camp boat out of a 25-foot cypress barge." The Cookes went everywhere by boat, to the library 16 miles away, to grocery stores. They had no regular income, and their houseboat had no utilities other than temporary electrical hook-ups they fashioned. They lived off the land by fishing, hunting, trapping and foraging.

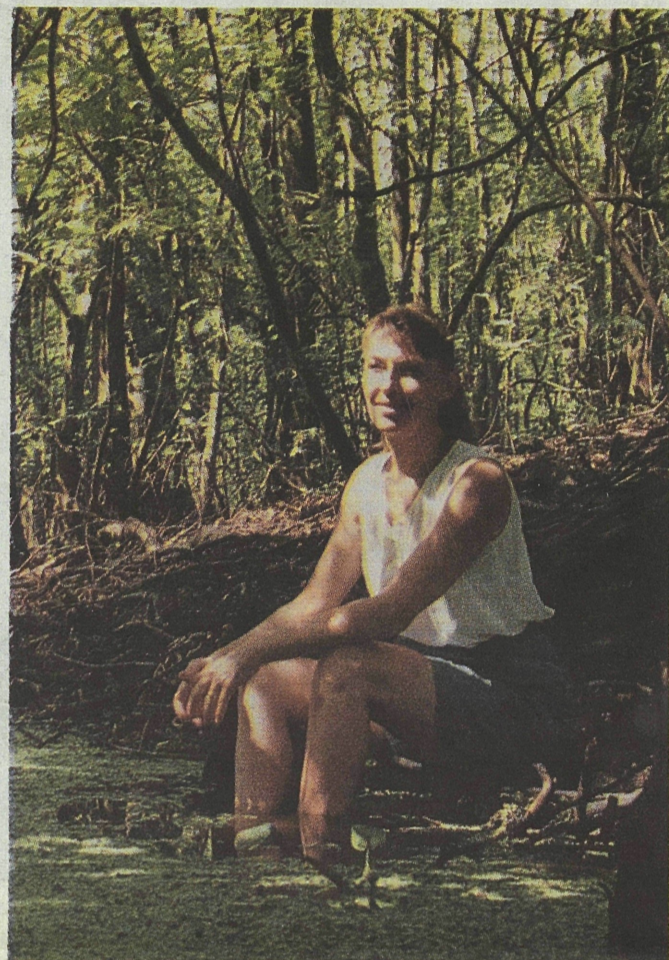
At first their life was comic, Cooke says. "We shot fish. That was the only way we could eat. People thought we were crazy. We ate anything we could catch. Owls, nutria rats, birds, armadillos, we ate them all. We ate our first catches without skinning them. Little by little we got to be more successful at catching things. For income, we trapped fur-bearing animals. If we made \$2 a day, we were doing well."

The most exciting and lucrative time in the bayou, according to Cooke, is February to May, the crawfish season. "The town is bustling with organizing, arguing and speculation. When the water comes up, the whole basin is filled. It's hot, sticky, smelly, messy, wonderful. We make what look like cages with a funnel. The crawfish enter for the bait and can't get out. We set 500 traps around and run them seven days a week. We spend \$200 a day on gas and bait to catch \$400 worth of crawfish."

For crawfishing Cooke uses a small, lightweight, flat-bottom boat called a pirogue. "Usually you stand up and push-pole. Sometimes you walk or crawl. I like fishing by myself. Snakes and alligators don't bother me. The mosquitoes eat you alive."

The Cookes' two daughters have grown up in the swamp without nice clothes "but with full-time parents. Our older daughter was raised totally isolated from other children until she was 6. I think she had a great time, but when she was ready for kindergarten, we moved out of the basin so she would be around other children."

After the Cookes built a house in Belle River, Linda took a job at the middle school in Pierre Part. "I've taught on and off for 19 years. I teach for a year, then spend one or two at home." Most other residents of the basin are Cajuns, who "would go to school until crawfish season, when they can make \$400 a day fishing with their fathers, so why go to school? The first year I taught here there were 20 teachers and maybe only two had degrees, and children rarely went beyond 6th grade. I'd never met anyone who didn't know how to read or write until I got here. It's improving, though."



Outdoorswoman-schoolteacher Cooke in Louisiana bayou country, where she and her family lived on a homemade boat for six years.

When she's not teaching, Cooke continues "to crawfish in the bayou and shrimp in the Gulf. When the fur business was better, I've skinned hides. I like to fish, hunt and teach school. Sometimes it doesn't seem like I had to go to college to do this."

Cooke says pollution is spoiling the Atchafalaya Basin. "We've been here 25 years, and this is a perfect example of a place that was overflowing with life and is now being ruined. The spillover basin is filled with oil-producing wells. We get pollution from gas, from petrochemicals and from people. Some land is owned by large lumber companies. Everybody here assumed we'd never run out of mink or otter, but now there aren't enough animals to go around."

In addition to the pollution and the hot and humid summers, the other drawback to living in the bayou, Cooke says, is a lack of cultural activities. "I'm a classical music fan, and I haven't been to a live concert in years. I miss bookstores. Thank goodness for public libraries."

This year, Linda and Pete are working full-time so Linda can retire from teaching as soon as possible. "We can live very inexpensively. We own everything we have, owe nobody, the house is paid for. We're hoping to buy a 60-foot boat and live and shrimp on it."

"There might be some things I wouldn't try," Cooke reflects, "but I don't know what. My nieces and nephews have always seen me as a hippie, as rebellious, when I'm the most ordinary person around. I have old-fashioned values. I have not the slightest notion of rebellion. Whether Pete and I are foolish, ignorant, brave, whatever, I don't know. We're just incurable adventurers, I guess."

LINDA AUSTGEN '86 Dinnebito, Arizona

Ten miles down a rough desert road in northern Arizona, time and technology disappear among ancient earthen hogans, rocky cliffs and the small cluster of dusty buildings that make up the Rocky Ridge Boarding School on this Navajo reservation.

Linda Austgen, a sixth-grade teacher at the school, finds backwardness and isolation to be her biggest professional challenges. "It's been just two years since electricity's been available out here for the Navajos," says Austgen, who received her B.A. in education. "Few families have it; none has running water. They must haul their water in trucks or on their backs."

The school's primary goal, Austgen says, is to develop Navajo leaders for the next century. "Most of them come from sheepherding families. Their first language is Navajo. It's hard for the kids when they've never seen an elevator or an escalator or a mall. When I came out here, I was talking about beaches one day. These kids had no idea what a beach is. Many have never been off the reservation."

The reservation school has 220 students in kindergarten through eighth grade. Half board and half are bused. Austgen teaches social studies and has created a gifted program. "I spent last summer at Northern Arizona University getting my master's in how to identify and teach minority and gifted children, specifically Navajo," she says. "I've identified 20 kids as gifted in one area or another. We do quite a bit with computers, and we've been teaching the basics of the German language because another teacher knows German. Our aim is to get the kids thinking in non-traditional ways, thinking creatively to solve their problems, with an emphasis on leadership skills."

"There is such a need for Navajo leaders in education, business, science—any sort of leadership positions—on the whole reservation. We have a young man now at West Point. Another young man just graduated from MIT. About a dozen kids a year go to Northern Arizona in Flagstaff. It's a definite conflict for them to have all that knowledge while trying to keep the traditional ways of the family—to keep their language going

while they also learn technical language."

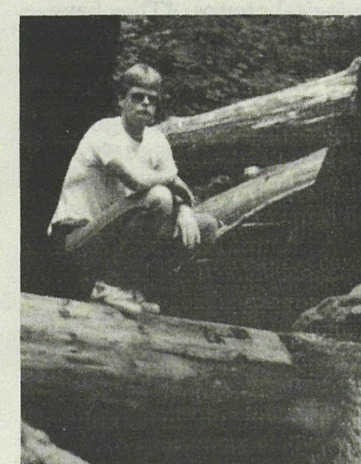
Austgen grew up in Spring Lake, Michigan. She married right after high school and had three children. "By 1983 my children were grown, and it was time I went to school." A discovery of her own roots spurred Austgen's interest in Native American culture. "I found out after my father died that his mother was a Cherokee. That had been suppressed in the family. It was something to be ashamed of. They passed her off as an Anglo with a good tan. I resolved to find out as much about her and her family as I could."

"At Michigan I was involved in the Native American Student Association. I became acquainted with Native students, faculty and staff. After graduation, I substitute taught for two years, then Dr. Edwin J. McClelland from the School of Education, who was a Choctaw, said to me one day, 'Linda, I think you'd really enjoy teaching Navajo kids.' I applied to the Bureau of Indian Affairs, and they sent me to Rocky Ridge. I miss my family, but I've never been upset by being alone; it's perfectly okay with me. I've seen a number of teachers come and go, sometimes in a matter of days—sometimes in hours."



Reservation teacher Austgen stands at the gate of Rocky Ridge Boarding School, where she teaches sixth-graders.

CHIP BRITTING '75 Blue River, Oregon



Britting stands atop a 'trash rack,' a structure designed to protect streams and fish by catching debris from timber cutting that would otherwise gouge the streambed.

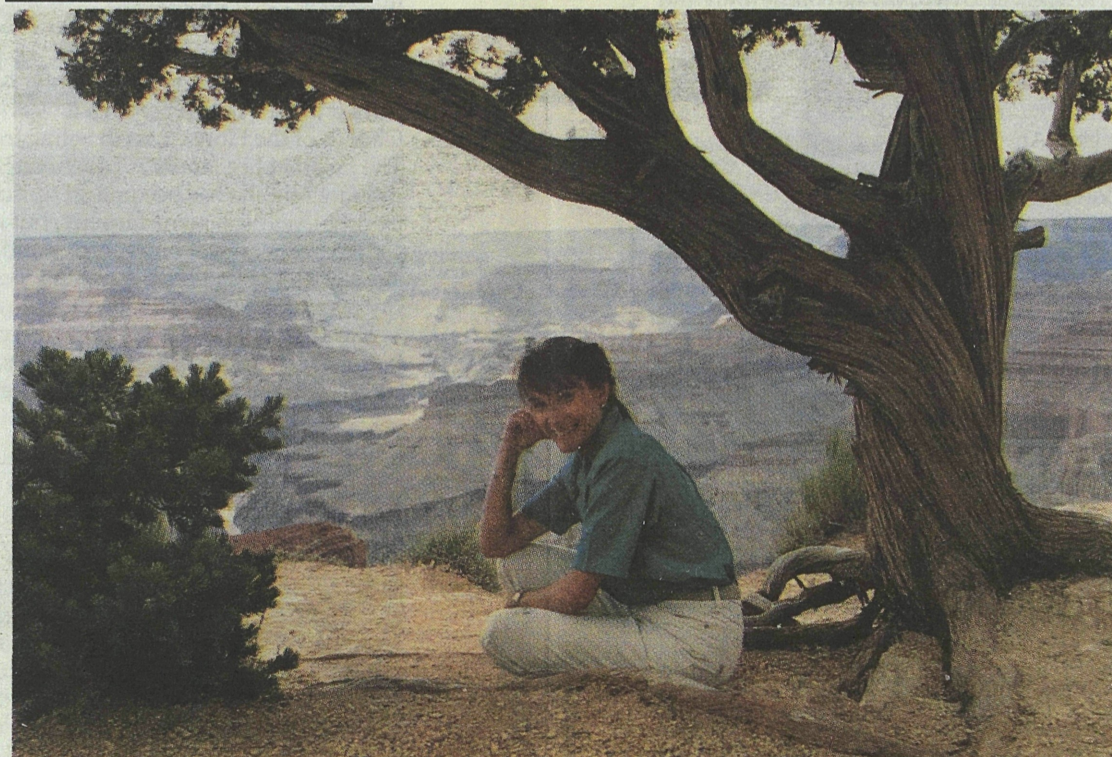
He parks his mountain bike at the Blue River Ranger District, but Chip Britting's real office is the 1.7-million-acre Willamette National Forest, high in the Cascade Mountains.

J. Chipman Britting, a forester with the U.S. Forest Service, studies wooded areas before and after they are leased to private industry for logging. "I'm in charge of quality control on a timber crew. They'll go out and take ground samples, collect information on species types, wildlife sightings and soil quality. I prepare prescriptions for timber cuts, how to best harvest the ground."

Britting moved to Oregon in 1989 from the Colville National Forest district in Republic, Washington, where his job was to sell as much timber as he could to private companies. He says he had a "timberbeast mentality" that was consistent with his training at the U-M School of Natural Resources. "At Michigan I was taught how to cater to industry. The courses were geared toward cranking out industrial foresters in upper management. I hope the curriculum has changed to respond to conservation and environmental ethics."

Blue River inspired Britting to shift "from pro-timber to pro-environmentalist. Here, I had to deal with the aftermath of timber sales. I saw the bad effects—how we've cut on bad ground where trees couldn't grow back. I thought to myself, 'We've got beautiful country here, beautiful trees. Are we leaving a legacy for future generations?'" Standing on the lawn of the 10-acre ranch he shares with his girlfriend, Vicki Schmidt, Britting points to the hills on either side of the McKenzie River. Out his front door the hills are a patchwork of stumps and young trees; behind his house is a stand of 200-year-old virgin Douglas fir. The position of Britting's ranch is a visual symbol of the dilemma faced by the Forest Service, which finds itself between polarized

ZEHRA OSMAN '82, '85 MLA Grand Canyon Village, Arizona



Landscape architect Osman is making the scenic overlooks on the south rim of the Grand Canyon more attractive for the four million annual tourists.

When Zehra Osman tells people she's the landscape architect for the Grand Canyon, their eyes widen for a moment. With a beguiling smile she asks them, "You didn't know all of this was done by landscape architects?"

But Osman concedes that the landscape here was not of her making. "Landscape architecture is a lot more than landscaping," she says. "In fact, I hardly ever work with plants, it's more designing the outdoor environment."

Development along the south rim of Grand Canyon National Park mainly comprises the 1,300-resident village built for park employees and their families—where Osman lives with her husband, Dan, a ranger—and the dozen or so overlooks designed for tourists. In the early 1980s, the Park Service removed trees and built look-alike ranch-style homes with blue aluminum siding.

"Aesthetically, the outdoor landscape suffered," says Osman, most of whose time is spent designing new employee housing. She tries to "bring some sense" to the landscape by preserving trees and other vegetation, and building with natural materials. "I make sure any construction is designed around some of the sensitive features—drainage and wetlands, around a nice stand of trees. You want people to have good views and privacy. I've also been doing some of the overlooks, trying to enhance the experience of the four million annual tourists as they drive into the

parking lots. Some of our overlooks look like wastelands with all the traffic. We're also protecting the resources, for instance, by putting in a trail so visitors don't walk over the roots of a tree."

Osman grew up in Dearborn Heights and credits her parents and her education as the sources of her appreciation for the environment. "My parents came from the Crimean Peninsula in the Soviet Union. They grew up thinking the whole world was that beautiful. They left in World War II, but taught their children to respect nature as a living creature. In college, I found the School of Natural Resources ideal for me. I think having the Landscape Architecture Program in the School of Natural Resources has made its graduates more sensitive to the environment."

After receiving her B.S. in 1982 and her master's degree in landscape architecture in 1985, Osman interned with the Park Service at the Denver Service Center, which is the central design office for the National Park Service. Field work constitutes about half of her duties. "I can in one day attend a meeting in the morning, inspect some construction in the afternoon and spend the rest of the night doing some design work. The best part is the variety, and seeing your ideas come to fruition. We're taking a river trip through the canyon this November for 21 days, restoring the beaches and campgrounds on the Colorado River. This is the best job ever."

Osman and her husband are avid runners and mountain-bikers. She finds it "impossible to enhance your life here through culture or education, but nice to be close to the canyon. Sometimes I get so busy I forget to go to the rim for a week. When I saw it for the first time I was awestruck. I still am. The first thing it gave me was a different sense of time. It took so many years to make the canyon; my lifetime will be just a flash. It helped me have the perspective that everyday problems aren't so great. It'll all be over soon, so why not enjoy it?"

AH, WILDERNESS

Story and photos by Sam Walker

CHIP BRITTING, continued

timber industry and ecological groups. "They have opposing views on how the resources should be managed," he says. "The Forest Service basically catered to the whims of the industry from World War II to about four years ago by providing more ground to cut. We did some environmental damage we could have avoided. The service should only have cut what it grew; it should have been managing private industry, managing an array of multiple uses, timber, water, soil, recreation and wildlife. But our upper management had been dealing with the cutting of timber for so long they didn't know any other way of doing business. Now I think we've adopted a new forest plan that uses resources more evenly."

Britting, who grew up in Phelps, New York, in the Finger Lakes region, attributes some of the impetus for the change to a Seattle judge's decision that barred logging companies from harvesting the habitat of the spotted owl, which was declared a threatened species by the Fish and Wildlife Service in 1990. The decision will probably reduce the harvest in the old growth

forests in the western Cascades by 50 to 75 percent, Britting says. "That will have a big impact on the local economy. Timber generates big dollars—25 percent of timber sales go to the state for education and roads. The de-escalation of the cut means diminished timber jobs, but it'll make us better land stewards."

The Forest Service is also exploring new products and methods to supplement timber profits and protect the environment. "Many smaller plants and shrubs have economic value," Britting says. "The Pacific yew was thought to be a 'garbage tree' before, not good enough for boards, but inside the bark there's a chemical called taxol that is the principal ingredient in the medicine used to treat breast and ovarian cancer. Another new resource is the Princess pine, an 8-inch-tall tree that produces an extract that's used in Pepsi Cola."

As for the future, "If I could find a field position for better wages, I'd take it," Britting says. Even spending only half of his time in an office is too much for him. "I wouldn't mind being a grunt laborer. I get sick and tired of being stuck behind a word-processing machine. It's too far away from the ground."

**JAMES W. SNIDER '50
Colstrip, Montana**

James W. Snider was born in 1921 in his family's farmhouse on Rosebud Creek 10 miles from Colstrip. Today he lives in that house and works the same land his grandfather homesteaded in 1883.

"There were three families on the creek when my grand-dad moved here in 1883," Snider says. "He built a log building, and when there was Indian-fighting, the neighbors would gather there until it was over." The Snider family's remote corner of southeastern Montana was the setting for some of the most legendary battles between Native Americans and U.S. settlers. Forty miles west, on June 25, 1876, Gen. George A. Custer and his troops were killed by the Sioux at the Battle of the Little Bighorn, a day after he had led his men south along Rosebud Creek toward the battle site.

"Custer camped up the creek here about three miles," Snider says. "My granddad took a hunting trip about seven years after the battle. He found a gunstock and a heavy flint pistol, which he contributed to the Custer Museum in Monroe, Michigan."

These days, the only clouds of dust being kicked up on the farm are behind one of Snider's gigantic tractors. "I farm 1,000 acres of wheat and 250 acres of alfalfa, leaving 1,000 acres fallow. That sounds big to farmers in Michigan, but here I'm a small farmer. The soil is richer there. Here you have to have big equipment and a lot more acreage. We get 13 inches of rain a year if we're lucky."

The Montana winter sends Snider into a flurry of activity. "I repair machinery in the winter and take car tours and cruises. Mostly in the winter I'm dancing." Snider's wife died in 1986. For the last two years he's been going dancing with his girlfriend, Stella Connelly. "We go dancing in Billings, Montana; Sheridan, Wyoming; North Dakota; South Dakota; everywhere. It's mostly polkas, but we do all kinds of dances—the jitterbug, the fox-trot, waltz and rock. When I became widowed, I decided the only way to pass time was to dance, not sitting at the bar boozing."

In World War II, Snider served in combat intelligence, scanning artillery and troop positions behind enemy lines. He was shot twice and awarded the Bronze and Silver Stars. He attended Michigan on the GI Bill, thinking college would be "a good way to adjust back to civilization," and graduated with a



Snider farms 1,250 acres by himself. Whenever he's feeling down, he recalls his combat experience in World War II. 'Whatever happens, you're better off now than you were in the army.'

degree in design. "Industrial design jobs are limited to big cities. I worked in Detroit and Chicago, but didn't like it too well. I was told it takes five years to get used to Chicago if you're from a small town, and I didn't want to put in the time. I decided I'd might rather farm."

During the Depression, Snider's family had moved to Michigan but kept title to the land in Montana. "I'd been coming out every summer from college and maintaining it. I don't know if a college education would help a working farmer, but the University had given me confidence, security, business sense, and helped me to read, follow directions and run the business end better."

Snider has two daughters in Montana, one is an accountant and the other farms with her husband. When asked if he thinks the farm will pass to a fourth generation, he laughs. "I would want them to take over, but unlike most guys my age, who look to sell out and retire, I have a problem of not wanting to quit."

to talk about besides hunting, fishing and the weather, and I couldn't care less. The outsiders here get together not because we seek each other out, but because no one else will have us."

Sterner, a Flint native, arrived in North Dakota four years ago after receiving his Ph.D. in theater at the University of Texas. After his first semester teaching speech and drama, he began looking for another job.

"In my first speech class I launched into the history of rhetoric, Aristotle, and the principles of public speaking. I lost these people. I wasn't aware of it at the time, but I was lecturing way over their heads. I want to make the class work for some people, to have relevance in their lives, but it's not challenging to me in an intellectual way."

**AMY ANTLE '73 MPH
DAVID ANTLE '74 MPH
Raton, New Mexico**

Providing health care to underserved populations has taken the Antles to several sparsely settled areas. 'I think we've tried to help each other,' David says, 'to make sure both partners got what they needed.'

With 14 years of higher education, 6 degrees and 11 medical jobs between them, Amy and David Antle have finally found a situation they can agree on—at least for now. David is chief executive officer of the Miner's Colfax Medical Center, and Amy, a nurse, is director of the center's cancer clinic.

The center, originally established exclusively to provide health care to miners, sits on a windy

hill outside Raton, near the ruins of the old Santa Fe Trail. "It's been a real stretch at times," says David. We keep going back to school; that's a perverse thing to do. It's taken a lot of accommodations of each other's professional needs."

Amy adds, "It's a challenge for two professionals to find meaningful positions in their fields in a small setting like this. We're happy it's worked out as well as it has."

When the Antles arrived in 1989, they found they'd boarded a leaky ship. "The center had overrun its budget by an increasing percentage the last three years," David recalls. "It was a challenge for us to get economically stable and develop new programs, to become a real regional medical center."

Amy had similar experiences with the oncology clinic. "In a small hospital the boat rocks a lot. The local hospital doesn't have a lot of depth in any given area. We had two general surgeons; one chose to relocate, and the other needed surgery himself. We had to scramble around."

In addition to plugging financial holes, the Antles managed to offer new services. "At the University of New Mexico I worked with the cancer center in clinical research," Amy says. "When Dave got here, the nearest oncology service was in Pueblo, Colorado, 110 miles away. So we created a cancer clinic."

While Amy planned the clinic, David convinced the University of New Mexico to sell medical services to the center. There were enough local patients to put the center in the black in six months.

The Antles met at the School of Public Health in 1972; both earned their master's degrees there, and they married in 1975. They moved to Window Rock, Arizona, where both of them got health care jobs on the Navajo reservation. They adopted two Navajo children, Jay and Julie. "We got them first as foster children," Amy says, then they adopted them "after it became obvious that no one in their family could take care of them."

The Antles moved from Window Rock to Palo Alto, California, where Amy attended a postgraduate nursing fellowship program at Stanford Medical Center. Then it was off to Albuquerque, New Mexico, where David received his MBA. To both Antles, living in Raton is a tradeoff. Amy misses the "stimulation you get in a university setting"; David says that they are "mobile, and will probably move on," although probably not to an urban environment.

"There's been a lot of give and take," David says of the couple's careers. "There've been times when one of us has had to assume total childcare. I think we've tried to help each other, to make sure both partners got what they needed."

"This sounds puffed up, I guess," he adds, "but I think every place that we've been, we've left in better shape than when we came." Amy nodded in agreement.

**MARK STERNER '73
Valley City, North Dakota.**

The campus of Valley City State College is clean and compact, resting among trees on the high banks of the Sheyenne River just above a town of 8,000. From the old footbridge the brick pillars of the college gate seem welcoming, but Mark Sterner has found them confining.

"I had an idyllic fantasy that a rural place would be simpler, easier, friendlier," he says, "but people here aren't interested in you unless you're a friend or a relative. They work steadily, and they're honest, but they have an inferiority complex. They expect that outsiders will put them down, so they have a chip-on-the-shoulder attitude. They don't have anything else



'It's hard to teach drama in an environment like this,' Sterner says. 'Conformity is the game here; people don't want to be unusual, but that's what acting is.'

LAURA ROTTENBILLER '81
East Glacier, Montana

In the Bob Marshall Wilderness beneath the acute peaks of Glacier National Park, the tulips bloom around June 20. "It's a challenge to live out here and maybe that's what gets you hooked," says Laura Rottenbiller in her house in northwestern Montana. "It wouldn't be so much fun if you could just go to the store and get a green pepper or a tomato."

Rottenbiller, who received her B.A. in business, shares a rambling trailer home with her husband, Randy, a doctor at the Blackfeet Indian reservation in Browning, and their two preschoolers, Annie and Ryan.

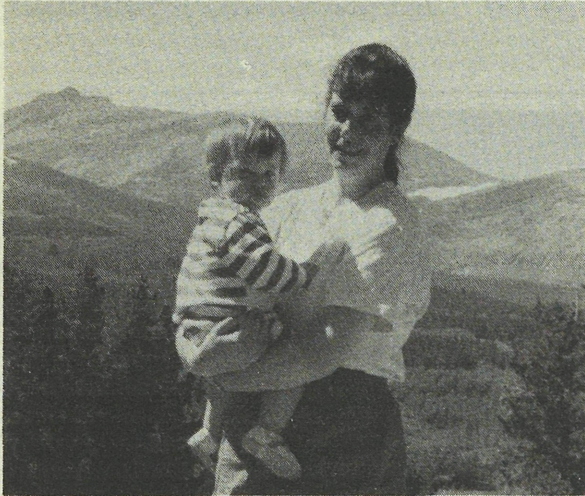
Two years after college, Rottenbiller, who is from Dearborn, Michigan, was managing a restaurant serving Detroit's Metropolitan Airport. "The airport was a rat-race," she says. "When Randy got a residency in Casper, Wyoming, I took a vacation and helped him move out. I'd never been out West, and Randy took me backpacking. It was gorgeous, the pace was slow and the people were wonderful. I moved out and started work in accounting at a small computer company there. Then Randy got the job here."

Arriving in 1985, Rottenbiller had a difficult time the first two years. "I started pinch hitting. I did some trouble shooting with computers at the hospital, made signs for people, worked as a maid, did some direct mailing, raised horses and puppies—a little of everything."

After having her first child three years ago, Rottenbiller became a full-time mother. "Sometimes it's hard not working, but I wouldn't trade it. Even if I had had a regular job, I think I would have decided to stay home with them. Out here, wives run the family. You can't depend on your husband to do everything, you have to be pretty self-sufficient. I drive 90 miles for groceries. If something breaks, you have to fix it yourself. One year the winter came early and my husband was at work. I had to winterize in an afternoon."

By snowfall this year, the Rottenbillers will be in their new house, farther into the wilderness, which suits Laura fine. The wilderness provides the Rottenbillers with much of their food. "I cook everything from scratch. Randy hunts. He's got an antelope, an elk and a deer each year. We do the butchering ourselves. It can take up to a week. That was an interesting thing to learn. I haven't bought meat since we've been here."

The winter population in the village is about 260. Among the outsiders, the Rottenbillers are old-timers. "I'd go crazy in the city, but I've seen a lot of people come up here and go crazy, too," Laura says. "It's the rarity that stays. Randy has been at Browning for six years. No one has ever stayed that long."



Rottenbiller and her family will move deeper into the wilderness once their new house is finished. 'I'd go crazy in the city,' she says, 'but I've seen people come up here and go crazy, too.'

Sterners says that the cultural isolation of the northern plains has led many North Dakotans to see drama as frivolity. "They think students don't need it. They say 'You teach drama? Oh, that's cute.' Many students have never left the state. Some think Valley City is so big a place, they'll lock themselves in their rooms and refuse to come out. Their families settled here at the turn of the century and built the prairie up out of nothing, but they've had little contact with the outside world. They need to be exposed to more of the climate of their times."

"It's hard to teach acting in an environment like this," he continues. "Conformity is the game here, people don't want to be unusual. But that's what

ROBERT OGBURN '59, '62 JD
Del Norte, Colorado

If you ever visit the San Luis Valley in southern Colorado, ask somebody if they've heard of Bob Ogburn. Chances are they'll know him as the judge—or maybe even as the embodiment of the law.

Ogburn is judge of Colorado's 12th judicial district, an agricultural area the size of Connecticut, fed by the Rio Grande and ringed by the Sangre Di Cristo and La Garita mountains. "In a rural area, I think our sense of justice is a more intimate one than it is in a metro area," Ogburn says. "If you've got someone in a metro court and you know them, you dismiss yourself. If you did that here, you couldn't do anything. It's assumed we know a lot about the people. And since 99.9 percent of the time, people here don't appeal our judgments, the judge literally is the law—which may be good or bad."

The former Detroiter says a rural judge develops "a sense of what's important, a sense of community values, and if you don't like them, you try to subtly change them. It's an awesome responsibility."

Ogburn's knowledge of his community extends far outside the courtroom. "I'm performing a wedding



'If you've got someone in a metro court and you know them, you dismiss yourself,' Judge Ogburn says. 'If you did that here, you couldn't do anything.'

WILLIAM OBERLING 72
Crested Butte, Colorado

On his first day of graduate school in 1973, William Oberling, who earned his B.S. in architecture, listened as a professor of design was describing the plan for the semester. "He wanted us to do group projects," Oberling recalls. "People in the class were saying they wanted to work individually, to learn more. This guy kept saying, 'This is the way it's done in an office. This is how it's done in an office.' I got up and walked out."

Oberling dropped out. Not, he explains, solely because of the professor's requirements, but also because a summer working on a punch press at an auto plant had "made me realize I had to get out of the cities where everyone is so inconsiderate, in such a hurry, so demanding—even the tourists here on vacation. At Michigan, there was also this anti-establishment stuff. I'm sure that added to it."

Back in Traverse City, Michigan, his hometown, Oberling ran into friends leaving for Colorado. Within a week, he went from graduate school in architecture to the old mining village of Crested Butte. "I had a duffel bag, a backpack and less than \$100. The street wasn't paved, there were board sidewalks and tumbleweeds. It looked like a ghost town. I got out and wondered, 'What have I done?' The first night we were here a guy got thrown through a bar window. I thought 'Jeez, this is the wild west.' It was a wild place when I moved here, mostly college kids."

acting is—acting things out without censoring ourselves. It's like trying to be metaphorical in a very literal place. The theater is called Theater 302. It's named after the room number. It's all so prosaic."

Sterners was cheered by the fact that he, his wife, Anne, and their two children would be leaving in September when he was to begin teaching theater and directing plays at Eureka College in Peoria, Illinois. Looking forward to the move, he summed up his Valley City experiences: "I can't paint an idyllic picture of this place. It's been a learning experience, a humbling experience. People who live in Austin and Ann Arbor take a whole lot for granted. It makes you more appreciative of what you've had. Without this I wouldn't have known deprivation."

tomorrow. I handled both of the bride's mother's divorces and one of the dad's, and the dad also appeared before me in a vehicular homicide case. The mother said, 'You know our family, you know all our problems. Will you marry our daughter?' That's the sort of intimacy you see."

After graduation from the Law School, Ogburn and his wife, Ann, moved to Colorado, where Bob was stationed at Fort Carson. They were starting a family and "fell in love with the country"; Ogburn joined a law practice in Monte Vista, became deputy district attorney in 1970, and was appointed to the bench in 1976. "I took the judgeship because I was working 60 to 80 hours a week," he says. "At that point, I had three kids and I wasn't spending enough time with them. I recognized the trap I was falling into."

Differences between country and city folks form the basis for one of Ogburn's most important pending cases. "There's a big water fight in the making," he says. "It's doubtful there will be any more dams financed by government, so private industry is looking at developing them for profit. In six months I have a water litigation case involving the diversion of billions of dollars worth of water."

The case centers around a proposal by a Canadian development company to pipe water from the valley across the mountains to Denver. "The big question is, are we going to devastate one area and its natural ecology for the benefit of the next caravan of buses into Phoenix, Los Angeles or Las Vegas? To have enough water will involve a delicate balancing of the needs of the urban areas and agriculture."

The water proposal is very unpopular in the valley, and Ogburn knows the residents will follow his every ruling closely. "We live in a glass house. There's a sense of closeness here, and if you don't like that, this is not the job for you. My daughter said it's worse being a judge's daughter than a minister's."



Restaurateur Oberling sits on a ridge above Crested Butte. He enjoys running in the mountains, and has won the Pike's Peak Marathon in the over-40 category.

Oberling has many stories illustrating how wild it was. When he moved here a character known as Crazy Dave shot a coyote, tied it to the back of his jeep and dragged it through town. "He pulled up to the bar, tied the coyote to a hitching post and bragged about his dead coyote. Some of the locals didn't appreciate seeing the carcass in the road, so they untied it and threw it in a garbage can."

"When Crazy Dave returned, he looked all over for the animal. Distraught, he returned to the bar, called the sheriff and said, 'I'd like to report a lost dog. Actually, it's not the dog I'm worried about, it's the rope he's on. I'm quite fond of it. It's the one my mother used to hang herself.'"

Like many other ski bums, Oberling got a job cutting corral poles. "Skiing was in its infancy. You had to be a jack-of-all-trades to survive." Until 1976, his trades included construction, some architectural jobs and ranch work. After that, he joined the ski patrol, supplementing his income by working nights in restaurants. He was promoted over the years, and now manages the kitchens at the Wooden Nickel bar and at the Powerhouse Bar Y Grill, where he's also co-owner. "I order food, take care of employees, try to keep things going smooth. I do plumbing, maintenance, unclog sewer lines—it's the good and the bad." Soon he'll help open a Powerhouse restaurant in Hawaii.

Oberling and his wife, Linda, recently moved into a new house that Oberling designed and built. "School has helped me get really organized, and the math end helps in the restaurant business. I got used to working really hard, putting a lot of hours in. Just because you do something at Michigan it doesn't mean they're gonna plug you in somewhere. It's hard to make a living here, but if you love to get in the woods, you have a lot of entertainment."

LETTERS

SOVIET DIS-UNION

My daughter is an alumna of the U-M, I am not. After reading "A Many-Splintered Thing" in your last issue, I am rather glad not to be. You see, I am a "humanities" person. I could not have taken the imperialist view of your "Sovietologists." Why are they so concerned that the Soviet empire will break up? Is it that they are afraid of, as Prof. Hopf calls them, "micro-states"? Would they consider France a micro-state? Ukraine is about the same size; Byelorussia somewhat smaller, but so is Belgium.

As for "anti-Russian" laws—are affirmative actions anti-anything? Since 1944, Russians were the favored minority no matter where they lived, and they imposed their language and laws on the majorities in all Soviet republics. Is it any surprise that now the "natives" would like to regain what they lost?

Maria Z. Odezynskij
Cheltenham, Pennsylvania

Your October issue was of special interest to me. I graduated from the College of Engineering in 1923 in hydraulic and structural engineering. In 1934, I was a structural designer with Niagara Moharol Power Corp. designing dams, powerhouses, etc. I was granted a leave to go to Russia with the agency Machino Import, which hired me to consult on the Dnieper River dam and powerhouse in Ukraine near the Black Sea. My contract allowed me to take 400 lbs. of canned food, a house, cook and housekeeper. I was there for three months.

In 1947 I was asked to go again because, when driven out of Russia, the Germans destroyed the powerhouse and blew big holes in the dam. The Russians wanted my services and gave me freedom to travel. I had more freedom than our ambassador, whom I called on at the embassy in Moscow. I remember saying to my interpreter, "I don't see any cats or dogs around here." He said, "No, they were all eaten during the war."

Harold J. Howell '23
Bonita, California

REUNION OF THE V-12ers

In 1943, Michigan, with 130 other institutions of higher education, participated in the largest educational program ever developed—the U.S. Navy's V-12 Program, which was designed to educate 125,000 officer candidates during World War II.

The Navy V 12 National Committee is planning the second reunion of V-12ers for November 4-7, 1993. The 50th anniversary reunion will be held at the Norfolk Waterside Marriott Hotel, Norfolk, Va. All former V-12ers or their families who wish additional information may contact Capt. Robert S Jones; U.S. Navy (Ret.); Chairman, Navy V-12 National Committee; 701 Pennsylvania Av. NW, Suite 123; Washington D.C. 20004-2608.

Capt. Robert S. Jones
Washington, D.C.

'AN HONEST SCHOLAR'

F.O. Matthiesen was a fine and honest scholar who accepted, as all such do, that one can be led into error by incorrect information. It is absurd to suggest, as your article ["Versions of Visions," Oct. '91] does, that his suicide might have been connected with such an error concerning Melville's *Whitejacket*. The history of his agonizing about great issues in his nation, and the tension between his deep Christian commitment and the directions taken by many in the socialist movement he admired, is well-known.

It is ironic that in the same issue, your pages contained comment on the hounding of academics in the McCarthy era when Matthiessen was hounded in that way. He was even quite untruthfully described as a "life-long" Communist in a history of the CIA published after his death by a former official of the CIA.

Bryan Coles
Visiting Professor
Harrison M. Randall Laboratory of Physics

'A DISTINCT AND OBSCURE MINORITY'

I realize that Universities should encourage diversity of opinions and foster the free exchange of ideas. I also understand that with an alumni body of 350,000, many divergent opinions will be found as to what constitutes supportable and legitimate University activities and positions.

However, the letters column of the October issue certainly exhibited an array of weirdness from your correspondents. One which castigated the University for "thought police" tactics, and disassociated himself from his alma mater. Others expressed their dissatisfaction with President Bush as the commencement speaker by telling you they trashed the October issue or by accusing the President of every crime short of initiating the Holocaust.

Let me assure you the majority of your readers love the University and support most of its policies and positions. We view the bitterness and sarcasm expressed in the letters column as short-sighted overreaction by a distinct and obscure minority

Richard Harper '50, '51 MBA
Birmingham, Michigan

PARENTAL PRIVILEGES

Michigan Today has been coming to my home for years, and my wife and I have found it very interesting and informative. Your October issue was a masterpiece—nowhere else, in newspaper or periodicals (except perhaps *The New Yorker*) have I seen so much of interest and value in so few pages.

We are the parents of three U-M grads. Now that my son Dan will receive his *Michigan Today* in California, we'll no longer see it. As parents of three grads, may we have a "special dispensation" and still receive our own copy of *Michigan Today*?

Eugene Baron
Oak Park, Michigan

Your interest in the University and this publication is appreciated. We are pleased to continue to send *Michigan Today* to you and other parents who wish to receive it after their children have graduated—Ed.

MORE U-M BOOKS

Here are yet two more books to add to the list of novels dealing with the University of Michigan: Michael Thall's *Let Sleeping Afghans Lie* (Walker and Co., New York, 1990) is a humorous mystery set in Ann Arbor and Ypsilanti. *Blaine of the Backfield* by Donal Hamilton Haines (Farrar and Rinehart, New York, 1937) is another Haines novel set at "Western University" at "Huron." The Library of Michigan's copy of the book has a letter from Haines stating that some of the background was suggested from his undergraduate and later experiences in Ann Arbor.

Robert Beasecker '70 AMLS
Muskegon, Michigan

SOURCES OF HUMOR

President Ford's budding sense of humor was nurtured when he first came to the University. He ate two meals a day during his first year at the same round table in the Cutting Cafe with a senior Phi Beta Kappa who had contributed articles to *The Gargoyle*.

Edward C. Varnum '33
Tempe, Arizona

CONTINENTAL OR CULTURAL?

I was amused to note that you are labeling ethnic groups incorrectly (May '91, page 3). The University of California at Berkeley has adopted usage which is preferred as more correct by dropping all "color" names for all groups including European-origin Americans.

I noted that *Michigan Today* considers the terms African American, Asian American, Hispanic American and Native American to be appropriate terms along with "white." Berkeley uses the term European American whenever that university lists ethnicities, and that term has in fact come to be more acceptable in a lot of ways than the color label "white." One reason for abandoning "white" as an ethnic label is that so far as we know, the only person who likes "white" is David Duke. Let's use continental or cultural designations for all groups in America.

Dale Warner, '65 Law
San Jose, California

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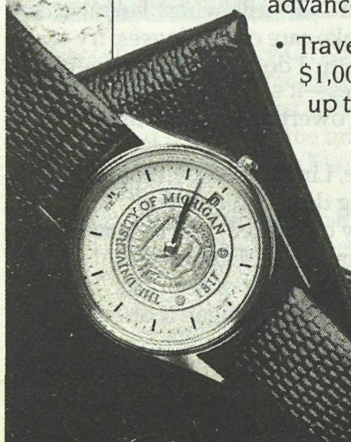
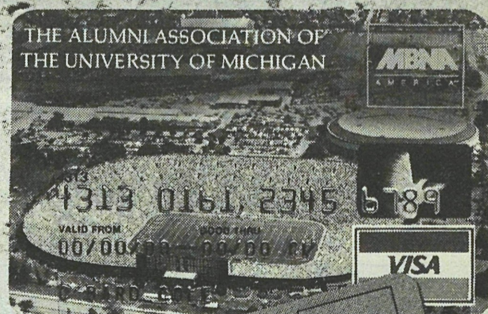
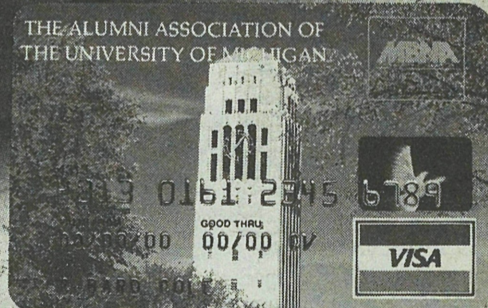
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Golden celebration of economics theorem

By John Woodford

The Department of Economics and the Institute of Public Policy Studies (IPPS) sponsored a symposium in November in honor of the 50th anniversary of the publication of a path-breaking article co-authored by Wolfgang F. Stolper, professor emeritus of economics.

The article, "Protection and Real Wages," developed the model upon which the modern theory of the economics of international trade has been built, said Prof. Alan V. Deardorff, chairman of the Department of Economics.

The article was published in the November 1941 issue of the *Review of Economic Studies*; the second author was Paul A. Samuelson, professor emeritus at the Massachusetts Institute of Technology, who received the 1970 Nobel Memorial Prize in Economic Science. Both Stolper and Samuelson participated in the symposium.

Professor Deardorff and Prof. Robert M. Stern explained the significance of the Stolper-Samuelson model in an interview with *Michigan Today*. They said that the authors' major theorem stated, in lay terms, that for a country like the United States—where labor is relatively scarce compared with such other economic factors as capital—protection of the home market increases workers' wages because greater trade makes it compete indirectly with more abundant and cheaper labor elsewhere. In a poor country, however, protection interferes with labor's ability to produce and trade labor-intensive goods, and thereby tends to decrease wages.

"Before their article," Deardorff said, "it was thought that it was impossible to determine the effect of protective policies on wages. Stolper and Samuelson analyzed the factors that determine these effects mathematically and showed that wages rose more than

prices when tariffs increased on imports. This was a big topic in Canada, Australia and other countries similar to the United States. The article initiated many further inquiries into the economics of international trade."

The Stolper-Samuelson theorem was one of the first substantive results to be derived from general equilibrium theory in economics. General equilibrium theory, Deardorff said, "takes into account all of the interactions within an economy. Stolper and Samuelson were the first to distill the complexity of an entire economy into a manageable mathematical model. Nowadays, bigger models are built in computers, but we might not be doing that sort of thing today if Stolper and Samuelson had not shown the effectiveness of this kind of economics."

An interesting corollary conclusion of the model, Stern said, "is that protectionism lowers the welfare of the whole nation even while it raises the wages of workers. Thus, while organized labor's historical advocacy for protectionism in the United States fits in with this model, the model does not suggest that protectionism is desirable for the country as a whole. The question the model poses is, in whose interest will international trade policy be formulated, in labor's interest or in that of the owners of other resources like land and capital?"

In subsequent uses and extensions of the model, economists have found that the short-run results of protectionism differ from long-term results.

"There is much more segmentation of the effect of raising wages in the short run, depending upon which industries are protected," Deardorff said. "In the short run labor and capital in individual industries share the same effects in the model, so that only certain industries might see a rise in wages, while in others there might be a fall. Thus, in a given industry one



Stolper



Samuelson

could see both labor and management push for protective policies at the same time. In such cases, we might see the model being used in the politics of trade policy."

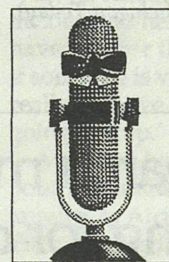
But in poor countries, less protectionism helps the workers, Stern said, and he cited the example of the economic rise of Eastern Asia and the Pacific Rim, "where wages have exploded in the last 30 years of free-trading policy."

The model "gives policy-makers and legislators a warning," Stern went on, "telling them what to watch out for if they should make one decision versus another. It tells them who is likely to be hurt by a given decision, who may resist it and whether they should use redistribution policies to soften the blow to the sectors that are hurt."

In recent years, monopoly power and increasing returns of scale have been incorporated into international trade theory. These factors weren't included in the original Stolper-Samuelson model, Deardorff said, "and they change what we are learning about the effects of protection."

The model is likely to become quite relevant to the former socialist countries, both economists agreed, because those countries might find a niche in producing labor-intensive consumer products, "in which case," Stern said, "they could travel East Asia's route if they establish the right policies."

Michigan Radio



Memberfest, the 10-day pledge drive of the U-M's public radio stations, reached its \$150,000 goal on its eighth day in November.

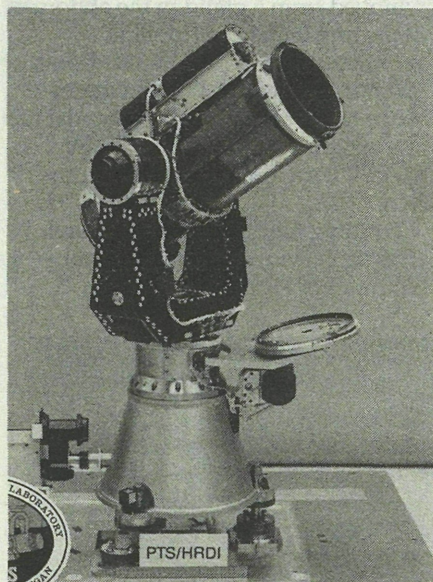
The total amount raised—\$178,092—was the highest ever for Michigan Radio," said Harriet Teller, promotion director. "More than 2,180 listeners pledged this fall, and 875 were new members."

Michigan Radio outlets are WUOM (91.7 FM in Ann Arbor), WVGR (104.1 FM, Grand Rapids) and WFUM (91.1 FM, Flint).

"Hundreds of callers said how much they enjoyed Garrison Keillor's show," Teller said, "and we got many other comments about what listeners loved and hated in the programming. There was a wide range of opinions, but we aired all their views. Some people loved the daily programming but hated the weekend programming. Others said just the opposite. What was wonderful was that they all pledged their support, no matter what their opinions. It was very democratic."

The total included \$11,290 in corporate matches and another \$11,200 in pledges from the Challenger's Pledge Fund, a group of corporations and individuals who promised to chip in even more cash if Michigan Radio reached its goal.

MAPPING WINDS IN SPACE



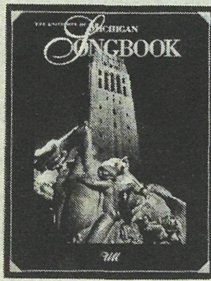
The first data from a new wind-mapping satellite was presented by U-M's Paul B. Hays at the December meeting of the American Geophysical Union in San Francisco.

The new instrument, designed and built at the U-M Space Physics Research Laboratory, was launched on the space shuttle Discovery Sept. 12 to track ozone depletion and wind velocities in Earth's upper atmosphere.

The device, called a high-resolution Doppler imager, or HRDI ("Hardy"), is helping scientists follow chemical changes in the cloud of upper atmospheric dust particles from the June eruption of Mt. Pinatubo in the Philippines.

Hays, professor of atmospheric sciences, College of Engineering, said initial data showed that the mesosphere—a largely unexplored region of Earth's middle atmosphere—is far more active and complex than scientists had believed.

Meteorologists will use the information to track jet streams, study how the ozone hole forms and learn how the Sun affects Earth's climate. The 4-foot tall, 350-pound HRDI is traveling aboard the largest non-military spacecraft ever launched.



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'The Best Team'

The summer job of 6 engineering students was to design an electric car

By Magraret L. Hostetler

The educational value of the Solar Car racing team project for students at the College of Engineering was underscored this summer when six former team members took their knowledge and experience into the business world.

Undergraduates Chris Gregory, Chetan Maini, Jeff Pavlat, and Andy Swiecki; graduate student Dave Bell; and former U-M student Bill Kaliardos '90 of Grosse Pointe, Michigan, were members of the solar car team that won the GM Sunrayce USA in July 1990 and finished third in the November 1990 World Solar Challenge in Australia (see Dec. '90 *Michigan Today*).

Last summer, they were hired by a new electric car company, Amerigon Inc., in Monrovia, California.

Amerigon is owned by Lon Bell, who is also the father of student Dave Bell of Pasadena, California. Lon, who sold his airbag-sensor company to TRW five years ago after managing it for 25 years, launched Amerigon last spring. He knew that the competition in mass-produced electric cars from the Japanese and the big three American auto companies would be fierce, and that he would have to move quickly to get a car on the market. He decided that the best people to get off to a rolling start were the six student engineers from the U-M.

Dave explains his father's reasoning:

"Lon thought that if a company like Amerigon was to be successful, it would have to use Quality Function Deployment [QFD—a managerial method that emphasizes cooperation and consensus decision-making]. After seeing these guys work on the solar car, he thought they would be good at QFD because they had already worked as a team. More-experienced engineers would have more knowledge, but they wouldn't have the teamwork."

The senior Bell had learned from Dave that four of the students had been meeting weekly since the Australia race to formulate plans to launch their own electric car company. In April, Bell asked the four and two other students to merge their plans with his and join Amerigon in trying to get an electric car to market in just three years. They agreed.

As the company's only engineers, the six were put in charge of designing, testing and building the car. They had only four months to get started before school resumed in the fall—a time span that is customarily considered enough to create a plan of action, but not to come up with anything material.

Working 50 to 80 hours a week, the students established the company's mission, researched and analyzed all 42 systems found in an electric car,

created an integrated design, selected components, built a "mule" (a test model consisting of frame, components and data-acquisition systems used in experiments), and produced a quarter-scale clay model of the car's body.

"This was a natural continuation of what we started on with the solar car," says Chris Gregory '92 of Bloomfield Hills, Michigan. "The intent of the race was to develop technology to apply to the real world, and that is what we did."

All of the young engineers said their experiences confirmed their belief in the importance of teamwork. "In our meetings our egos are always down," says Chetan Maini '92 of Bangalore, India, "and everyone's opinion is respected. We criticize an idea, not a person, which helps us to make progress more quickly. The success of the team is more important than the success of the individuals. During the solar car race, a lot of other teams did not have teamwork. We won not because we had the best car—ours was not the best—but because we were the best team."

All of the students agree that their attitudes toward schooling have changed dramatically. "I know that I want to work in teamwork-oriented companies," Bell says. "My school-work is now oriented toward making myself useful to a team rather than just making myself an expert in something."

Wasp research may yield deadly sting for diseases

By Sally Pobojewski
U-M News and Information Services

Hidden inside microscopic abdominal glands in a common species of miniature wasps grows a biochemical "magic bullet" that could give researchers a new weapon against cancer cells and agricultural pests.

University of Michigan biologists Tahir M. Rizki and Rose M. Rizki are trying to determine how this substance produced by the female *Leptopilina heterotoma* wasp works like a microscopic "smart bomb" inside fruit fly larvae—selectively destroying the fly's ability to defend itself, while preserving it as a food source for the growing wasp.

The Rizkis—a husband-and-wife research team—are intrigued by the unique parasitic relationship these wasps have with their fruit fly hosts, as well as the possibility that the virus-like particles they produce might be as lethal to human cancer cells and other insects as they are to fruit flies.

Female *Leptopilina heterotoma* wasps take their maternal responsibilities seriously. After laying their eggs inside fruit fly larvae, these wasps inject a substance similar to a virus that disables one key part of the fly's immune system in less than 60 minutes. With no way of recognizing and attacking its invader, the fruit fly is destined to be eaten alive by the growing wasp.

"Many insects are endoparasites—meaning they spend part of their life cycle inside the body of another insect," said Rose Rizki, research scientist in biology. "But in many relationships, the presence of the parasite retards the growth of the host."

"Since the host is food for the growing parasite, anything that restricts its growth is bad," added

Tahir Rizki, professor of biology. "This wasp has a trick that is unique among insect parasites. It's the only documented case of an endoparasitic relationship where only one specific cell in the host is affected. The fruit fly larva continues to coexist and thrive with the wasp egg until the growing wasp needs food."

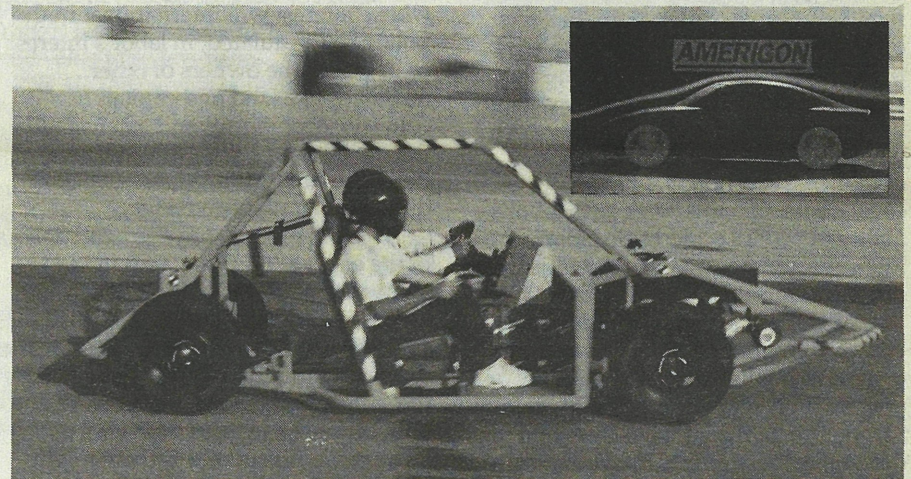
According to the Rizkis, the only cell affected by the wasp virus is a key component of the fruit fly's cellular immune system called a lamellocyte. Its function is to surround and disable foreign substances within the fruit fly larva.

"Somehow, this 'cell poison' injected by the female wasp recognizes and penetrates the wall of the fruit fly lamellocyte," Tahir Rizki said. "It's like injecting a bomb into the cell; we see the effect begin within 30 minutes. The cell gets longer and longer, and cellular components begin to extrude outside the lamellocyte wall. The lamellocyte self-destructs."

"If this substance destroys other cells in the same way, there may be potential to direct its action against malignant cells. Or if we can isolate the gene that produces the substance, we may be able to splice it into another insect and use it to control agricultural pests."

The Rizkis caution that research on specific applications of the wasp virus is still years in the future. One problem hindering future research is the fact that the substance must be manually removed from a gland in the abdomen of the tiny female *Leptopilina heterotoma* wasp. "We must dissect one hundred wasps under a microscope to get enough of the material for one experiment," explained Tahir Rizki. "It's a long, painstaking process."

Funding for the ongoing research effort is provided by the National Institutes of Health.



Engineering students drive their 'mule'—a bare-bones prototype built to evaluate battery, motor and drive-line systems of the electric car. INSET: A quarter-scale model is tested in the wind tunnel at California Institute of Technology in Pasadena.

Photo by Larry Rogers

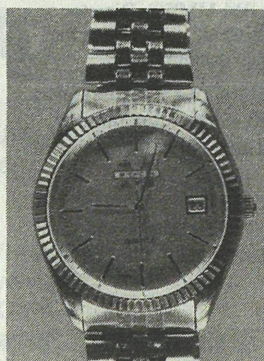


The Rizkis hope a 2-millimeter-long wasp (inset) possesses a 'magic bullet' against cancer cells and agricultural pests.



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Alumna was center stage at the Thomas hearings A testimony to U.S. history

By Laurie Fenlason

While much of the country seemed shocked last month when allegations of sexual harassment impeded the confirmation process of then-Supreme Court Justice nominee Clarence Thomas, alumna Nancy Elizabeth Fitch ('71 MA, '81 PhD) was not entirely surprised.

"This is nothing new," Fitch said of the allegations of sexual harassment against which she had defended Thomas, her former supervisor at the U.S. Equal Employment Opportunity Commission (EEOC), in his confirmation hearings.

"If you look at history," continued Fitch in her office at Temple University in Philadelphia, where she is assistant professor of African American Studies, "you can almost anticipate the moment when something like this is going to happen."

Fitch, a self-described "moderate, New York [Nelson] Rockefeller Republican," recited a long list of Black leaders—Frederick Douglass, Booker T. Washington, Martin Luther King Jr., Jesse Jackson—who she says were "neutralized" by allegations of sexual misconduct, whether the accusations were made inside or outside the judicial system, and whether they were proved, unproved or disproved.

"It was not at all surprising to me that Clarence Thomas ran into problems during the confirmation hearings, although I never would have expected anyone to make this particular charge against this particular individual," Fitch said. "The questions the senators asked and Anita Hill's answers were the types of things that have always been said about Black men before a lynching."

Fitch is pleased that Thomas has been confirmed, and attended his swearing-in ceremony "along with most of the town of Pin Point, Georgia, Thomas's hometown." But she regrets several misconceptions that remain about the circumstances of her appearance before the Senate Judiciary Committee.

Many people, Fitch elaborated, are unaware that she, like most other witnesses, were subpoenaed to appear before the committee, which they did at their own expense. "People have been telling me, 'You were so brave to do what you did,' " she said, "but the brave—and stupid—thing to do would

have been to ignore the subpoena." Fitch bristles at suggestions that she and Thomas were friends. "As I said in my testimony, we were friendly, but we were not friends. If I was friends with anyone, it was Anita Hill."

Much of Fitch's testimony centered on providing a historical context for Thomas's remark that the "circus hearings," as she calls them, constituted "an electronic lynching." Fitch seized the occasion to give an American history lesson to the 14 senators and to millions of television viewers of all ethnic backgrounds.

She saw the discussion of the lynching of Blacks "not as African-American history but as U.S. history," Fitch said. "That's not very well understood: It's all of our history. It's not always comfortable, but it's what happened."

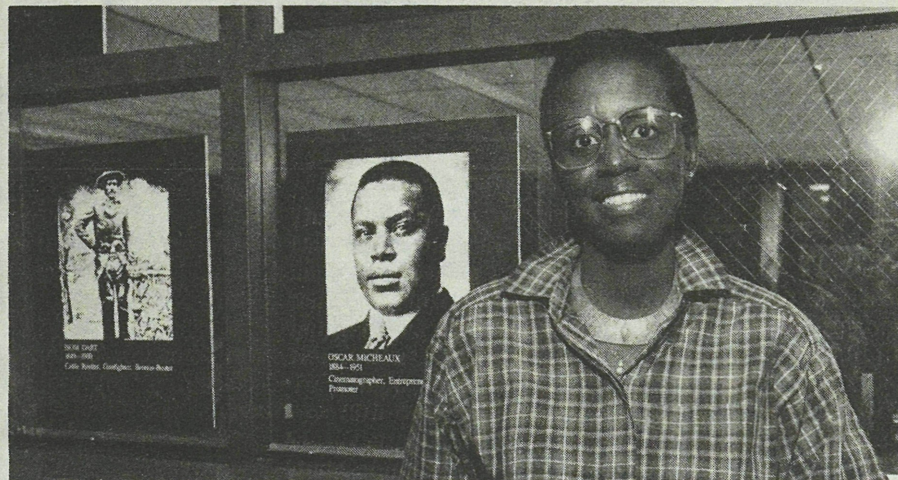
Immediately following the hearings, Fitch received more than 100 letters and postcards from strangers commenting, mostly positively, on her testimony. For the Black people she heard from, her testimony "was a reaffirmation of what they already knew, but for the Caucasians who wrote it was a revelation."

"One letter," Fitch continued, "said, 'If I had understood some of the content of U.S. history, maybe then I would have understood what the Sixties were about and why Blacks are still upset.' Almost everyone who wrote asked me to tell them what they should be reading to better understand African Americans' experiences in this country."

Fitch believes the hearings also brought unprecedented attention to the existence of America's active and diverse Black middle class. "What you had on all the panels was a parade of Black, middle class—albeit precariously middle class—professionals that nobody had ever seen before," she explained. "I've gotten lots of letters from people saying, 'I always thought all Black people were either Jesse Jacksons or Malcolm Xs, Martin Luther Kings or Thurgood Marshalls. I never saw them as Black, middle class professionals like yourself.'"

Fitch's testimony also reflected her belief that acknowledging the diversity of Blacks' political and philosophical alliances is a positive and necessary step toward their full cultural and political participation.

"As I said in my testimony, Black



Fitch, who teaches at Temple University in Philadelphia, was one of the cynosures of viewing eyes during the Senate hearings on sexual harassment charges against Justice Clarence Thomas, for whom she testified.

Photo by Geneva Britton

people in this country have always had diverse views," Fitch said. "We are not a monolithic community in thought. I hope that, as a result of the hearings, people will be glad that there are Blacks in both political parties, so that when somebody's out of office for eight years, we still have access through another door."

Fitch first met Thomas through her mother, Nancy E. Fitch, an active Republican and the first African American female municipal official in Mount Vernon, New York. She recalls discussing with her mother two incidents of sexual harassment in her own life, one that occurred while Fitch was a faculty member at Sangamon State University in Springfield, Illinois, another while flying from Washington to New York to visit her mother.

"It's an awful thing," I remember my mother saying, "but don't take it too personally because it happens to all of us," she recalled. It's a message Fitch says is prevalent among women of her mother's generation who have experienced sexual harassment, but not necessarily a view she herself endorses.

"One of the things that depressed me most about the hearings," Fitch explained, "was that the panel that spoke on Anita Hill's behalf, which included two women lawyers and a judge, did not encourage their friend to do something about it [the alleged harassment by Thomas]."

If Hill had reported any such incidents to her, Fitch said, "I would have told her that she had options, that if someone is victimizing you, you really do have the power to say, 'This is going to stop.'"

Although her U-M degrees are in South Asian history and she is "self-taught" in African American history, Fitch, inspired by her recent experiences, said she might write a brief American history text "to fill in the gaps in people's understanding that have become so apparent to me as a result of these confirmation hearings."

She said her book would not rely on what she calls the infusion technique, in which African American names and dates are dropped into a perspective on history that is "the same Western and American world view." Her book, she explained, would "look at American history through another prism, another perspective, one in which all people feel included."

In addition, this summer Fitch plans an extended visit to Georgia to continue research begun during her years at the EEOC on a biography of Justice Thomas. The book would focus on the impact of "local values, upbringing and family members" during his early years in Pin Point until his admission to Yale University Law School.

Laurie Fenlason is the national information officer in the U-M Office of External Relations in Washington, D.C.

Team, Continued

Pavlat '92 of Monroe, Michigan, says he now concentrates in his computer classes on learning "everything that can help in batteries. Class is a tool for doing things down the road."

Swiecki '92 of Wyandotte, Michigan,

says he "discovered that many experts on the cutting edge of our area are right here at Michigan."

How impressive were the students' accomplishments? "This was a fairly ambitious amount of work even for experienced people," says Gene Smith, assistant dean of engineering. "Usually, after students get degrees and are hired, they go into a year's training program before they even are assigned to a project, and they are never given the lead."

When they returned to classes this fall, the team handed off the work to Amerigon's newly hired engineers who are testing the test mule and clay models while beginning work on the prototype car. As they finish their schooling, some in December and some in April, the students plan to return to Amerigon and rejoin the project, which is scheduled to complete a prototype car in the next six months.

Margaret L. Hostetler is a science writer for the Department of Mechanical Engineering and Applied Mechanics.

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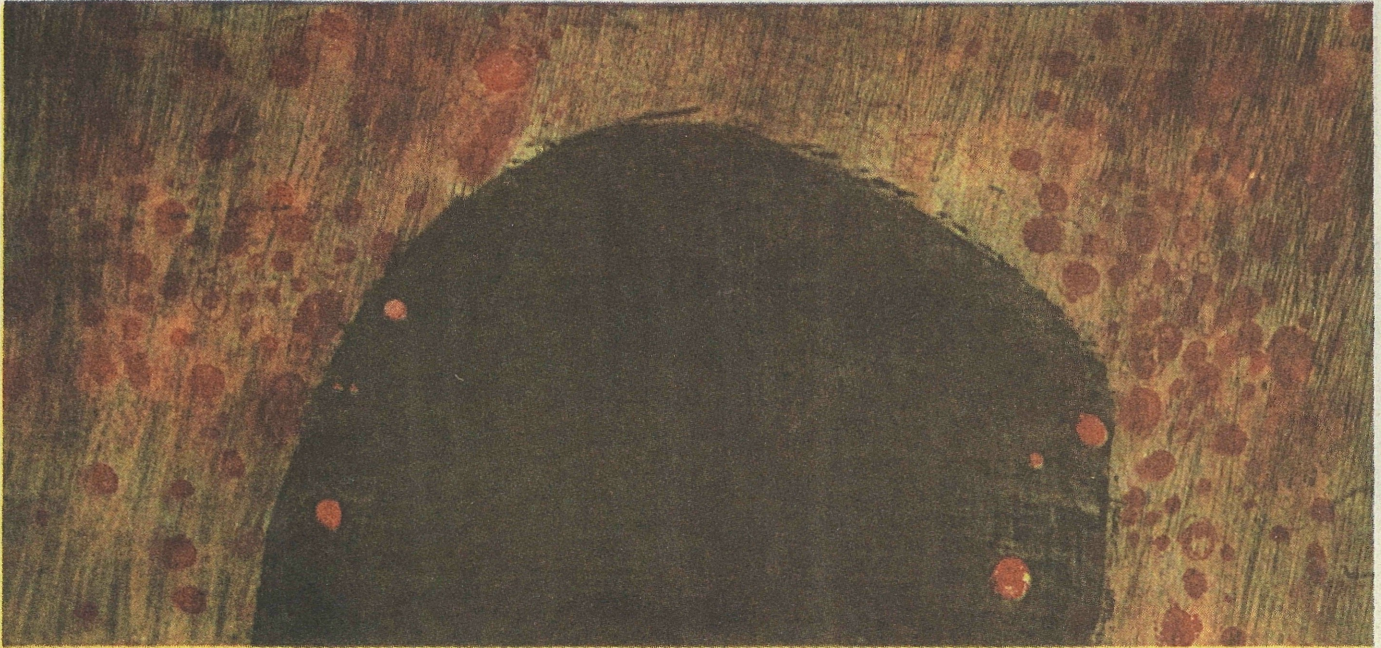
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Michigan Today



'KAMINARI-NO TAKI' (Thundering Waterfall), a 1990 intaglio by printmaker Takeshi Takahara, professor of art, is one of the works by U-M faculty featured in 'Humanities and the Arts,' an exhibit in the U-M Institute for the Humanities. During his sabbatical funded by the U-M Center for Japanese Studies, Takahara studied waterfalls along a now disused path connecting Tokyo and Kyoto. The multimedia exhibit is on the first floor of the Horace H. Rackham School of Graduate Studies. It will stand through November 1992.

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