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# MICHIGAN TODAY

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## A NEW CLIMATE

see page 12

J.C. FRANCOIS



## GADGETS THAT TEACH

Here's a 21st century dilemma. Students who have never known life without computers, Gameboys, cell phones, and DVD players sit before faculty who grew up writing school reports on typewriters and watching classroom film strips.

PowerPoint slides have become as much a part of the college experience as textbooks, but Microsoft's souped-up slideshow software has been around since about the time today's freshmen took their first baby steps toward their parents' PCs. Even e-mail is considered old-fashioned by the Instant Messaging cohort.



The GeoPocket allows students to interact with lecture material as it's delivered.

Why does U-M own thousands of children's books? For the education. The volumes date back some 400 years, including classics, modern works, and an astounding 2,000 pop-up books. The collection, which merits its own curator—former head of the U-M library William Gosling—offers researchers a trove of information about subjects from paper engineering to changes in culture, as this page from *Dean's Moveable ABC*, published in 1859, amply demonstrates. **MT**



Rather than resist young people's love of new technology, several campus units are embracing it as a way to help them learn—and to better compete for their attention.

The University of Michigan School of Dentistry is collaborating with Apple Computer to bring iTunes software to the academic setting.

The Dental School records large lecture classes, then electronically posts the recordings on their website, available for download by registered U-M dental students. The students can put the lectures directly onto their iPods or other electronic music players, then listen while they work out, walk to class, or eat breakfast. It may not be the way their parents learned, but the new technology capitalizes on the realities of today's students.

Another venture called the GeoPocket project allows students in the courses Global Change I and Extreme Weather to interact—while class is underway—with course material. Students use wireless Pocket PCs or their personal laptops to manipulate data, respond to professors' queries, and explore maps, diagrams, and photos. The gadgets turn ordinary lectures into interactive events.

The U-M team behind GeoPocket received \$125,000 in equipment from the Hewlett-Packard Company in June, and first classes to use handhelds began in September.

Elsewhere at Michigan, tech projects abound, from a School of Music effort to get student performances on the web to the recent launch of GradTools, a web-based tool to help doctoral students keep on track to completion.

Perhaps it's a small comfort to Baby Boomers that someday today's teens could wax nostalgic about the days of blogs, podcasts, and instant messages the way their parents do about 45s, the introduction of cable TV, or the first car phones. **MT**

## ENCORE! MUSIC SCHOOL EARNS APPLAUSE, STARTS NEW VENTURES

U-M's School of Music has been featured in the news recently, earning kudos for work already accomplished and pioneering new musical projects.



William Bolcom

Composer and music professor William Bolcom was nominated for four Grammy Awards, including Best Classical Album, for his song cycle based on the poetry of

William Blake, "Songs of Innocence and Experience." Bolcom wrote the epic piece in 1984, but it was not recorded until last year. The recording involved some 450 musicians and draws its musical influences from classical, jazz, and reggae, among other styles.

Bolcom, the Ross Lee Finney Distinguished Professor of Composition, is no stranger to acclaim. His compositions have garnered a Pulitzer Prize, Guggenheim fellowships, Rockefeller awards, and NEA grants.



Bright Sheng

Another U-M professor and composer, Bright Sheng, travels in similarly elite circles. Winner of Guggenheim, Rockefeller, and NEA awards, and given a 2001

MacArthur Foundation "genius" grant, he is also U-M's Leonard Bernstein Distinguished Professor of Composition—an endowed chair named in honor of one of his mentors. The *New York Times* hails his "skillful mix of traditional Chinese music with Western idioms."



Sheng is hardly content to compose and teach, however. He recently accepted a post as the New York City Ballet's first-ever composer-in-residence.

Meanwhile, in Ann Arbor, the Music School has launched an ambitious new venture. It's called Block M Records, and it is a full-bore music business on campus. U-M students and professors can play, record, produce, and distribute original material without having to go through an outside company. Recently, for example, School of Music professor



of piano Louis Nagel played several Haydn sonatas at Hill Auditorium. Students in audio engineering recorded the performance, produced it with professional equipment, and released the slick product to the public.

The upshot is that U-M students get hands-on experience with state-of-the-art recording equipment and production techniques. The University holds the rights to the recordings, allowing it to profit from sales. And the University-based musicians, who retain the copyright on their work, receive a larger slice of the proceeds than they would from a commercial label.

Ironically, Block M Records doesn't generate actual records. Instead, it distributes its recordings via the inter-

net, primarily through its website at [blockmrecords.org](http://blockmrecords.org). This digital, direct-to-consumer method cuts costs, but even better, it allows students to get hands-on experience with the latest in music technology.

Moreover, avant-garde artists on the U-M music faculty, whose work an ordinary music label might be reluctant to try to sell, can find an audience. The most recent example is a collaboration of three music professors, Mark Kirschenmann, Katri Ervamaa, and Michael Gould, who call themselves E3Q—a reference to East Quad dormitory, where each works in the Residential College. Their startling improvisations involving trumpet, percussion, violoncello, and electronics may not be the stuff of commercial radio, but they

remain exemplars of U-M's commitment to musical diversity.

Though Block M's catalog is still small, the incredible span of musical achievement at the University promises to turn it into a hub of eclectic tunes, from classical to jazz to electronica. For more information, or to give Block M a listen, go to the website at [www.blockmrecords.org](http://www.blockmrecords.org). **MT**

## BIG NEWS ABOUT BLACK HOLES

**W**oe betide any object that falls within a black hole's "event horizon," the gravitational point of no return. Black holes—stars that have collapsed in on themselves—are so massive that their gravitational force prevents even light from escaping. The vortex is powerful enough to alter matter, space, and even time.

Astronomers have theorized much about black holes ever since Einstein predicted their existence about a century ago. But even though scientists have found real black holes in space, it's been difficult to observe what actually goes on around them.

Now, using an orbiting X-ray telescope, a team of astronomers from U-M, MIT, and Amsterdam University have plucked valuable information from a black hole and companion star called GRO-J1655-40.

One hypothesis about black holes is that matter can orbit them in a stable manner, as long as it doesn't get too close to the event horizon. At GRO-J1655-40, gas from the star is being drawn into the black hole's orbit. But even orbiting a black hole is no picnic. Jon Miller, the U-M astronomy professor who worked on the project, says the gas superheats to 10 million degrees, and rockets through its 240-mile orbit at a mind-boggling 300–450

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Lin Jones, U-M Photo Services. Law School, autumn 2005.



revolutions per second. No wonder Miller refers to this neighborhood as an "extreme spacetime environment."

The same factors that make a black hole such a nasty place to visit also unlock its secrets. Miller says the superheated, orbiting gas is visible in the X-ray spectrum, and the astronomers were able to measure its emissions twice in a nine-year period—a rare opportunity that let them estimate the black hole's rate of spin. It's a long-held theory that all objects in the universe spin. These observations provide strong and unique evidence that this theory holds even in the unimaginable chaos of a black hole. **MT**

## THE COUPLE THAT WORSHIPS TOGETHER...

Researchers investigating marriage and divorce have stumbled upon a peculiar phenomenon. Couples who attend church together are more likely to stay together than couples who attend separately. Edna Brown, a former psychology research fellow in U-M's Institute for Social Research now at the University of Tennessee, led a team as part of the Early Years of Marriage project, which has followed 373 couples since 1986.

Remarkably, though there's a distinct difference between couples who do and do not attend church together, the study found no difference in divorce rates between those individuals who attend church regularly and those who never do. A couple's marital stability, in short, seems to depend less on whether each individual worships in church or not, and more on whether they do so together as a couple.

What else contributes to remaining married? For women, the likelihood of staying hitched increases with education level. For men, income is decisive: the more they earn, the less likely they are to divorce. **MT**

## ANOTHER REASON TO EAT BETTER AND LOSE WEIGHT— AND WHY IT'S HARD TO DO SO

The old saying "three out of five ain't bad" might be true in sports. But when it comes to your heart, three out of five can definitely be bad, says Melvyn Rubenfire, M.D., director of Preventive Cardiology at the U-M Cardiovascular Center.

More and more doctors agree that there are five basic factors that can lead to heart disease and diabetes—and that anyone with at least three of these characteristics is at especially high risk. Many Americans, even those who think they're perfectly healthy, have at least three, Rubenfire says.

The medical name for this collection of risks is *metabolic syndrome*, sometimes called Syndrome X. Although there's some debate over exactly what test results a person should have to be diagnosed with metabolic syndrome, Rubenfire explains that there are five key risk factors to look at:

- **Blood pressure** that's at or above 135/95, or that's being lowered by drugs
- **Weight**, especially if it's concentrated around the middle rather than the hips, causing a waist measurement over 40 inches (men) or 35 inches (women)
- **High blood sugars**, measuring over 100 on a test conducted in the morning before breakfast
- **Triglycerides**, a kind of fat in the blood, especially if it measures over 150
- **Low levels of "good" cholesterol** (which is earned through exercise): below 40 in a man or 50 in a woman

"None of these values is considered a major risk factor by itself," Rubenfire explains. "They're all actually normal values, but when put together, three or more of them constitute a very high risk."

In fact, he says, these different factors seem to exacerbate one another, interacting in a way that makes a person more likely to have heart disease or develop diabetes in the future. People with metabolic syndrome are two to four times as likely to have a heart attack or stroke, and five times more likely to have diabetes over the long term.

Metabolic syndrome isn't a disease, he explains, but rather a collection of warning signs that the body isn't dealing well with the built-up effects of unhealthy diet or lifestyle and inherited traits.

How do you reduce the risk of metabolic syndrome and its attendant diseases? Through those old stand-bys doctors have recommended for years: exercise, eat right, quit smoking, and deal with stress.

The sooner a person realizes that he or she is at risk of heart disease and diabetes because of the "three out of five" risk factors, the sooner he or she can do something about it. "It's a preventable problem," Rubenfire concludes. "We can prevent diabetes, we can prevent heart disease, and it doesn't require medication. It requires only a change in your willingness to exercise and diet."

The advice is simple, but it's easier said than done. Why can it be so tough to avoid unhealthy foods and keep off the pounds? Some intriguing answers are suggested in a pair of U-M studies:

**HORMONES AND WEIGHT LOSS:** Jeff Horowitz, assistant professor of kinesiology, is undertaking a study to determine why some people gain more weight than others—even when they eat exactly the same diet and exercise the same amount. While he has not yet drawn any conclusions, preliminary data suggest that the culprit may be growth hormone.

Growth hormone is present in every person, and its levels vary throughout the day, spiking several times, then dropping off. Studies of rats and humans seem to indicate that some people have higher overall levels of growth hormone, and that their daily fluctuations spike higher than others. Those folks, whether rats or people, seem to put on the most weight and have more trouble taking it off.

**THE SWEET SPOT:** U-M psychology professor Kent Berridge and postdoctoral research associate Susan Pecina have discovered a "pleasure spot" in the brains of rats. Sweet tastes trigger a chemical response in this "tiny brain pleasure cube," says Berridge. That in turn drives the rats to eat six times more sweets than other foods.

The researchers believe that when the rats eat sweets, the brain registers the sensation as it would any other, but certain neural systems "paint" a sense of pleasure on top of that experience. It's a complicated set of interactions, and Berridge and Pecina believe it could also illuminate the causes of eating disorders and drug addictions. Meanwhile, it's just one more proof that the temptation to dig into that cookie jar is tough to resist. **MT**



## BETTER LIVING THROUGH STUDENT ENGINEERS

When Andres Clarens and Tim Towey returned from stints in the Peace Corps, they began working toward graduate degrees in engineering at U-M. But they missed the hands-on development work they had done in the Dominican Republic and Paraguay, respectively, and when they looked around the College of Engineering, they saw, says Clarens, “a need to increase awareness about environmental sustainability, privilege... and appropriate technology here on campus.”

In 2002 they formed a campus chapter of Engineers Without Borders, later renamed BLUElab. Their goal was to bring together like-minded engineering students and faculty and create new opportunities for them to get involved in real-world community aid projects. In just a few years, they've stirred up changes on campus, in the U.S., and abroad.

BLUElab's greatest influence may be on the College of Engineering itself. They've invited experts in “eco-design,” engineering ethics and policy, and other subjects to campus, and they helped create a new

cross-disciplinary course called “Engineering for Community” that helps students think about using their skills for long-term social good.

Possibly their most interesting study showed how the University can turn used food grease from its cafeterias into bio-diesel fuel to power its bus fleet. That study has turned into a pilot project to begin making it happen.

Finally, the group has sent student volunteers to the Dominican Republic, where the young engineers work with local communities to build low-cost but effective water purification systems.

Towey graduated in 2004, and Clarens expects to receive his PhD in 2007, but he trusts that BLUElab will forge ahead when he's gone. He says Manuel Hernandez, a PhD student from Nicaragua, has become a vital leader in the group, and together they are trying to structure the organization “so it can be easily managed by a small group of committed students.” **MT**



In Rancho al Medio, Dominican Republic, BLUElab volunteers Robert Penfold (foreground), Manuel Hernandez (wearing bandanna), and community members sample stream water as a possible source for a new aqueduct. Through BLUElab, U-M engineering students undertake community-aid projects on campus, nationally, and abroad.

## MORE FUNDING FOR SUSTAINABILITY

Already sprouting a multitude of cross-disciplinary projects to help the environment (see “A New Climate,” p. 12), the University received a great boost in November toward becoming a powerhouse in sustainability studies. The Graham Foundation, established by Donald Graham and his wife Ingrid, donated \$5.25 million to encourage U-M's work in sustainability. That gift

was matched by one from the Office of the Provost. That combined \$10.5 million gift creates the Graham Environmental Sustainability Institute.

The Institute's reach will include climate change, but it will also promote U-M's work in five areas: energy, freshwater systems, human health and its link to the changing environment, global change and biodiversity, and infrastructure and manufacturing systems. As the term implies, sustainability refers to approaches that attempt to meet the needs of the present without compromising the environment for future generations.

Besides promoting research and teaching in these areas, one of the Institute's main objectives will be to foster cross-disciplinary work. The Institute will offer seed money to get multi-disciplinary projects hatched, and will host events that can bring together researchers who might otherwise never learn of one another's work.

The Graham gift is the latest of several important donations meant to propel U-M's cross-disciplinary work on sustainability. Other donors include Frederick and Barbara Erb, whose support linked the Ross Business School and the School of Natural

Resources and Environment through the Erb Institute for Global Sustainable Enterprise; and the Wege Foundation, supporter of SNRE's Center for Sustainable Studies. On climate change and other sustainability issues, these contributions will help focus the whirlwind of activity that the University has already started to generate. **MT**

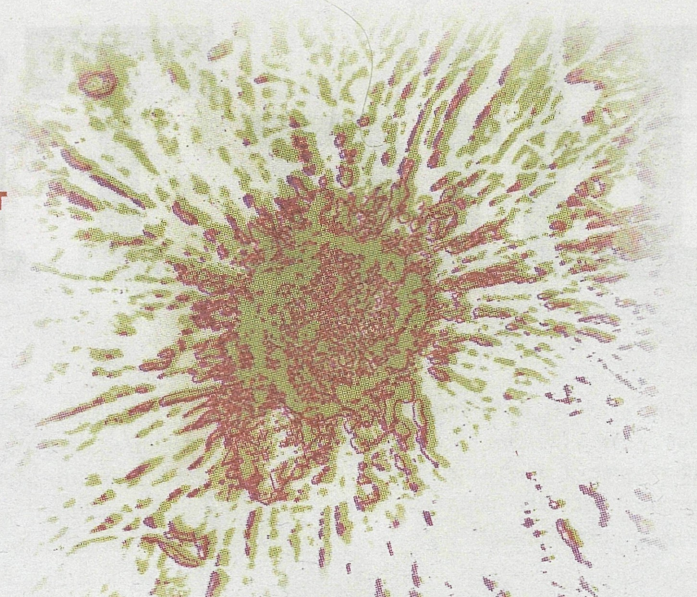






# CAN CANCER BE DEFEATED?

DECADES OF RESEARCH  
HAVE YIELDED IMPRES-  
SIVE GAINS IN THE FIGHT  
AGAINST CANCER,  
BUT SOME PHYSICIANS  
WONDER JUST HOW  
MUCH PROGRESS WE'VE  
REALLY MADE.



BY KARL LEIF BATES

We've been calling it the "War on Cancer" but it was never officially declared as such.

As this massive campaign enters its 35th year of multi-billion-dollar budgets, a few troublesome questions remain: "Are we winning or losing? Do we know this enemy any better than we did?"

More than 1.5 million academic research papers produced over that time would indicate we know a lot more about cancer. For one thing, we know we're actually fighting hundreds of kinds of cancer, making the singular cure President Richard Nixon announced as a goal in 1971 highly unlikely. Real progress has been shown in survival rates for a few select cancers like cervical, prostate, and breast. Prostate cancer deaths have fallen 25 percent in just the last decade, for example.

But the overall incidence of cancer and the death rates for some of the worst actors, like cancers of the lung and pancreas, tell a less encouraging story. More than a half a million American cancer deaths per year dwarf the casualty numbers of any shooting war we've ever

fought. Adjusted to account for the graying of Americans, the percentage of people dying from cancer really hasn't changed significantly since 1971.

"If you want to look at the glass half empty, it's really easy to say 'look how poorly we've done for patients with advanced-stage cancers,'" says Eric Fearon, the Emanuel N. Maisel Professor of Oncology and associate director for basic science at U-M's Comprehensive Cancer Center. "But the glass half full view says we've come an enormous distance."

\* \* \*

Except for a few select cancers, the percentage of people dying from cancer has not changed significantly.

\* \* \*

The progress is excruciatingly slow. "In terms of advanced cancer, using cure as the measure of success, it's really hard to see that we're winning the war," says Fearon, a lanky Mainer with retro glasses and an easy smile. "Better prevention

and screening will pay off over the next 10, 15, 20 years. But that's not good news for a patient or family affected by cancer now."

Cancer researchers are growing somewhat used to having this sort of conversation. A provocative 10,000-word critique of the war on cancer in *Fortune Magazine* last year has been must-reading in their field, and the subject of many cocktail party discussions.

In a nutshell, author Clifton Leaf argued that our multi-billion-dollar "war on cancer" has drifted away from its goals, being drawn instead into numerous, duplicative, and somewhat irrelevant local skirmishes, while the enemy continues just as strong as it was in 1971.

"What happens is that people underestimate the complexity of the problem every time," says Kenneth Pienta, a prostate cancer specialist in Internal Medicine and the Cancer Center.

He squeezes the half-inch tip of his left forefinger with his fist until it turns crimson. "This is about one cubic centimeter. That's a billion cells," Pienta



Eric Fearon

says. "And that's when we can first find cancer." Each of those billion cells contains 3 billion bits of DNA code, and somewhere in each cell, that code has gone a little haywire. "That's 10 to the 18th problems right there," says Pienta. "And then it doubles!"

The leading cause of cancer, human behavior, may prove to be the most complex problem of all.

"Most cancers are behaviorally based," says behavioral scientist Victor Strecher almost before sitting down to an interview.



As director of the Health Media Research Laboratory and cancer prevention and control in the Cancer Center, Strecher has a decade of data to prove that prevention could be the best bang for our cancer bucks.

“Ninety-five percent of lung cancer deaths occur in smokers. Thirty percent of all cancers are probably related to smoking,” he says. So why spend all this money taking apart the machinery of cancers if you could prevent most of them from happening in the first place?

In part because behavior change is harder to quantify, harder to measure, and



MARTIN VLOET

Kenneth Pienta

apparently, harder to fund. “People just don’t regard behavior change as a real science; it’s mushier,” says Strecher, who has the soothing voice and calm demeanor of a psychologist.

Not only is it exceedingly difficult to tell Americans to take better care of their bodies, education by itself won’t be enough, he adds. Smokers already know the habit is bad. What they really need most is help to quit. More than 90 percent of smokers try to quit at one time or another but only 3 percent succeed without help, Strecher says.

Taking this sort of information into account, Leaf and other critics charge that research funding is aiming at the wrong targets altogether, looking for ‘cures’ and measuring tumor shrinkage only in late-stage cancer patients when it might make more sense to pursue early detection and prevention.

Pienta says that’s precisely what Michigan researchers are pursuing. The general trend in cancer is toward finding cancer earlier, maybe even finding pre-cancer, and using what Pienta calls “smaller hammers”—more specific therapies that don’t cause as much collateral damage to the patient or as many miserable side effects.



MARTIN VLOET

Victor Strecher

“Here at Michigan, we do things a little differently,” says Pienta. Cancer Center investigators frequently reach out to disparate fields like physics and engineering for help with their ideas, and multidisciplinary research centers are the norm. “We build these cooperative environments and use pilot money to investigate new problems, so you’re not taking away from [a basic research grant], you’re adding value to it.” Even when younger U-M researchers receive a highly focused research grant from the National Cancer Institute, they find themselves surrounded by multidisciplinary teams, and resources that encourage them to branch out and follow their science where it leads, Pienta said.

Some recent successes include the discovery, by Arul Chinnaiyan of Urology and Pathology, of biomarkers which could lead to a test for early detection of prostate cancer that is four or five times more sensitive than the PSA test now in use.

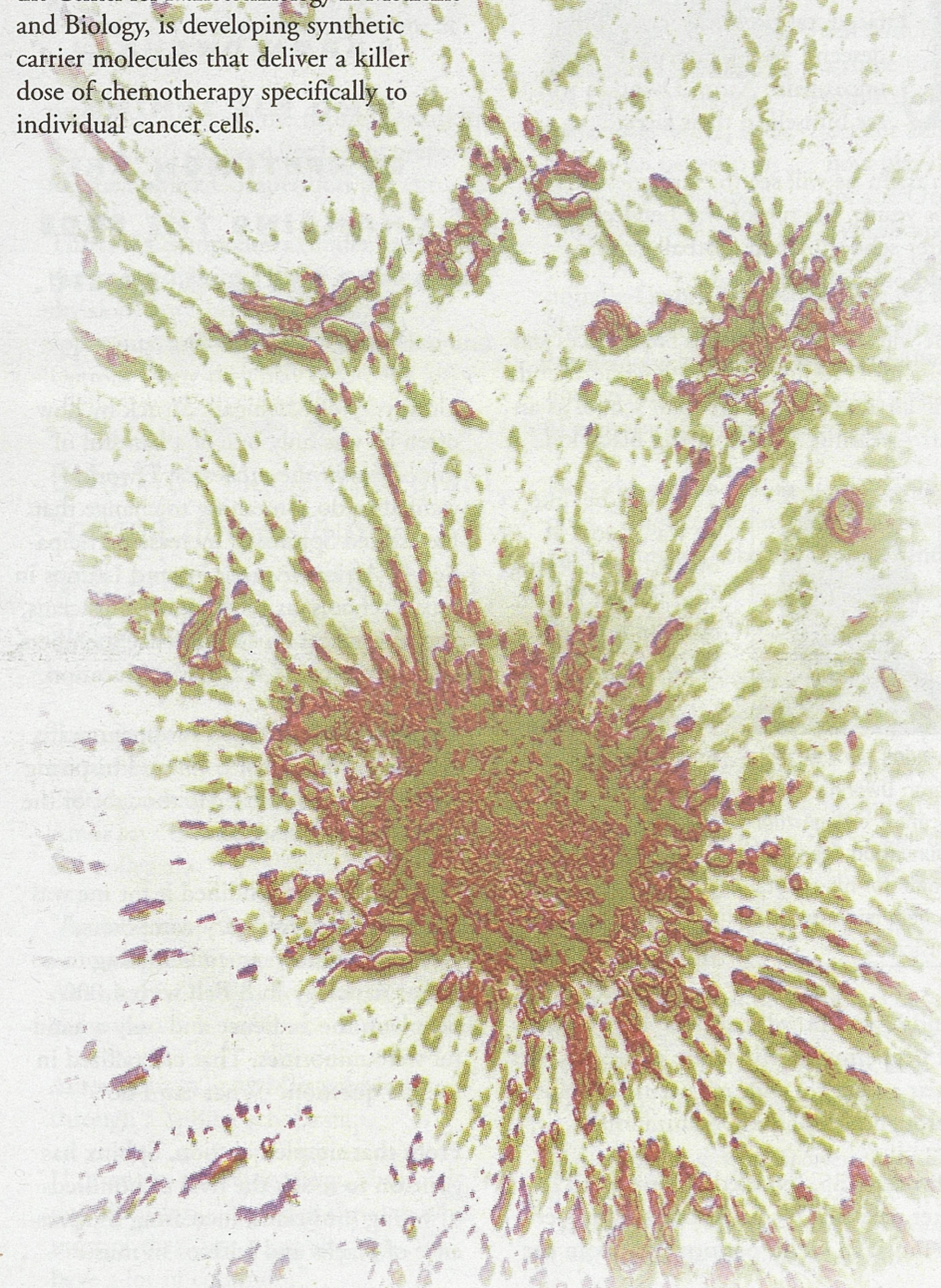
Mark Kaminski, director of the Lymphoma/Leukemia Program in the Cancer Center, is perfecting the use of immune system molecules armed with radiation to act as guided missiles, homing in on lymphoma cancer cells and destroying them individually.

James Baker, the Ruth Dow Doan Professor of Nanotechnology and director of the Center for Nanotechnology in Medicine and Biology, is developing synthetic carrier molecules that deliver a killer dose of chemotherapy specifically to individual cancer cells.

“I think in the next 10 to 15 years we’ll see major improvements in the treatment of advanced cancers, as well as increased success in picking up pre-cancers,” Fearon says.

The cancer fight is a war, and it has been prolonged and nasty, Pienta acknowledges. “It’s a war that hurts because we lose people every day. But the war is more like World War II, not Vietnam,” he says. “We have a very clear goal and we’re making a slow, steady advance against this enemy.” **MT**

*Karl Bates is Director of Life Sciences Communications at U-M.*





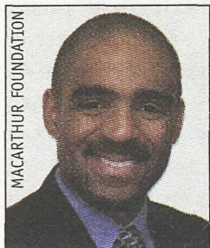
# MUSICAL GENIUS

BY DAN SHINE

Come February, a group of fresh-faced, talented musicians will descend upon Ann Arbor. And once again, Aaron Dworkin will see himself in their faces.

In them he will see the struggles of his youth, the tug-of-war between after-school pickup football games and practicing his music.

He will see their black and brown faces and remember feeling ostracized while attending an almost all-white high school as an Afro-wearing, violin-playing black kid.



In 2005, at age 35, Aaron Dworkin received a MacArthur Foundation "genius grant" for his efforts to help minority musicians.

And Dworkin will continue his mission of peppering mostly white orchestras and their audiences with musicians of color through his Sphinx Organization.

Dworkin, 35, founded Sphinx in 1996 after receiving his bachelor's and master's of music in violin performance from the

University of Michigan. Struck by how often he was only one of a handful of minorities in the orchestra, Dworkin wanted to do something to change that. He created Sphinx to increase participation of African-Americans and Latinos in music schools, as professional musicians, and as classical music audience members, and to improve K-12 music education.

They will be, like he was, a sort of outcast for favoring Mozart and Haydn over hip-hop and R&B. But, like him, the musicians will forge ahead with their love of classical music, keeping a constant loop of sonatas, partitas, and suites rolling through their head.

He gives credit to U-M for opening his eyes to composers of color and inspiring him to create Sphinx. He thought of the idea while still a student.

"One thing that solidified it for me was learning about minority composers," Dworkin says. "I remember going to a performance by Josh Bell with 4,000 people in the audience and only a handful were minorities. That crystallized in me the question, 'What can I do?'"

From that simple question, Sphinx has gone on to touch the lives of hundreds of young musicians, increasing the presence of blacks and Latinos in music

schools, orchestras, and classical music audiences. Last fall, it earned Dworkin a prestigious MacArthur Fellowship—the so-called "genius grant."

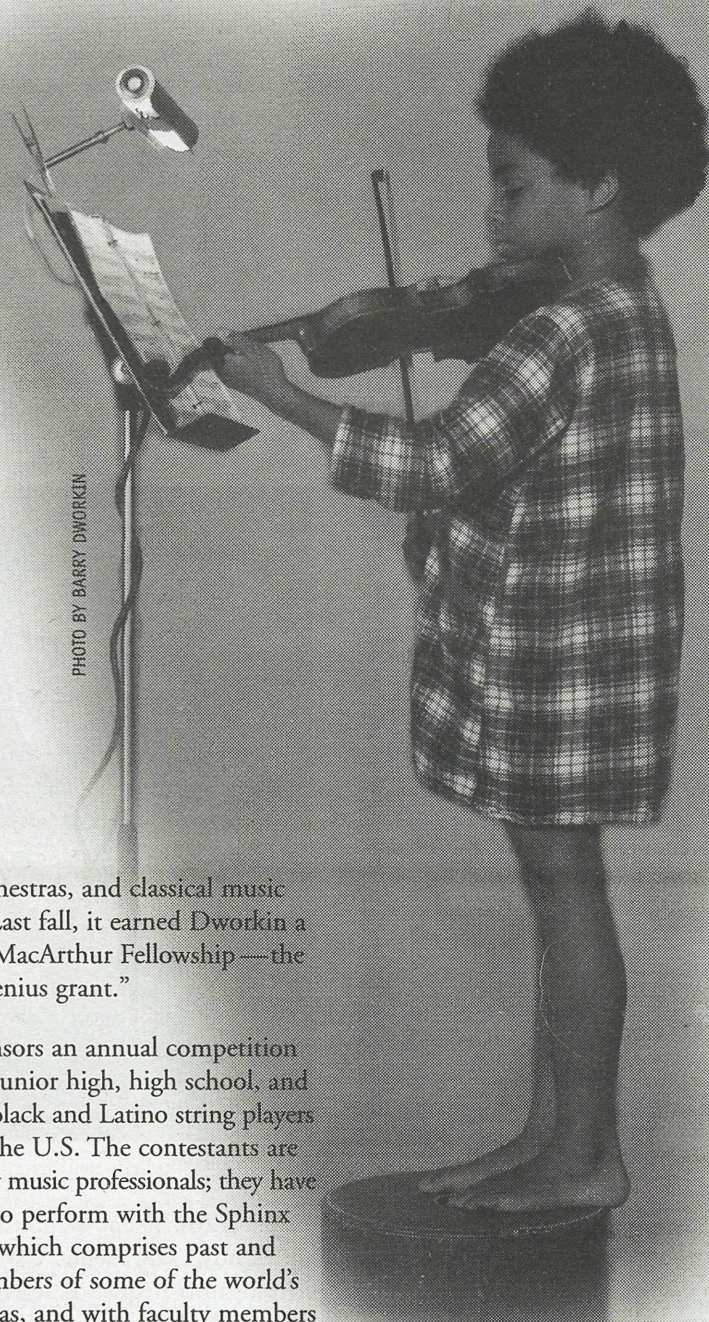
Sphinx sponsors an annual competition open to all junior high, high school, and college-age black and Latino string players residing in the U.S. The contestants are mentored by music professionals; they have the chance to perform with the Sphinx Symphony, which comprises past and current members of some of the world's top orchestras, and with faculty members from some of the leading music schools.

"I just wanted a competition where other students like me could participate, meet each other, and get resources to pursue our careers," Dworkin says. "We wanted to be able to showcase ourselves."

Besides the competition, Sphinx brings classical music into minority communities through two outreach programs. Sphinx musicians perform at schools, community centers, and libraries to expose new

AARON DWORKIN  
AND HIS SPHINX  
COMPETITION ARE  
CHANGING THE FACE  
OF CLASSICAL MUSIC.

PHOTO BY BARRY DWORKIN



Aaron Dworkin practicing. As a violin-playing black kid in a mostly white city, Dworkin felt ostracized. "Absolutely I wanted to be like other kids."

audiences—especially children—to classical music. With the help of sponsors, Sphinx provides full scholarships to prestigious music programs as well as top summer programs, loans instruments to those in need, and participates in a recital series at Borders bookstores.



And almost none of it happened. Dworkin's interest in music nearly ended before it began.

He started playing violin at age five but as he grew older he yearned for the care-free, practice-free lifestyle of his friends.

"Absolutely, there was a sense of jealousy," he says. "I wanted to be like other kids."

Growing up in nearly all-white Hershey, Pennsylvania, with his adoptive parents, who are white, also made things tough. He found it hard to make friends and felt like he didn't fit in.

"With the ostracism, I was on a downhill spiral, rebelling, feeling totally alienated," he says.

Before his junior year in high school, Dworkin's parents suggested—strongly—that he consider attending the Interlochen Center for the Arts in northern Michigan.

"My parents...forced it on me," he says. "I didn't want to go; I didn't want to go into a foreign environment. But once I visited, it made sense to me. It was a really amazing place.... To be able to go

into an environment that had so much focus on music, on art form."

Surrounded by people who cherished music like he did, Dworkin flourished. Interlochen, he says, "saved my life."

Before Dworkin could attend U-M, after two years at Penn State, he had to work and save money. But it was money well spent, he says.

U-M allowed him the creative freedom to explore his interests. He discovered music by black and Latino composers, something he never knew existed. Professors let him deviate from the standard music school repertoire to arrange music by Boys II Men and Mariah Carey.

During his time at U-M, Dworkin shared his dreams with others. Kenneth Fischer, president of the University Musical Society, got a visit from Dworkin while he was a graduate student.

"I found Aaron as a person and Aaron's idea—I want to change the face of America's orchestras—absolutely compelling," Fischer says. "He was so clear about what he wanted to do and about his idea and mean of achieving it—the Sphinx Competition."

In addition to inspiring minority musicians with the message that classical music is "cool, fun, and rewarding," Sphinx is also having an impact on classical music audiences, Fischer says.

Sphinx "is shooting down the old adage that the reason there aren't more minorities in orchestras is that 'they just aren't out there,'" he says. "Aaron, by identifying, rewarding, and providing opportunities for minority performers, is letting the

Jason Amos won a Sphinx scholarship to U-M. Here he teaches a master class in one of Sphinx's outreach programs.

world know that they are out there. They just need to be given a chance."

Dworkin encountered countless nay-sayers along the way, many who "gave him all the reasons why he would fail and too many others who simply ignored him," Fischer says. "Thank God he didn't let those people discourage him."

Dworkin's latest accolade, the MacArthur Fellowship, will allow him to do much more. It provides him with \$500,000 over the next five years, and the opportunity to ensure that Sphinx continues to thrive.

The award changes things "dramatically," Dworkin says. "The award raised our visibility and provides a chance at sustainability."

While his eye is on the future, Dworkin and his staff of seven are busily preparing for the Sphinx Competition in February.

Thirty-six competitors (under age 18 in the junior division, 18-26 in the senior division) have been selected from 93 applicants, and invited to Ann Arbor and Detroit, where they play before the judges.



**Dworkin's MacArthur grant "raised our visibility and provides a chance at sustainability."**



Jason Amos, a junior at U-M in viola performance, was voted "best tone" in 2003 and was a semifinalist in 2005. Amos says the competition is stressful but collegial.

"At the end of the day when we all leave, we're going back to very different situations," Amos says. "So we cherish each other's company while we're around each other."

Amos' tuition at U-M is paid for through a Sphinx scholarship.

"I often see myself in them, absolutely," says Dworkin. "I've been through what most of them are going through. We have a lot in common."

But true to form, Dworkin resists any temptation to put his feet up and reflect on all he has accomplished. "I try not to do that too much," he says. "Typically I'm too busy. I'm all about efficiency. Resting on one's laurels doesn't help in life's work."

That lesson is one that many of his young charges have taken to heart. Besides moving on to play in big orchestras,



Jen Arnold, a four-time Sphinx semi-finalist, wants to carry on Dworkin's legacy of helping young minority musicians.

many are following Dworkin's example and trying to help the next generation.

Jen Arnold was a three-time Sphinx competitor and now plays viola for the Oregon Symphony.

Arnold says

initially Dworkin's goal was lost on her. She attended the Cleveland Institute of Music, which she says was culturally diverse "so I wasn't as aware" of the lack of minorities in classical music.

Now she sees the value of what Sphinx does. "I notice in our audiences barely any minorities," she says. "Even when [black conductor] James DePriest was here that didn't have much effect."

She would like to continue Dworkin's work in her adopted hometown of Portland.

"I think there's a need," Arnold says. "It's a small minority community but if I can get people interested in the music, even a simple knowledge of it, that'd be great."

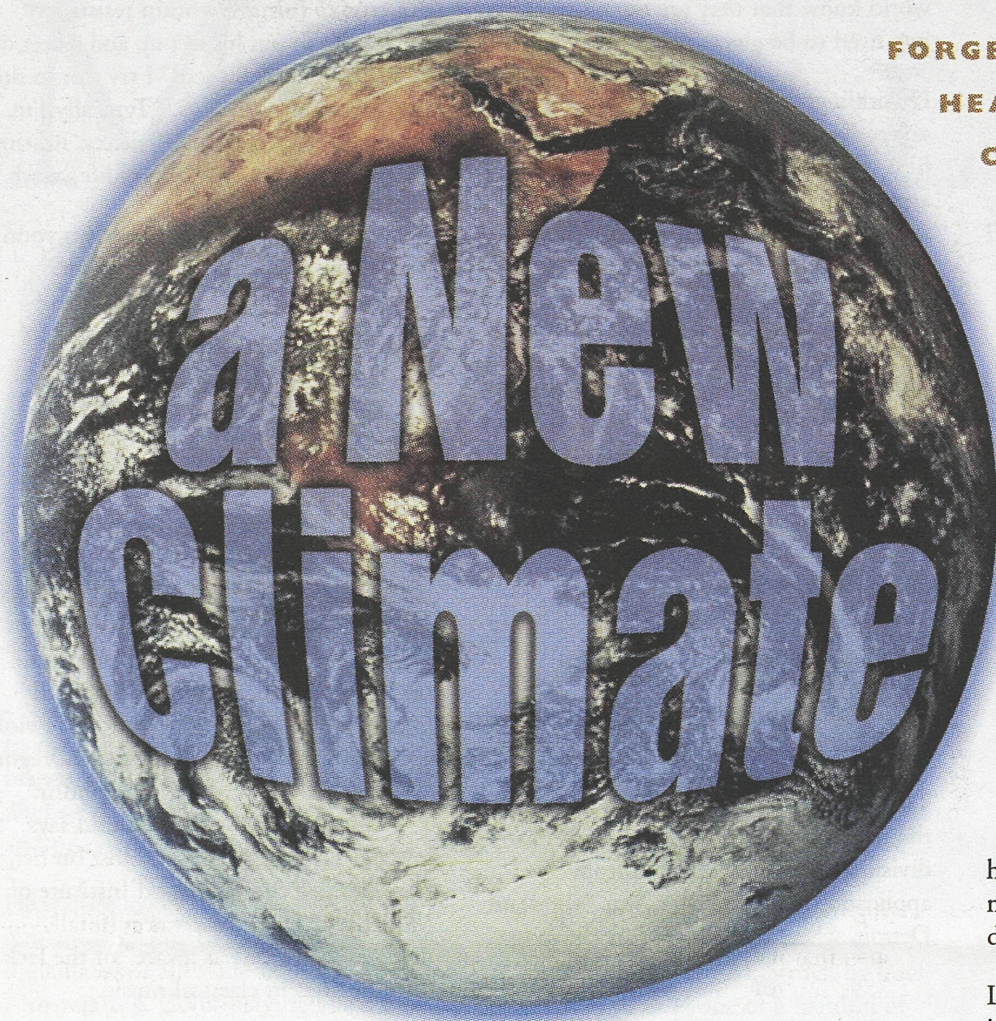
When she succeeds, she'll be carrying on Dworkin's legacy of willpower and love for music. Future great musicians are out there, just waiting for the chance to be inspired, and to blossom, like Dworkin, into another great American success story. **MT**

*Dan Shine, a former reporter at the Dallas Morning News and Detroit Free Press, is manager of external communications for U-M's William Davidson Institute.*



COURTESY SPHINX ORGANIZATION





**FORGET WHAT YOU'VE  
HEARD ABOUT A CLIMATE  
CHANGE "DEBATE"—  
THE SCIENTIFIC  
CONSENSUS SAYS  
GLOBAL WARMING  
IS UNDERWAY.  
THE REAL  
QUESTION, ARGUE  
U-M PROFESSORS  
OF SCIENCE,  
BUSINESS, LAW,  
AND ENGINEERING,  
IS, "WHAT NEXT?"**

BY JOHN LOFY

**N**ot long ago, the last place anyone would have gone looking for an expert on global warming was a business school. But at U-M's Ross School of Business, you can find not one but two professors who are facilitating some of the University's most interesting work on climate.

Professors Andrew Hoffman and Thomas Lyon are not typical b-school teachers: each holds a joint appointment with the School of Natural Resources and Environment (SNRE), via the Erb Institute for Global Sustainable Enterprise, U-M's crossroads for business and the environment. Both were hired in 2004 as endowed professors—the funding donated by Barbara and Frederick Erb, Dow Chemical, and the concrete company Holcim (U.S.)—with the expectation that they would

help bridge the gap between environmentalists and business people. They're doing that and more.

Last fall, Hoffman and Lyon convened an informal conference on climate change. They invited University climate researchers and anyone else interested to listen to a few expert speakers and schmooze. The conference would introduce climate change experts to one another, promote cross-disciplinary work, and develop ways of influencing public debate.

The conference was especially interesting for two reasons. First was the fact that many U-M faculty from several disciplines are producing cutting-edge research on climate change. Besides climate scientists studying the history and composition of the atmosphere, there are engineers struggling to understand how technologies can mitigate or prevent further warming. Experts in business, law, and social science are looking at the problem's political and economic dimensions.

These researchers are eager to collaborate. U-M is witnessing an explosion of interest in cross-disciplinary work on global

warming. The conference organized by Hoffman and Lyon was supposed to be a one-time event, but interest was so high they turned it into a regular meeting they call a Faculty Forum. Meanwhile, Ted Parson, a professor at SNRE and the Law School, has created a seminar series asking experts from many fields to explore tough climate questions. Engineering professor Peter Adriaens is helping organize projects both within the

\* \* \*

**"Is climate change happening? It's a done deal."**

\* \* \*

College of Engineering and across campus. The Center for Advancing Research and Solutions for Society is fostering convocations of experts both within and outside the University. And U-M announced in November the creation of the Graham Environmental Sustainability Institute [see p. 5], which will provide seed money for researchers to develop large grant proposals for cross-disciplinary work on several environmental issues, climate change included.



The second interesting conclusion of that first conference was the unanimous opinion that climate change is “real,” and already underway.

Much of the public believes there’s contentious argument among climate scientists. In truth, there’s almost no disagreement. “Is climate change happening? It’s a done deal,” says Christopher Poulsen, Assistant Professor of Geological Science and an expert on the history of earth’s climate. “Virtually every scientist believes it’s been proven.” All of the researchers interviewed for this story said that they not only believed the science, but that they knew of no credible research that cast serious doubt on projections of warming temperatures.

Despite the advances that have led to a consensus, many scientific uncertainties remain. Solving the political, economic, and social problems will be even tougher. To watch some of the University’s top people rise to the challenge is to get a front row seat at one of the defining issues of our time.

### Taking on the Skeptics

Henry Pollack is professor emeritus of Geological Sciences and a prominent expert on climate change. Bald-headed and friendly, he explains the science of climate change with the clarity and patience one would expect of a past winner of U-M’s Excellence in Undergraduate Teaching Award. Pollack invest-



A few of U-M’s climate change researchers (top l-r): Associate Professor Thomas Lyon, Professor Knute Nadelhoffer, Professor Richard Rood.

(bottom l-r): Professor Peter Adriaens, Associate Professor Andrew Hoffman, Professor Emeritus Henry Pollack.

ed years into researching the atmosphere from an unlikely place: underground.

Along with other scientists around the world, Pollack drilled into the earth to take the temperature of rocks. “If the air is warming,” he explains, “the rocks will feel it. It’s like when you put a rock by a campfire. Even when the fire’s gone, the rock has a ‘memory’ of it” and remains warm. By “poking 800 holes” around the world, he and his colleagues “can look back five hundred, sometimes a thousand years before the climate change signal peters out.”

His finding: from 500 years ago to today, the earth has warmed one degree Celsius—with half of that rise coming in the 20th century.

That conclusion is consistent with research in other fields. Marine scientists have found the oceans warming. Atmospheric scientists have tracked warmer air temperatures. A study published by *Science* in December 2004, surveyed 928 peer-reviewed papers on the subject and found “near universal” agreement that warming is underway. “The science” on climate change, he says, “is the least of the uncertainties.”

That science is well-known and straightforward. Everyone agrees the atmosphere contains “heat-trapping” gases, especially carbon dioxide and water vapor, that hold on to the sun’s heat, preventing it from escaping into space. This storage of heat is called the Greenhouse Effect, and without it, life on earth would be impossible. Global warming occurs because as humans burn forests and fossil fuels, which contain carbon, the amount of carbon dioxide in the atmosphere increases, meaning more heat is retained.

Yet skeptics and naysayers remain. A few are scientists (though U-M professors tend to dismiss the credibility of most). Others are public figures with little or no science background, such as Senator James Inhofe (R-Okla.), who accuses environmentalists of hyping the issue to raise funds, and novelist Michael Crichton, author of the novel *State of Fear*, which



An assistant to Geology Professor Henry Pollack uses a borehole in Niger to measure the earth’s past temperatures.

portrays environmentalists as so desperate to prove global warming that they cause hurricanes and other disasters.

Pollack answers some central questions and critiques as follows:

- 1) *Are temperatures really getting warmer?* Yes. Even Crichton acknowledges this fact. But doubters say that today’s higher temperatures are not unusual—that it’s been hotter in the past. Skeptics thought they’d won this point last year when a study seemed to reveal serious flaws in the “hockey stick graph,” which showed a spike in modern temperatures. But those criticisms proved insubstantial, even as several other studies verified the original findings. These are some of the hottest years ever.
- 2) *If it is warming, why?* Humans pour eight billion metric tons of carbon into the atmosphere every year. Carbon dioxide levels are the highest they’ve been in at least 650,000 years. Says Poulsen, “Paleoclimate shows us that any time there’s a CO<sub>2</sub> change in the atmosphere, there’s a temperature change. There’s a real clear connection through history.”
- 3) *Could there be other, nonhuman causes?* Highly unlikely. Skeptics argue that current warming is just a natural trend. But, Pollack notes, the sun is in a cool

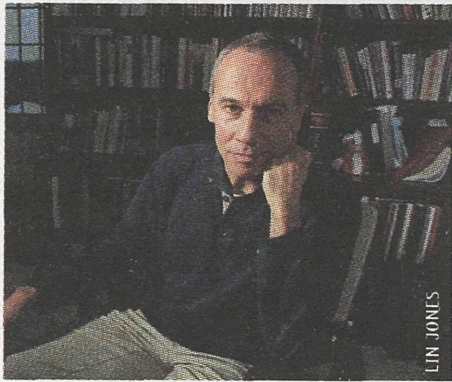
phase, and in the last half-century an unusually high number of volcanic eruptions have blocked sunlight. These and other events should be causing a cooling period.

### Science in the Public Realm

If the science is so well settled, why does the impression of a debate remain? Partly it’s because serious uncertainties do remain. The last ice age was only about 2.5 to 5 degrees Celsius cooler than today. Projections of just how hot the earth will get range from one degree to nine degrees Celsius. As a practical matter, that’s a huge spread: and it means the potential results of global warming run from pretty bad—droughts, storms, and killer heat waves—to calamitous—the collapse, for instance, of entire ecosystems and agricultural production.

Professor Ted Parson, of the Law School and the School of Natural Resources and Environment, has been working on climate change for over 20 years, and has played a national role in other environmental debates, particularly the protection of the ozone layer. Tall, voluble, and erudite, he knows much of the science behind climate change, but his real expertise is public policy. He says there are many reasons this issue remains so contentious.





Ted Parson.

For one thing, not everyone plays fair with the science, he says. "Use the word 'skeptics' in quotes. Some who are pointing out honest holes in the data are being used by policy people. Others are contrarians. I know some who are bald-faced liars," says Parson. Pollack calls such doubters "manufacturers of uncertainty, who want you to be confused."

But Parson goes on to paint a more complicated picture. In an interview and a new book, *The Science and Politics of Global Climate Change: A Guide to the Debate*, he observes that there's an inherent conflict between the realms of science and public policy. The language of science is, by necessity, one of caution and provisional estimates. Einstein reportedly said, "No amount of experimentation can ever prove me right; a single experiment can prove me wrong." Scientists always speak with that next experiment in mind.

Not so politicians and pundits. While a scientist who makes sweeping generalizations becomes suspect, other public figures get attention for unequivocal statements. The public arena doesn't offer scientists a fair fight; partisans on both sides of an issue get impatient for certainty, but good scientists won't give it to them. They prefer to talk of probabilities and likelihoods. Science and public policy speak different languages.

That communication problem is exacerbated by journalists. Reporters' approach to any story is to be fair and objective, to present both sides. So even when the vast majority of scientists agree that climate change (or, say, evolution) stands on firm ground, journalists often feel obliged to give equal time to naysayers. Ironically, it's often the most scrupulous journalists—those most interested in being fair—who fall into the trap.

On this issue, Pollack says, "If journalists show both sides, it says to me they don't know the science.... It tells me there's been a failure of science education in America."

### Uncertainty

While skeptics use the uncertainties of climate science to attack the whole theory, several U-M researchers point out that uncertainty cuts both ways. Things could be better—or worse—than scientists expect.

Geologist Poulsen, for instance, observes that in the history of climate, there have been periods of slow change, "then, over the course of three or five years, there's a huge change in climate.... Climate isn't a steady, plodding creature. It can change quickly, and we don't understand what tips it." No one has any idea whether warming will be gradual and steady, or abrupt.

"Here's what worries me the most," says Perry Samson, Professor in Atmospheric, Oceanic, and Space Sciences (AOSS). In the 1970s, he says, scientists calculated that CFCs could deplete the ozone layer. Two of those scientists won a Nobel prize. But "as bright as those guys were, they didn't predict the hole in the ozone layer," Samson says. The discovery of the Antarctic ozone hole in the mid-1980s surprised scientists; ozone depletion was more severe, and in a different location, than they'd expected. What, he wonders, is the global warming equivalent of the ozone hole? What might be waiting out there to surprise us?

AOSS Professor Richard Rood, who worked for NASA for 20 years before coming to U-M and is an expert on regional climate, says he's already encountered two big surprises. One is the appearance of potentially ozone-destroying

clouds of nitric acid in the upper atmosphere. "We didn't even know you could get clouds of nitric acid," he says. The second is the speed at which polar ice is melting. "The melting," he says, "is dynamic." In the Arctic, white ice that reflects sunlight is giving way to open water, which is darker and absorbs heat, causing further melting. In Antarctica, as huge ice shelves break off the continent, inland ice melts and slides ever faster toward the ocean.

Current warming, Rood says, may "challenge the fabric of our co-evolution with the weather and climate."

### A Change in Thinking

Assessments like that lead many critics to accuse climate scientists of spreading fear. But more and more researchers are starting to think about climate change's new opportunities. Business and environment professor Hoffman is adamant that government and industry leaders must take steps to reduce carbon emissions. But if reductions could hurt the economy, they can also help. "Some [economic] sectors will be hurt," he says, "but others will develop. Stop thinking about jobs lost, and think of jobs created." He fears that if the United States fails to embrace such opportunities, it will lose out. "Other countries doing this work does us no good," he says. "The European Union uses half the energy per GDP that we

do; every dollar



spent on inefficient processes is a dollar we can't spend somewhere else. "Forget the environment for a moment. What's the business environment going to be? Regulations are coming," he says, even if the federal government doesn't create them. "States are [reducing emissions], city mayors are doing it, businesses are doing it. Forget the science. Looking forward, something's coming" to change the market.

The search for opportunities led Hoffman and Lyon to organize that first conference. Hoffman believes it is imperative to bring together a cross-disciplinary crowd. "Climate change is the environmental issue right now," he says. "It has a magnitude like no other. It requires input from so many different systems—economics, international relations, science...."

He believes U-M is the ideal place to generate this sort of conversation. "One thing that makes Michigan unique," he says, "is that cross-disciplinary work is more likely here. I've been at other schools, where the 'silo mentality' is much more pronounced." Other professors agree: U-M has always built links between schools and departments. It has a huge number of joint-degree programs and cross-disciplinary institutes, and many faculty have joint appointments.

\* \* \*

If the U.S. fails to embrace the opportunities created by climate change, says Hoffman, it will lose out to competitors.

\* \* \*

"I would love to see Michigan become the go-to place on climate change," says Hoffman, "with every researcher linked in an open network."

It's beginning to happen. U-M is generating cutting-edge research, and it is humming with innovative, cross-disciplinary efforts to augment that research and to put it in language that has a chance of being heard in the public arena.

That's the future at the university. As for the planet? Says Ted Parson, "I study decision-making under uncertainty. I'm pretty optimistic. We'll probably muddle around for 20 to 30 years, then probably do all right." He pauses. "The question is, will it be too late?" **MT**

*John Lofy is interim editor of Michigan Today.*

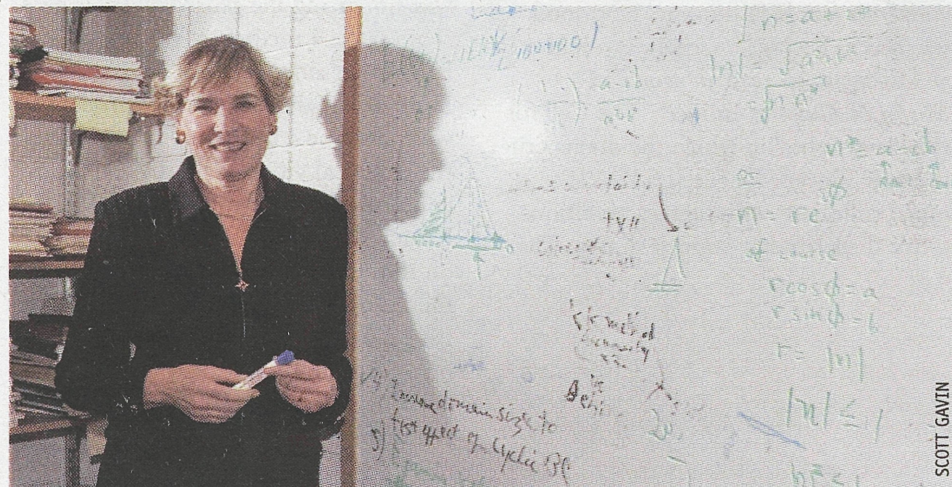


# “THE MOST EXCITING QUESTIONS OF OUR TIME”

Professor Perry Samson, an expert in climate and weather, says climate change “is one of the most exciting questions of our time. If you’re a student in physics, or a math major, come work in [atmospheric science]—we’re working on so much in our field.” Here’s a small sample of the work U-M researchers are doing:

- Joyce Penner, Professor of Atmospheric, Oceanic, and Space Studies (AOSS), says one of the great uncertainties in predicting climate change is the effect of aerosols. She’s not talking about the spray cans of deodorant. Aerosols, to a scientist, are tiny particles in the air—dust, pollution, volcanic ash, cloud vapor. Some aerosols, Penner has found, absorb heat and contribute to warming. Others, such as clouds, block or even reflect sunlight, thereby cooling the earth. The effects of still other particles are unknown. The atmosphere is dense with aerosols, and their net effect uncertain. Do they help or hurt? Penner runs massive calculations and computer simulations to search for answers. Her results will provide insight into just how severe warming will become.

Joyce Penner.



SCOTT GAVIN

- AOSS professor Richard Rood is taking on one of the toughest problems in climate. He’s trying to figure out the regional impacts of warming. These calculations are radically more difficult than figuring out if the earth as a whole will warm. Indeed, most experts now prefer the term “climate change” to “global warming,” because not every place on earth will get warmer. Some places, especially Europe, could well become far colder. It will be crucial to know what to expect for, say, the Great Lakes, and the agricultural lands of California and the Midwest. Rood’s work is just beginning to answer a few such questions.
- The U-M Biological Station is a 13,000-acre complex in northern Michigan. Knute Nadelhoffer, the station’s director, describes fascinating research being conducted in the bio-station’s forests. High-tech instruments atop a tower in the trees are so sensitive they can determine how much carbon dioxide the forest is “breathing in.” Undergraduate and graduate students conducting original research have shown the forest is very good at soaking



The view from the top of a monitoring tower at the U-M Biological Station. Instruments on the tower measure greenhouse gases.

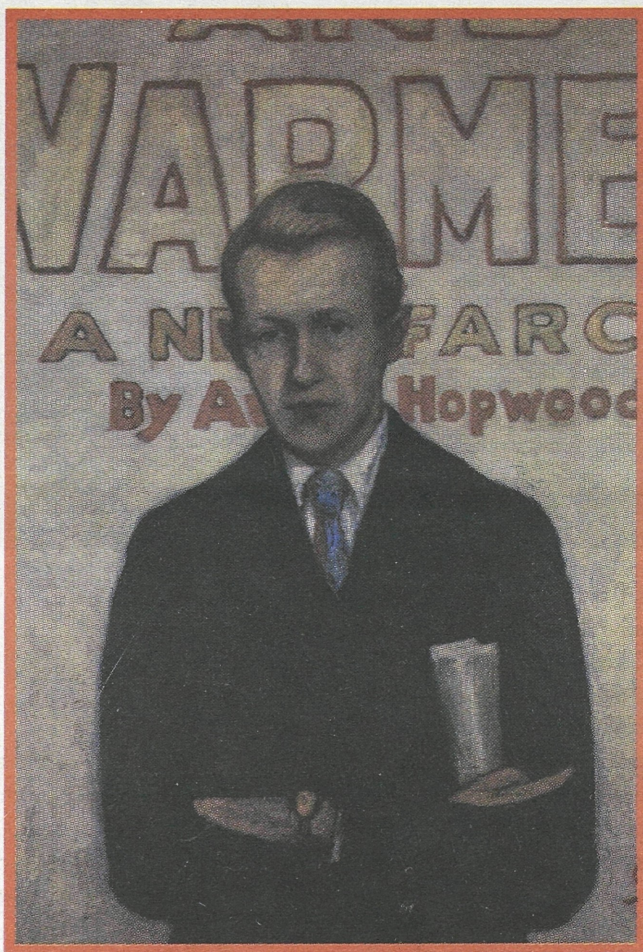
up carbon dioxide. But, says Nadelhoffer, the research leaves an unanswered question. Most of the world’s forests were logged 100 years ago and are steadily re-growing today. Are forests taking up carbon because they’re young? Once they’re older and more stable, will their absorption rate decline? No one knows.

- Professor Peter Adriaens conducts research into the carbon-absorbing effects of green roofs—literally, rooftops covered in plants. He also develops biological fuel cells for alternative energy. Adriaens has also become a key organizer of the Faculty Forums on Climate and leads several environmental initiatives that link the environmental work of Engineering faculty.
- Associate Professor Jeremy Semrau is researching ways to reduce the emission of methane—a greenhouse gas far more powerful than CO<sub>2</sub>—from landfills. He is also one of the leaders in the creation of the Graham Institute.
- Professor Levi Thompson and a team of Engineering faculty and students are pushing the development of hydrogen fuel cells. The technology promises an alternative to internal combustion engines, but it is brutally complex. **MT**



# Avery Hopwood

BY JAMES TOBIN



2006 MARKS THE 75TH ANNIVERSARY OF U-M'S HOPWOOD AWARDS, THE COUNTRY'S MOST PRESTIGIOUS COLLEGE WRITING PRIZE. HERE, A LOOK BACK AT THE TROUBLED LIFE OF U-M'S GREATEST LITERARY BENEFACTOR.

## ACT I

**In which a young writer from the Midwest sets out to make his mark in New York**

In the span of a few months in 1905, a melancholy young man with a fine sense of humor wrote his first play, graduated from the University of Michigan, and sold the play to a Broadway production company for an advance against royalties of \$250. This combination of easy effort and quick reward set the pattern of his career, leading to worldly riches and inner despair.

In Ann Arbor, a friend said, Avery Hopwood (LSA 1905) had been “awkward, baleful [and] witty,” with an air of preoccupation that “ward[ed] off intrusion.” His head looked too large for his slender body, and his right eye drooped very noticeably, which made him look slightly off-center and sad.

Throughout his boyhood in Cleveland, where his father sold meats, Hopwood yearned to become a writer. As a junior at Michigan, he read an article in *Michigan Alumnus* entitled “The Call for the Playwright,” in which the drama critic Louis Vincent DeFoe (LSA 1891) urged collegians with literary ambitions to try their hand at popular drama. The

American theater, with its melodramas and light comedies, did “not aspire to the highest ideals of literature,” DeFoe conceded. But it offered other compensations. He cited a writer whose comic plays earned him close to \$100,000 a year. This was bait that Hopwood, raised in a household where money was scarce, could not resist.

In the long run, Hopwood’s intention was to create serious fiction—“something which an intelligent man can sit down and read and think about,” he said. After his first play, a comedy about the clothing industry, became a minor hit, then two serious plays flopped, he settled on a compromise that has appealed to many writers with saleable talent and slim means. To pile up a cushion of money to live on, he would, for a time, write popular plays. Then he would quit the business to write his serious novels.

Hopwood had come to New York just as the playgoing public—a much larger part of the population then than now—was embracing the genre known as bedroom farce, a mixture of titillation and laughs that aimed “to achieve the maximum of naughty suggestion compatible with fables so constructed as to preserve the technical virtue of all the characters concerned,” as the critic Joseph Wood Krutch put it. This was called “skating on thin ice.” The trick was to administer mild shocks to playgoers raised on Victorian proprieties but eager to feel daring on a Saturday night at the theater—yet without provoking genuine outrage or censorship.



❁ ❁ ❁

**For Hopwood, “the Neil  
Simon of his time,” success  
as a comic playwright only  
deepened his conviction  
that he was a failure.**

❁ ❁ ❁

Over the next ten years, Hopwood mastered the tools of this trade—how to develop an eyebrow-raising situation around an appealing leading lady; how to create sexual tension without going too far; how to create sight gags and well-timed lines that leaven the naughtiness with laughs. With *Seven Days*, a collaboration with the novelist Mary Roberts Rinehart, Hopwood, at the age of only 27, scored his first big hit. This was followed by *Nobody's Widow*, *Judy Forgot*, *Somewhere Else* (a musical), and *Miss Jenny O'Jones*—two hits and two flops—then, in 1915, a major hit, *Fair*

and *Warmer*. Here, Hopwood had a young husband and wife—not each others'—create a classic “compromising situation” to excite the jealousy of their respective spouses. The players mix cocktails, hide under beds, and lock bathroom doors until finally the maid sorts out the mess to restore domestic harmony.

Most serious drama critics moaned. One called *Nobody's Widow* “one of the silliest conglomerations of twaddle and indelicacy with which the trash-ridden stage of America has been encumbered.” But some, like Hopwood's friend Carl Van Vechten, saw “the work of a genius” in

Hopwood's entertainment. “Let those who do not appreciate the virtuosity of this undertaking attempt to write as successful a scene in a similar vein.”

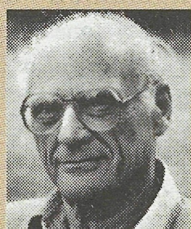
Audiences ignored the critics and by word of mouth made Hopwood a prince of the box office. At a time when a run of 100 performances classified a play as a hit, *Fair and Warmer* ran for 377 nights in New York, spawned nine U.S. touring companies, and played 497 nights in London.

“People love a touch of the risqué just as they love a cocktail before dinner,” Hopwood declared. “Drama is a democratic art, and the dramatist is not the monarch but the servant of the public.” His plays appealed to “a healthy instinct in modern audiences, he said. “I refer to the instinct of sex. Prudery and false modesty may pretend to be ashamed of that instinct. I'm not.”

He still intended to write literature, he told reporters, since “what the novelist has to say to his public, he says; the playwright must depend upon some actor, engaged by the owner of the production,

to convey his message for him.” He had the money he needed to write seriously, and he felt ready to start. But he was “always finding myself outlining a play when I am talking with a manager or actor, and of course I may never be able to cure myself of this habit—consequently I shall be getting deeper and deeper into the theater.”

## ON ITS 75TH ANNIVERSARY, THE HOPWOOD AWARD PROGRAM RECALLS SOME OF ITS ILLUSTRIOUS WINNERS



Arthur Miller

- Arthur Miller, playwright. *The Crucible*, *Death of a Salesman*.



IRA WOOD

Marge Piercy

- Marge Piercy, poet, novelist, and essayist. Author of *Gone to Soldiers* and more than 30 other books, most recently *Sex Wars*.



Lawrence Kasdan

- Lawrence Kasdan, writer and director. *The Big Chill*, *Grand Canyon*, and other films.



JOE GAFFNEY

Mary Gaitskill

- Mary Gaitskill, novelist. Finalist for the 2005 National Book Award for *Veronica*.



John Ciardi

- John Ciardi, poet. His translation of Dante's *Divine Comedy* was for years the standard.



Betty Smith

- Betty Smith, novelist. *A Tree Grows in Brooklyn*.



Robert Hayden

- Robert Hayden, poet. Author of the classics “Middle Passage” and “Those Winter Sundays”



# ARTHUR MILLER DECLARED THAT WINNING A HOPWOOD

## ACT II

### In which the writer reaches the top of his profession and changes his will

Gossip columnists frequently linked Hopwood, the “Playboy Playwright,” to beautiful actresses. In fact, his personal papers make it clear that he was gay, though in that day, when the rules of the closet governed most gay lives, he kept his emotional life to himself, pursuing affairs mostly on trips to Europe. The theme of thwarted sexuality also appears in the manuscript of an autobiographical novel he worked on in spare hours, an exposé of the theater world in which a young graduate of the University of Michigan aspires to write literature but turns to popular stagecraft. “There was, he found, something very satisfying about making money.”

He made more and more of it. With the end of the First World War in 1918, Broadway’s popularity rose to new heights. The spread of silent movies meant less call in the hinterlands for touring dramatic companies. So playwrights increasingly wrote to suit the sophisticated tastes of New Yorkers without fear of censure on the road. Hopwood led the way.

His goal was to surpass the record of London’s star playwright, Somerset Maugham, who once had five shows running at once. In the 1920–21 season, Hopwood came close, with four simultaneous hits. First came *The Gold Diggers*—later to inspire a string of hugely popular “talkies”—about young New York women who forthrightly “capitalize what nature has given us” to earn their livings from admiring men. Next came *Spanish Love*; then *Ladies’ Night (In a Turkish Bath)*; and Hopwood’s most popular show of all, *The Bat*, another collaboration with Mary Roberts Rinehart.

*The Bat* was not a farce but a scary comedy/mystery with a surprise ending. The core of the story was Rinehart’s, but Hopwood added all the laughs, frights, and special effects. The two split \$1 million in royalties, and by 1946 *The Bat* had been seen by 10 million people.

Earlier, Hopwood had been called “a carpenter in a play factory,” but by now he was a master craftsman, with producers calling him in at top dollar to reshape the drafts of less adroit writers. One of these was David Gray, who watched Hopwood work his magic on the draft of Gray’s comedy, *The Best People*.

“As we worked together,” Gray said later, “I began to note not only his amazing industry and an almost infinite capacity for taking pains, but so generous and sympathetic an understanding of what I had tried to do that I was speechless. I saw my characters and scenes develop as if by magic into what I had dreamed of but could not realize myself.... No one living can put things in the mouths of his characters that convulse great audiences as he can.”

But Hopwood, now drinking heavily and using cocaine, had come to regard his virtuosity in terms that bordered on self-contempt. A New York columnist who had watched him at several openings said: “He has made millions laugh... but I’ve never seen him do more than faintly, boredly smile at the most shrieking farces.” The playwright flirted with Hollywood, then told a friend he had decided not to write movies. “I am too high-priced a whore for that.”

Early in 1922, just after his four-hit smash season, Hopwood directed his attorney to rewrite his will. He was only 39. But his mind was dwelling on finalities—on the truth, as he perceived it, of his own career and the hope of redeeming it by a gift to the future. But he told no one what he had done. The terms were to be kept secret until after his death.

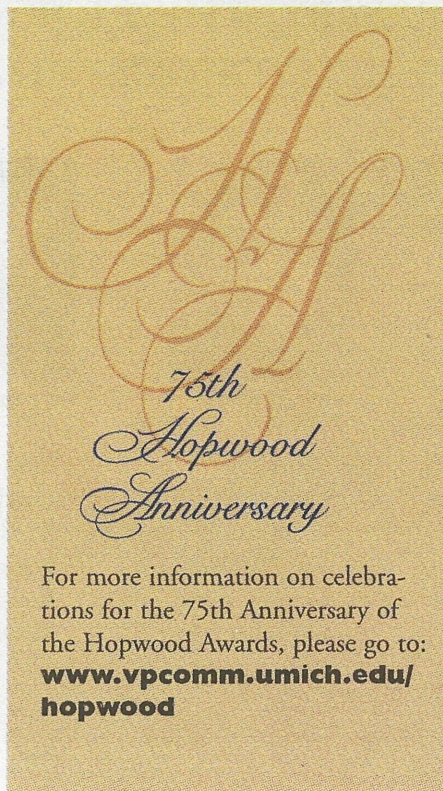
## ACT III

### In which the writer despairs and dies

Hopwood co-wrote two shows for 1922, *The Demi-Virgin* and *Getting Gertie’s Garter*. Both were hits, but the sparkle had gone stale. The critic Heywood Brown said *Gertie* had its moments, “but they are moments which nearly every farce has had for the past fifteen years.” Eugene O’Neill and other dramatists were raising the standard of the American stage, and playgoers’ expectations were rising with it. But “Mr. Hopwood made his reputation as a farce writer back in the days when the favorite sport was skating on thin ice. Since then audiences have learned how to swim.”

But no critic was sicker of the fad of bedroom farce than the master farceur himself. In December 1924, at the end of a performance in Baltimore, Hopwood rose to give a drunken speech at the curtain. He told the audience that *The Demi-Virgin* and *Getting Gertie’s Garter* were the “dullest plays” he had ever seen, let alone written. He was “tired to death” of concocting such stuff, he said, and he was quitting.

He wrote adaptations of two or three more scripts but no more plays of his own. He spent more and more time in Europe. Friends heard reports of wild escapades and drunken public scenes. Of his novel’s protagonist, he wrote: “He was not ashamed of himself, so long as he kept drinking.” But “more and more, all that really interested him was the mood into which he could project himself, with the aid of drink or cocaine.” On July 1, 1928, he died in the surf on a beach in the French Riviera—the victim, apparently, of some combination of heart failure and alcohol.





# AWARD ALLOWED HIM TO FINISH COLLEGE.

## CODA

### In which the writer's legacy is revealed

A month later, the revised terms of Hopwood's will were disclosed to the press. By the revisions he had dictated six years earlier, his estate, valued at well over \$1 million, would go to his mother, Jule Hopwood. Upon her death, one-fifth of the estate was to endow a program of literary prizes for students at the University of Michigan. "It is especially desired," the will stated, "that the students competing for prizes shall be allowed the widest possible latitude, and that the new, the unusual, and the radical shall be especially encouraged."

Mrs. Hopwood died only a year later, and the bequest to Michigan of \$313,836 established the Avery Hopwood and Jule Hopwood Prizes. This year is the 75th anniversary of the awards, and in that time, the University has granted more than 3,000 awards worth a total of \$2.25 million. "The Hopwoods" have also inspired others to donate, including, most recently, alumna Helen Zell ('64) who provided a \$5 million dollar gift to make Michigan's Master of Fine Arts in creative writing program the best in the nation. Today there are some 19 other writing prizes associated with the Hopwood contests. But the original awards remain the toughest to earn, and retain their status as perhaps the most prestigious student literary awards in the U.S. Past winners have included literary powerhouses Marge Piercy, John Ciardi, Frank O'Hara, and Nancy Willard. The most eminent is the playwright Arthur Miller, who won awards for drama in 1936 and 1937. Miller said later the cash awards had made it possible for him to finish

college. Hopwood's biographer, Jack Sharrar, notes: "By an irony Hopwood himself would have appreciated, he made his chief contribution to the development of American drama indirectly by extending a helping hand to Arthur Miller, creator of the new tragedy of the common man: Miller was to do the kind of work Hopwood himself had aspired to but never achieved."

The unfinished draft of Hopwood's novel, nearly 900 pages in all, was found among his effects, but it was never published. It's now in the archives of the Hopwood Room.

"It's not as if this is an undiscovered masterpiece," said Nicholas Delbanco, Robert Frost Collegiate Professor of English and Chair of the Hopwood Awards Committee since 1979, who has read the manuscript. "It's pretty much journeyman work. He was basically right to harness his talents to the stage.

"The more I've spent time around Hopwood's oeuvre," Delbanco said, "the more I believe that he actually was a hell of a playwright, by which I mean... he had an almost unerring instinct for entertainment. He was easily the Neil Simon of his time.

"So, I think, by and large, it's a life that was an achieved one rather than a failed one. He put what was, finally, a relatively minor talent to its major use. He found his calling and he did damn well with it." **MT**

*James Tobin (BA '78, Ph.D. '86) is an author and historian.*



For years, the public faces of the Hopwood Awards have belonged to Nicholas Delbanco, Professor of English, prolific author, and teacher of creative writing, and Andrea Beauchamp, Hopwood Program Associate for almost three decades and a mainstay of the awards and of U-M's creative writing community. They have mentored and supported hundreds of student writers, and continue to host both young and established authors in the Hopwood Room, where they are pictured here.



# kathryn clark

Throughout her career in academia, government, and industry, Dr. Kathryn Clark has been an ambassador for science and science education. She is a University of Michigan alumna with both a master's degree and a Ph.D. from the Division of Kinesiology, in 1983 and 1990, respectively. Clark is currently enrolled in a master's program in geology here at UM and spent the summer studying Russian through LSA's International Institute. She joined the UM faculty in 1993 in the Department of Molecular, Cellular, and Developmental Biology, but she had her eyes on other stars — literally. She began a career at NASA after she received a prestigious grant to study the effects of space flight on neuromuscular systems, and has served there in various capacities since. She was picked to serve on the NASA Return to Flight Task Group, which was formed in 2003, to lead an independent assessment of the agency's efforts to revamp the space program in response to the shuttle Columbia disaster in February of that year.

**LSA:** What did you do with NASA and what are you doing now?

**KC:** I recently resigned from my job as NASA's Chief Scientist for Human Space Flight, which I'd done since 2000, where I helped plan potential missions to Mars. Before that, I spent two years as the chief scientist for the International Space Station, and I also worked on other research projects. Right now, I'm getting a master's in geology, studying Russian, giving a lot of talks on the lecture circuit, and I'm still consulting with NASA.

**LSA:** Why study Russian and geology?

**KC:** I need the language to communicate effectively with our Russian partners on the Space Station. We have a translator when we're in meetings, but it's when we're sitting down to dinner that I have the most difficulty. One of the Russian scientists invented the Soyuz capsule, the International Space Station's crew return vehicle, so these are people I would definitely like to have a conversation with.

I'm studying geology for several reasons. Part of it stems from the stigma of not being a "real scientist" if you're "only a kinesiologist," which I am. The stigma is totally wrong. Another part of it comes from the ability to give myself an edge in this industry by knowing about the geology of the moon.

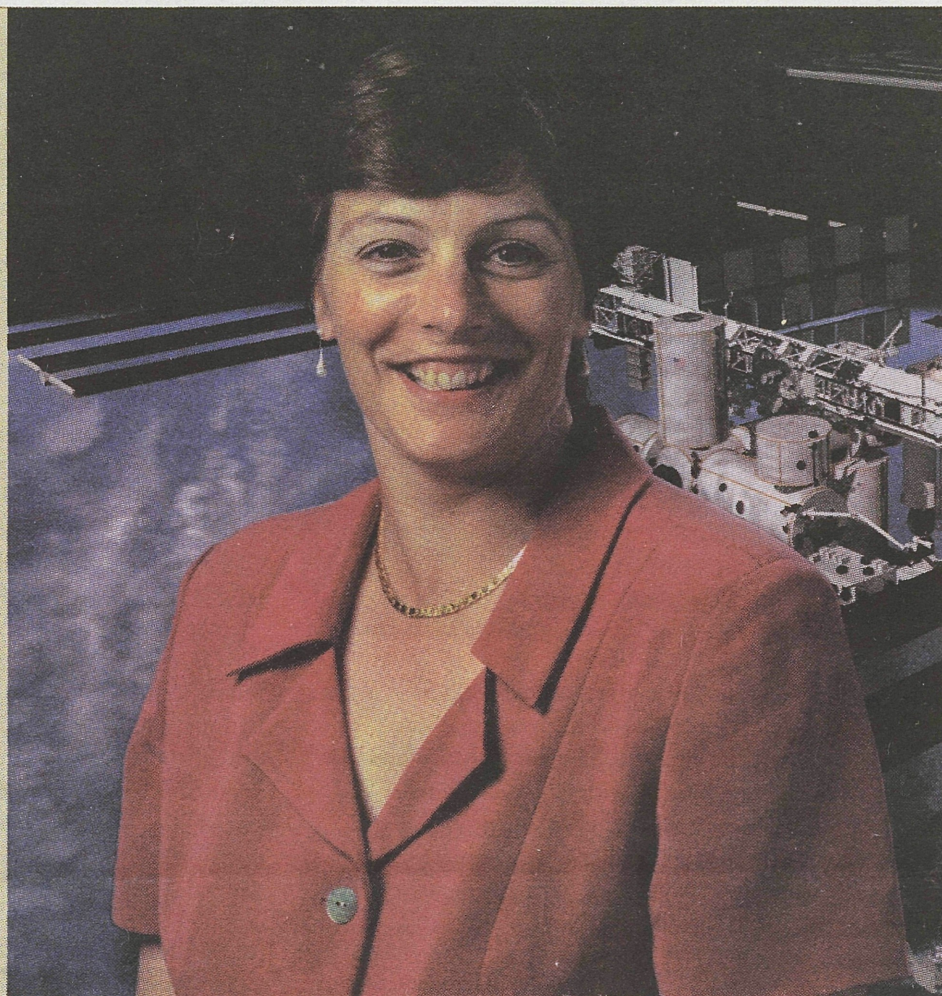
**LSA:** You were directly involved in helping get the shuttle back into space. Why was the Discovery mission, which blasted off July 26, 2005, so important?

**KC:** Because of the 2003 Columbia accident, we tested many things on the Discovery mission. We worked to reduce the foam that comes off the tank

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Courtesy of Kathryn Clark



during launch, and we implemented a sensor system to help us know if the vehicle had been hit by anything. There were prototype repair techniques to fix any problems in space that occurred during liftoff.

Because Discovery came home safely, I say bravo to NASA on a job very well done. Yes, there is still work to be done to continue to improve the safety of the space shuttle, but we learned much from the flight, which can be used for all additional shuttle flights. The crew did a great job and I cried both when the shuttle launched and when it landed.

**LSA: Do you think the public really understands the danger of space travel and why NASA would delay a launch?**

**KC:** Space flight, particularly human space flight, is just dangerous. If you want to be safe, don't light the solids. NASA doesn't always do their job making

it clear to people that the only reason all the missions don't blow up is because the NASA scientists are so good at doing what they do.

**LSA: So they need to educate the public. You have very strong views on science education.**

**KC:** I have always felt that education, particularly science education, could be so much better and more effective than it is currently.

**LSA: And you work in the private sector to further your theories on science education?**

**KC:** Yes, currently I am President of Docere LLC, a science and educational consulting company. We work with teachers to figure out how to grab kids' attention, and to get kids involved in learning.

**LSA: Where do U.S. kids stack up against other nations in science?**

**KC:** The United States is hurting in this area, and we're going to be in a heap more trouble in about 10 years if we don't do something about it. High percentages of students in the sciences are foreign students. There's nothing wrong with that, but I think we're not doing ourselves a just service by not bringing along our own little girls and boys.

**LSA: Another battle is the fight for state and federal science funding. Is there enough support and money directed at the sciences?**

**KC:** There will never be enough money and support directed toward the sciences, but having said that, I don't think money is as big an issue as the potential to lose people-power, which is the direction we're headed now. Overall, we need to put a much higher value on science in this country and we need to engage our students earlier and better.



# GLOBALIZATION AND HEALTH

JULIO FRENK, MD, PhD  
MINISTER OF HEALTH, MEXICO



Dr. Julio Frenk (MPH '81, MA '82, PhD '83) is Minister of Health for Mexico. Dr. Frenk confronts, every day, the challenges of public health in a changing world. His experiences have taken him from U-M to the international policy crucible of the World Health Organization to the real-world health struggles in his native country.

With Asian Bird Flu, natural disasters, and threats of bioterrorism flooding the news, *Michigan Today* asked Dr. Frenk to reflect on the state of international public health.

Let me start these reflections by stating the obvious: globalization is evolving at such speed and with such complexity that it challenges our ability to grasp it in its full extent. Obvious as it may be, this dynamism is a good reason to constantly renew the discussion around the forces of globalization and their impact on everyday life.

The shift of human affairs from the nation-state to planet Earth is affecting not only trade, finance, science, the environment, crime, and terrorism; it is also influencing health. In 1997, a report by the U.S. National Institute of Medicine stated: "Distinctions between domestic and international health problems are losing their usefulness and are often misleading." By 2001, HIV/AIDS had become such a pressing international problem that the United Nations made it the subject of the first-ever General Assembly session on health, underscoring the growing link between economic development, global security, and pandemics such as AIDS.

I do not mean to argue that intense international contacts are new. From time immemorial the forces of trade, migration, war, and conquest have bound together persons from distant places. What is new is the pace, range, and depth of integration. Like never before, the consequences of actions that are taking place far away show up, literally, at our doorsteps.

The degree of proximity in our world can be illustrated by the fact that the number of international travelers has tripled since 1980, and it now reaches 3 million people every day.

We cannot underestimate the implications of these changes for health. In addition to their own domestic problems, all countries must now deal with the international transfer of health risks and opportunities.

The most obvious case of the blurring of health frontiers is the transmission of communicable diseases. Again, this is not

a new phenomenon per se. The first documented case of a transnational epidemic was the Athenian plague of 430 BC. The Black Death of 1347 was the direct result of international trade. The global spread of influenza in the early 20th century accounted for far more casualties than World War I.

Also new is the scale of what has been called "microbial traffic." The explosive increase of world travel produces thousands of potentially infectious contacts daily. Thus, in 1991, a Peruvian outbreak of cholera turned into a continental epidemic in a matter of weeks. Likewise, drug-resistant strains of tuberculosis have traveled from detention centers in Russia to Paris in just a few hours.

To make matters more complex, it is not only people and microbes that travel from one country to another; it is also lifestyles. Smoking provides a clear example. The most powerful tobacco companies are able to expand their marketing efforts into countries lagging in regulatory capacity.

Furthermore, the globalization of health includes health products. To mention but one example, regulations on access to prescription drugs in one country may be subverted when its neighbor allows the unrestricted purchase of antibiotics, thereby stimulating the appearance of resistant microbes that show up in the first country.

\* \* \*  
We face a new era  
of health threats and  
opportunities.

\* \* \*

The foregoing examples illustrate the growing complexity of health systems under globalization. But globalization also affords tools and opportunities to respond to longstanding and emerging health threats.

Allow me to give an example of a major health care reform in my own country,

Mexico. The process began at an international level, with the development by academic and international organizations of a novel analytical tool: national health accounts. By applying this tool to local data, we showed that more than half of total health expenditure in Mexico was out-of-pocket, because approximately half of the population lacked health insurance.

The careful interplay between national and international analyses generated the advocacy tools to promote a major legislative reform in 2004, which will ultimately provide universal health insurance, including the 50 million Mexicans who had been excluded until then from formal social insurance.

This is a clear example of how globalization can turn knowledge into an international public good that can then be brought to address a local problem. Such application, in turn, feeds back into the global pool of experience, thus generating a process of shared learning among countries.

The performance of local health systems can also be enhanced by one of the most potent motors of globalization: the telecommunications revolution. The pioneering work in the field of telemedicine by one of my mentors at the University of Michigan, Professor Rashid Bashshur, points to a future when physical distance may no longer be a significant barrier to health care.

The challenge, of course, will be to make sure that the distance divide is not merely replaced by the digital divide. The magnitude of this challenge becomes clear when we realize that the 80 percent of the human population living in developing countries represents less than 10 percent of internet users.

The challenge we have before us is to build a world order characterized by peace in the midst of diversity. Health may contribute to this pursuit because it involves those domains that unite all



human beings. It is there, in birth, in sickness, in recovery, and ultimately in death that we can all find our common humanity. More today than ever, health is a bridge to peace, a common ground, a source of shared security.

But for this to happen, we must renew international cooperation for health. I suggest three key elements for such renewal, three *es*: exchange, evidence, and empathy.

Health systems around the world are facing similar challenges. The communications revolution provides the opportunity to exchange information about these challenges and about initiatives to deal with them.

To be informative, such exchange should be based on sound evidence about alternatives, so that we may build a solid knowledge base of what really works, which may be transferred across countries when its culturally, politically, and financially reasonable.

But there is another value, empathy, that human characteristic which allows us to emotionally participate in a foreign reality, understand it, and, in the end, value the core elements that make us all members of the human race.

As we engage in the process of renewal, we would do well to remember the words of a universal person, Dr. Martin Luther King, Jr., who wrote, "It really boils down to this: that all life is inter-related. We are all caught in an inescapable network of mutuality, tied into a single garment of destiny. Whatever affects one directly, affects all indirectly."

Let us continue to weave together the destiny of better health for all the inhabitants of our common world. **MT**

# BUILDING THE DIGITAL LIBRARY

MARY SUE COLEMAN  
U-M PRESIDENT



U-M is one of five universities that have partnered with Google to make their libraries'

contents available online. Here, Mary Sue Coleman explains why.

**S**ome authors and publishers have cried foul regarding Google's digital library initiative, sparking debate about intellectual property rights in an online age. Beyond the specific legal challenges emerging in the wake of such a sea change, there are deeply important public policy issues at stake. We must not lose sight of the transformative nature of Google's plan or the public good that can come from it.

Throughout history, most of the world's printed knowledge has been created, preserved, and used only by society's elites—those for whom education and power meant access to the great research libraries. Now, groundbreaking tools for mass digitization are poised to change that paradigm. We believe the result can be a widening of human conversation comparable to the emergence of mass literacy itself.

Google plans to make its index searchable to every person in the world who enjoys access to the internet. For those works that remain in copyright, a search will reveal brief excerpts along with

information about how to buy the work or borrow it from a public library. Searches of work in the public domain will yield access to complete texts online.

Imagine what this means for scholars and the general public, who, until now, might have discovered only a fraction of the material written on a subject. Or picture a small, impoverished school—in America or anywhere in the world—that does not have access to a substantial library but does have an internet connection.

This enormous shift is already upon us. Students coming to my campus today belong to the Net Generation. By the time they were in middle school, the internet was a part of their daily lives. As we watch the way our students search for and use information, this much is clear: If information is not digitized, it will not be found.

Libraries and educational institutions are the only entities whose mission is to preserve knowledge through the centuries. It is a crucial role, one outside the interest of corporate entities and separate from the whims of the market. If libraries do not archive and curate, there is substantial risk that entire bodies of work will be lost.

Universities and the knowledge they offer should be accessible by all.

We must continue to ensure access to the vast intellectual opportunity and knowledge we generate and preserve. The digitization of information is a profound gesture that holds open our doors. Limiting access to information is tantamount to limiting the opportunities of our citizens.

Criticism of the Google library project revolves around questions of intellectual property. Universities are no strangers to the responsible management of complex copyright, permission, and security issues; we deal with them every day in our classrooms, libraries, laboratories, and performance halls. We will continue to work within the current criteria for fair use as we move ahead with digitization.

But we believe deeply that this endeavor exemplifies the spirit under which our nation's copyright law was developed: to encourage the free exchange of ideas in the service of innovation and societal progress. The protections of copyright are designed to balance the rights of the creator with the rights of the public. At its core is the most important principle of all: to facilitate the sharing of knowledge, not to stifle such exchange.

No one believed more fervently in the diffusion of knowledge than Thomas Jefferson, who resurrected the Library of Congress, using his own books, after its predecessor was destroyed by fire. We must continue to heed his message:

"And it cannot be but that each generation succeeding to the knowledge acquired by all those who preceded it, adding to it their own acquisitions and discoveries, and handing the mass down for successive and constant accumulation, must advance the knowledge and well-being of mankind, not infinitely, as some have said, but indefinitely, and to a term which no one can fix and foresee."

I worry that we are unnecessarily fearful of a world where our libraries can be widely accessed and that our fear will strangle the exchange of ideas so critical to our Founders. As these technologies are developed, our policies must help ensure that people can find information and that printed works are preserved for future generations. **MT**

*This essay first appeared in the Washington Post on October 22, 2005.*



# it's a mad, mad magazine

By JON CAROULIS

When, as a U-M student, Sam Viviano (BA '75) was asked to draw the cover of an incoming freshman guide, he envisioned then-university president Robben Fleming in a butcher's smock, behind a deli counter (the cheeses and meats were "course offerings" and "extra-curricular activities"). A student leaning against the counter asks, "How thick do you slice the baloney here?"

An art student, Viviano had enrolled at Michigan wanting a career as a "humorous illustrator." One problem: there were no related courses. "Some professors in the art school were extremely encouraging, and once they realized I did funny drawings, they wouldn't object to me doing that within the context of their courses," says Viviano. "If I was in a print-making class, they didn't mind me making prints with a humorous subject matter as long as I was making prints."

After graduating, he went to New York "to become a



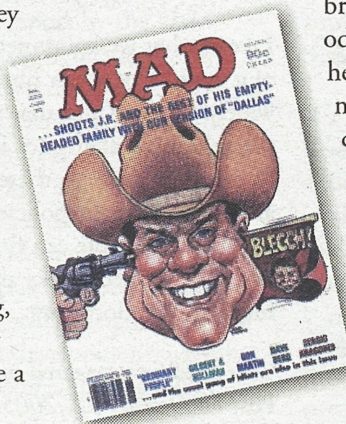
rich and famous illustrator." Six years later, after contributing to publications from children's magazine *Dynamite* to *Institutional Investor*, he was asked to illustrate the cover

of *MAD Magazine* for its parody of the "Who Shot JR?" mystery from the TV show *Dallas*.

"It was the cover for June of 1981, and the issue tanked," says Viviano. "I felt the editor attributed the failure of that issue to my cover, and I didn't get another MAD job for four years."

But after that editor retired, the magazine brought Viviano back to illustrate a parody of *Ghost Busters*. Within three years he was a regular contributor, parodying movies and TV shows, mocking politicians, and drawing "more Beavis and Butthead articles than I care to remember." In 1998 he became art director.

Viviano now rarely does finished art for the magazine. Often, though,



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after a story is written he draws "doodles" that provide artists with a blueprint of what he's looking for in an illustration.

"MAD has a readership that ranges from five to as old as, well, pick a number," says Viviano. "Most kids start reading MAD at 11 or 12, around the time puberty is taking hold of them. During a time of personal upheaval, both physical and psychological, MAD gives them approbation to mistrust authority figures; it is a kind of rite of passage for many adolescents."

But if anyone thinks the "usual gang of idiots" at MAD is juvenile, or acts as wacky as their humor, they're in for a shock. Viviano is an easygoing 52, who hangs his daughter's drawings in his office. Other MAD artists, such as the late Don Martin, Sergio Aragones, and Mort Drucker are "the most well-adjusted people you can imagine." Many of the contributing artists over the years lived into their 70s, 80s, and 90s. Says Viviano of his dream-come-true profession: "It keeps you young." **MT**

*Jon Carolis is a freelance writer in Philadelphia who remembers reading his first MAD movie parody, "Blow Up"—which was re-titled "Throw-up."*

## MICHIGAN TODAY

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