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Michigan Today



Lessons from Ancestors

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Photo by Cameron Campbell

a thing or
two to say:
four
LSA alumni
stake their
claim by
<commenting>
on all things
pop cult

by katie gazella

illustrations by patricia claydon

How does one make sense of popular culture? For starters, it helps to seek wisdom — or at least a few timely one-liners — from, say, talking heads who can quip about the absurdity of fame; essayists who appreciate both Verdi and Eminem; critics who can sort out the meaning of what's happening on stage, on the sports field, and in the world; or Internet innovators who create one phenomenon by explaining another.

In a variety of media and from an array of perches, four LSA alumni offer insights and wisecracks about the culture in which we live.

Reprinted with permission from LSA Magazine,
spring 2005, published by the College of Literature,
Science, and the Arts.



Rich Eisen is a popular host on the NFL Network and a staple source of humor on VH1's *I Love the '80s* and other similar shows.

Neal Gabler offers meditations on movies, the arts, TV, and more in books, in articles, and on a weekly cable show.

Jon Hein brought the phrase "jump the shark" into the everyday lexicon and has created an online venue for TV watchers to opine about their favorite (and least favorite) shows.

Bruce Weber is a longtime theater critic for the *New York Times*, and is now writing about the interplay of sports and recreation with the rest of culture for the *Times*.

All four are keen observers of the world around us. They all have thoughts about the ways pop culture affects our everyday lives. And they all have a thing or two to say about reality television.

Rich Eisen

We've all seen it: The clip of the Chicago Bears performing "The Super Bowl Shuffle." It's a cringe-worthy cornerstone of the VH1 series *I Love the '80s*, (specifically, in this case, 1985). It practically screams for some I-can't-believe-they-did-that commentary. And Rich Eisen ('90) is there to provide it.

"Very awkward dancing. It was more like spasms. It was spasmodic," says Eisen.

Eisen's presence on VH1 is an ideal blend of expertise and experience. As host of *NFL Total Access* on the NFL Network and as a former anchor on ESPN, his gridiron knowledge is vast. And as a lifelong fan of TV, music, movies, and passing fads, Eisen is a perfect fit for the role of pop culture commentator.

"I was put on the planet for this, to talk about everything from Steven Seagal movies to *The Jeffersons*," says Eisen, who graduated from LSA with a communication studies major.

Eisen looks back fondly on his time at UM where he was a writer and editor for the *Michigan Daily*. He also performed standup comedy at the U-Club during a time when comedy clubs were at their peak popularity.

His fame grew quickly after he graduated, particularly when he joined ESPN as an anchor in 1996 and later became the face of the NFL Network.

Unlike many of the commentators on VH1 – that guy who was on that one show, that woman who looks vaguely familiar – Eisen already had secured a healthy amount of fame with his sports commentary career before talking about Garbage Pail Kids and *Family Ties* on VH1. But the pop culture shows have opened up a whole new fan base for Eisen, who says many more people recognize him in Los Angeles, including some of the people he has talked about on VH1.

He also has paid a price for his fame in the form of occasional embarrassment. Some segments he later wishes he could take back, and he and his wife have been mildly ashamed of a few of his comments. All part of the territory, he says. "If you totally put your foot in your mouth, you know they're going to use that."

Some of Eisen's thoughts about the reality TV trend, VH1, and what to expect from the *I Love the '00s*:

On VH1: It used to be "The Kenny G videos network," Eisen says. Now, he says, "it's basically becoming the pop culture network."

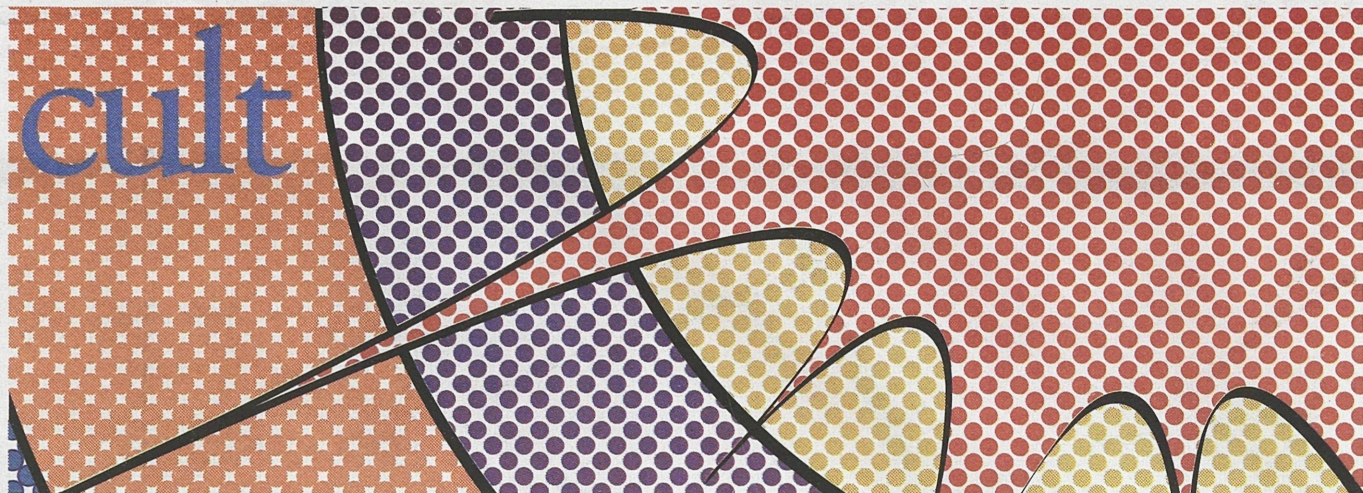
On performing standup comedy at the U-Club while a student at U-M: "It was the height of the comedy club craze.... It was the most nerve-wracking time for me ever in my life, more than being on TV. My *coup de grace* was reading *Penthouse Forum* letters as Howard Cosell!"

On reality TV: "It is totally insane. But it's a natural offshoot of people trying to get famous fast."

On what to expect from a pop-culture review of the current decade: "The first thing that leaps to mind is Janet Jackson at the Super Bowl. That'll be a 10-minute riff. Jessica Simpson will be big. From the sports world, Kobe Bryant." And movies? *The Passion of the Christ*.

pop cult

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Neal Gabler

The way Neal Gabler sees it, there is room in the culture for the highbrow and the low, the healthy fare and the junk food.

He just has one request: Can't more of the serious be mixed in with the frivolous, perhaps a little opera thrown in to balance out Britney and Jessica?

"I would love to see a pluralistic culture that has room for serious literature, movies, and music," says Gabler, a cultural historian and critic. He talks about such issues on *FOX News Watch* each week, where he is the self-described "token liberal."

"My fear is that we live in a culture where the serious is almost disappearing," says Gabler, a senior fel-

low at the Norman Lear Center at the University of Southern California's Annenberg School for Communication.

Gabler ('71, M.A. '75) has written articles and books about popular culture, including *Life: The Movie: How Entertainment Conquered Reality* (Vintage, 2000) and *An Empire of Their Own: How the Jews Invented Hollywood* (Anchor Books, 1989). In *Life: The Movie*, he notes that the prevalence of lowbrow entertainment is not merely a function of stupidity. "A lot of the popularity of so-called lowbrow culture is in direct proportion to the rise of the hatred of it by conservatives and elites," he says in an interview.

Lest you assume that Gabler is a snob who looks down on people who don't spend their waking hours curled up with *Harper's* magazine and some Bach on the stereo, listen to how he spends some of his free time: "I confess to liking Eminem. I watch *The O.C.* every week. I consume a lot of so-called junk."

He thinks that much can be learned from studying culture, and that some aspects of culture could be studied at the level of, say, classic literature. Take the issue of celebrity, for instance. Gabler draws a line between fame and celebrity, saying that the latter is a "narrative art form."

"A celebrity's life is no different from a movie or a novel. We 'read' their lives, in the same way that we see the stories they portray in film," he says. "If celebrities have narratives, they also have scenes. We could teach it, like *Anna Karenina*."

That is why celebrities fascinate so many people, he says. Their lives are like scenes from movies or chapters in books. They are stories, often tragic, fabulous, and otherworldly. And everybody, Gabler says, likes a good story. "This," he says of celebrity, "is the literature of modern America."

Jon Hein

New hairstyles can kill television shows. So can weddings, the sudden addition of long-lost relatives, babies, and a change in the actor who plays a character (think Dick Sargent replacing Dick York on *Bewitched*).

And the actor Ted McGinley? He's probably a really nice guy, but he also is the signal of impending doom for nearly any show on which he appears, according to Jon Hein ('89) and the users of the website he started, www.jumptheshark.com.

The site went up on Christmas Eve 1997 and launched a pop culture phenomenon. Hein's roommate at U-M, Sean J. Connolly, coined the phrase "jumping the shark" years earlier. The reference is to an episode of *Happy Days* in which the waterskiing Fonz, wearing a leather jacket, jumped over sharks. And that was the moment, Connolly thought, when the show went downhill. They began to use the phrase as a reference to shows passing their prime.

"When I put up the website, it was simply to amuse my roommates," says Hein, who graduated from LSA with history and communication studies majors.

More than just his roommates were amused. The site, which has led to two best-selling books and a TV pilot, has grown to be a popular online stopping point for those who want to weigh in on whether a show has jumped. "When something jumps the shark now, people are more aware of it," Hein says.

TV fans aren't the only ones aware of the site. Mentions of jumping the shark have worked their way on to prime-time television shows, including *The Simpsons* and *That '70s Show*. Hein receives emails, often from people who want to remain anonymous, that criticize shows they work for or that appear on their own networks.

And then there was the ultimate moment for Hein, in which the origin of the phrase and a reference to his website came full circle. He heard from someone at CBS that Garry Marshall — creator of *Happy Days* — was going to appear on *The Late Show with Craig Kilborn* and that Hein should tune in.

Kilborn asked Marshall about jumptheshark.com — a

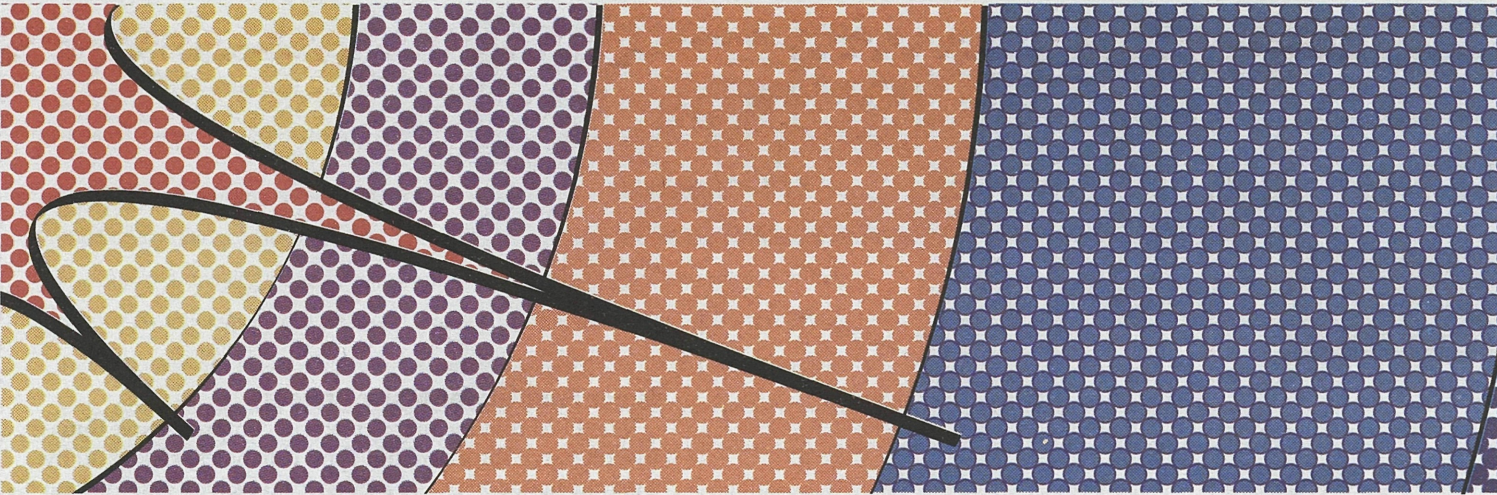
Gabler's thoughts on fame, celebrity, and reality:

On celebrity: "Queen Elizabeth is famous, but she's not a celebrity. On the other hand, Princess Di was both famous and a celebrity."

On reality television: "I think reality television has exhausted itself entirely. I see no appeal in it at all."

On people hiding their interest in the low-brow: "I have never, ever, addressed an audience where anyone 'fessed up to watching *Jerry Springer*."

On liking the serious and the popular: "Bruce Springsteen is as great an American artist, in my estimation, as Walt Whitman — and I love Walt Whitman."



Hein's thoughts about reality, the networks, and the new *Love Boat*:

On reality shows: "They are never going to go away, and the simple reason is that they're cheap to produce."

On whether network TV has jumped the shark: "NBC? Absolutely." CBS, he says, has allowed too many of the CSI spinoffs to spawn, but the network has good reality shows and popular — if not good — sitcoms. "All the fat guy-hot wife shows do well." ABC, he says, was at the bottom of the ratings and "had nothing to lose. And they're finally doing it right with shows like *Lost* and *Desperate Housewives*."

On *Will and Grace*: "It has become *The Love Boat* of this generation with all the special guest stars."

wonderfully surreal TV moment, though perhaps not as great as Kilborn asking the Fonz the same question. And lo and behold, Marshall agreed with Hein and his long-ago roommate — Fonzie's shark-jumping stunt did, in fact, signal the downhill slide of the once-great show.

Hein watched it in near-disbelief. "That," he says, "was a great moment."

Bruce Weber

Hardly anyone was on campus and almost nothing was happening when transfer student Bruce Weber arrived at U-M, looking for a place to live, in winter 1974.

Lucky for him, one of the only activities during that holiday break was a film co-op's double feature of two Hitchcock classics, *The 39 Steps* and *The Lady Vanishes*. "That really was the moment that I became interested in storytelling," says Weber ('75), who is now a feature writer for the *New York Times*.

He also counts himself lucky to have landed in a writing class taught by Richard Ford, who would go on to win the 1996 Pulitzer Prize in fiction. "He made me think about writing in a way I never had," Weber says. "He made me see it as something I could do for a living."

And so he has. After many years as a theater critic for the *Times*, he now is carving out a new role for himself at the newspaper with a beat focusing on the intersection of sports and culture. He has written, for instance, about the economic and social impacts of the NHL strike and about the rising popularity of paintball.

But his love of the theater lives on. While not everything on stage is masterly, he says, he loves the great moments of live performance he has witnessed through the years. He is well aware that not everyone shares his feelings. "Television is the main avenue we have to get our storytelling. It's why nobody goes to the theater anymore," he says.

When it comes to television, he likes some of what he sees — *Law and Order* and *Monk*, for instance — but he also thinks the proliferation of shows featuring real people has helped to downgrade the quality of popular entertainment.

"When Andy Warhol talked about everyone having 15 minutes of fame, he proved to be quite prescient," Weber says. "TV has created the impression that everybody can be on TV."

As someone who has witnessed some of the best of the entertainment world at Broadway shows, Weber wishes more people would use some of their leisure time away from the remote control. But it's not likely that the chips-

and-lite-beer crowd will convert to the brie-and-wine scene anytime soon, and he knows it. "There is an argument to be made that American culture is pop culture," Weber says. "There's not much of an audience, for instance, for classical music anymore." **MT**

Katie Gazella is a media coordinator with U-M Medical School Communications.

Weber's thoughts on theater, criticism, and TV:

On having his theater reviews taken out of context in ads: Somehow, he says, a certain punctuation point often appeared in publicity materials that used quotes from his reviews, even though "I've never used an exclamation point in a review."

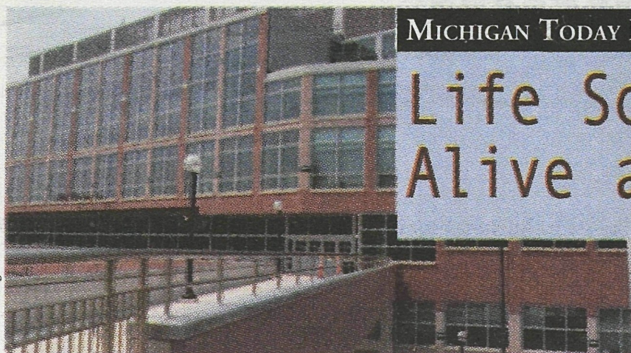
On reality television: "I think most of those reality shows are dreadful. The quality of TV in general is stretched very thin."

On the oldies, but not necessarily goodies: "I think quality has always been thin. I remember a TV show in the '60s called *My Mother the Car*, in which a 1928 Porter is the main character's reincarnated mother. It was completely idiotic."

Life Sciences at Michigan: Alive and Growing

By Karl Leif Bates

Marcia Ledford U-M Photo Services



The six years since the Life Sciences Commission presented its bold vision of the future of biomedical research have dramatically changed the intellectual and physical landscape of the Ann Arbor campus.

Already accounting for half of the \$780 million of research done at U-M, the life sciences promise to keep Michigan at the forefront of 21st century education and research. The Life Sciences Institute has recruited 18 first-rate faculty from across the disciplines. The U-M Health System plans to add 3 million square feet of new clinical, laboratory and teaching space. And more than \$50 million in funding for major new initiatives was awarded to U-M in the last year.

LSI Adds Seven Faculty

As a new research unit of the University, the Life Sciences Institute has established itself as a national leader in structural biology and chemical genomics and assembled a faculty of 18 in the new 230,000 square foot open-design laboratory that they began to occupy in fall 2003.

The LSI added a distinguished group of new faculty hires this year. They are:

Jason E. Gestwicki, PhD, from Stanford, studies small molecules and drug discovery and has some important findings on controlling the amyloid plaques that characterize Alzheimer's disease.

Patrick J. Hu, MD, PhD, from the Howard Hughes Medical Institute, is using the 1 mm nematode worm, *C. elegans*, to investigate the genes involved in cancer.

Alexey Kondrashov, PhD, from the National Center for Biotechnology Information at the National Institutes of Health, is a specialist in the new field of computational biology. He is using computers to compare large bodies of raw biological data from many species to address some of the most difficult questions of evolutionary biology.

Jiandie Lin, PhD, from Harvard, studies transcriptional regulation of metabolic programs using integrated approaches. His work focuses on understanding the fundamental biology of cellular and systemic energy metabolism to uncover pathways important in discovering the origin of metabolic diseases, including obesity, Type 2 diabetes, and cancer.

Noah Rosenberg, PhD, from the University of Southern California, is using computational biology to sift through key landmarks in the human genome and sort out how these markers relate to one another between individuals, across continents, and through time. Some of this information can, in turn, be used to develop better epidemiology to prevent human health problems.

John Tesmer, PhD, from the University of Texas at Austin, investigates the structure and function of a particular class of protein molecules that carry signals across the membranes of cells. He also studies the structure and function of enzymes that have been associated with leukemia.

Lois Weisman, PhD, from the University of Iowa, studies how components within a cell are moved to the right place at the right time. This process is a key feature of ordinary cell division and embryonic development and plays a role in many diseases including cancer and diabetes.

In addition to finding the right scientific talent, LSI has been attracting leading researchers to Ann Arbor to share their knowledge through the annual LSI Symposium. The fourth such meeting in May brought top cancer researchers from across the country to discuss their latest findings. Institutions represented included St. Jude Children's Research Hospital, Harvard, MIT, the University of California, and GlaxoSmithKline.

Life Is More Than Science

The Life Sciences, Values, and Society Program (LSVSP), which also grew out of the original commission recommendations, changed its name and leadership in the last year and sharpened its focus on the social and ethical questions swirling around the revolution in biological science.

Now called Life Sciences and Society (LSS), it is co-directed by Sharon Kardia, associate professor of epidemiology, and Toby Citrin, adjunct professor of health management and policy, both of the School of Public Health.

The new directors' vision builds on the activities the program has done so well already—a speaker series and a seed grant program, for example—and spells out increased efforts during the next three years, including the addition of undergraduate programming and graduate student training opportunities.

Major Funding for Major Projects

The U-M is launching a new and comprehensive initiative to search for a cure for Type 1 diabetes, kicked off by a private donation of \$44 million from Delores and William Brehm — the largest gift ever for the U-M Health System, and the second-largest gift in U-M history. Plans for the center include construction of a multidisciplinary research facility and establishment of eight new faculty positions.

The latest round of funding from the state's Technology Tri-Corridor (formerly the Life Sciences Corridor), included \$5.1 million for U-M researchers. The projects include research on cancers, infertility, lung disease and multiple sclerosis. Since 2000 the state of Michigan has invested more than \$230 million in life sciences research and commercialization efforts through the Michigan Technology Tri-Corridor and its predecessor, the Michigan Life Sciences Corridor. More than 100 new life sciences companies have been created in the state during that time, making Michigan the fastest-growing state in the nation for life sciences company formations.

The Michigan Nanotechnology Institute for Medicine and Biological Sciences (M-NIMBS) received a \$6.3 million Grand Challenges in Global Health grant from the Bill & Melinda Gates Foundation in June. The grant will support development and testing of a nanotechnology vaccine delivery system that uses a simple nasal swab rather than an injection. The heat-stable system eliminates the need for vaccine refrigeration, which often is unavailable in developing countries.

The National Institute of Allergy and Infectious Diseases awarded a \$5.9 million, five-year contract to the Medical School to create a comprehensive inventory of genes and proteins active in *Bacillus anthracis*, the bacterium that causes anthrax. The center will study anthrax at the earliest stages of infection, as one of seven new NIH-funded Biodefense Proteomics Research Centers.

U-M scientists have received a \$3 million, five-year grant from the National Institutes of Health to train tomorrow's leaders in regenerative science. This promising new area seeks to develop cell-based and tissue engineering therapies that can repair damaged tissue or replace dysfunctional organs. The new program will train teams of engineers, biologists, and clinicians in core competencies for regenerative medicine.

The National Institute on Aging (part of the National Institutes of Health) awarded a five-year grant to U-M's Michigan Alzheimer's Disease Research Center (MADRC) to fund the center's Memory and Aging Project (UM-MAP), a long-term study on memory, aging and dementia. The grant also will support a specific effort to encourage more participation in studies by African Americans, Hispanics and Asian Americans, so that research results better represent the entire American population. **MT**

In September, 2005, the Gayle Morris Sweetland Writing Center hosted a national gathering of scholars called *Originality, Imitation & Plagiarism*. No longer primarily an issue of students copying papers, plagiarism has become a serious problem in fields as diverse as journalism, the arts, and science. At the same time, the Internet Age has made "borrowing" easier—and often essential to intellectual pursuit. What are the problems, opportunities and dilemmas we face in the realm of intellectual property and creativity? Conference participants hashing out answers included journalist Daniel Okrent (B.A. '69), UM creative writing professor Nicholas Delbanco, and Jacqueline Jones Royster, Executive Dean of the Colleges of Arts and Sciences at Ohio State. A few scholars' ideas are excerpted below. More information is available at <http://www.lsa.umich.edu/swc/conference/>

UM Conference explores the dilemmas of intellectual property A Plague of Plagiarism?

"Academic integrity is not just a matter for students. It applies equally to faculty, researchers—to everyone in the university. Of course, we want to learn from others and borrow from their best work. That's an integral part of learning. But we also need to acknowledge what we take from them, to be open about our indebtedness, and to claim credit only for the work we do ourselves."

—Charles Lipson, Professor of Political Science, University of Chicago, and author of *Doing Honest Work in College: How to Prepare Citations, Avoid Plagiarism, and Achieve Academic Success*



Photo by Eileen Ryan

"Current discussions about plagiarism tend to stem from concerns about students' cheating. But the kind of plagiarism perpetrated by some students—the buying of a term paper from somebody else, or the lifting of articles or chapters from the web—is radically different from a scientist plagiarizing the research of a colleague. Plagiarists among students are buying themselves out of time-consuming requirements, but a plagiarist in science steals new knowledge claims, thus damaging a specific individual or team (and the taxpayers whose money might have supported that work). Although a student who plagiarizes does indeed break ethical and institutional rules, it is not completely clear who has been damaged by that behavior (except, of course, the credibility of teaching institutions). Speaking for myself, I would not feel outraged if a student plagiarized my work. But if I realized that a colleague had done that, I would immediately call my attorney.

When we think about plagiarism we need to pay more attention to differences and specificities rather than similarities, and to focus less on achieving a unified definition of plagiarism as a crime. Instead I suggest we focus more on the actual damages resulting from plagiarism, and on the parties affected by it. I understand and share the ethical and moral outrage that many people express when dealing with plagiarism, but treating plagiarism as a problem rather than a crime or a sin would strengthen rather than weaken the tools we have to deal with it. It's not that I want to 'decriminalize' plagiarism, but that I think if you see it as a crime or sin, you then want to define it once and for all. And **that** I think is a mistake."

—Mario Biagioli, Professor of the History of Science, Harvard University, editor of *Scientific Authorship: Credit and Intellectual Property in Science*



Photo by Lin Jones

"I would not feel outraged if a student plagiarized my work. But if I realized that a colleague had done that, I would immediately call my attorney."

"Within the university we have a profound investment in responsible, independent intellectual work, lest we undermine the very nature of our profession. Stealing or buying the work of others undermines the credibility of the written word and damages the open and free exchange of ideas. Yet many of us are uncertain about how to teach academic integrity to our students, and how to enforce it among our peers. Teachers across all fields are troubled by the ease with which students can buy papers through various Internet sites. We have had a recent rash of high profile plagiarism cases, ranging from the notorious Jayson Blair case at the *New York Times* to data fabrication in the biomedical field.

[Meanwhile], a handful of scholars have alerted readers to America's tradition of "fair use" in the exchange of ideas among its citizens. They are deeply concerned that we are losing access to works that, in the words of the original American copyright law, will "promote the Progress of Science and useful Arts." They remind us that intellectual property and copyright laws do not give authors, musicians, publishers, agents, or corporations absolute control over all aspects of a work.

How do we take advantage of the creative opportunities of the Internet, while still giving due credit to the hard work of research and writing—to that creature called an author?" **MT**

—Martha Vicinus, Professor of English and Women's Studies, and Director of the Sweetland Writing Center

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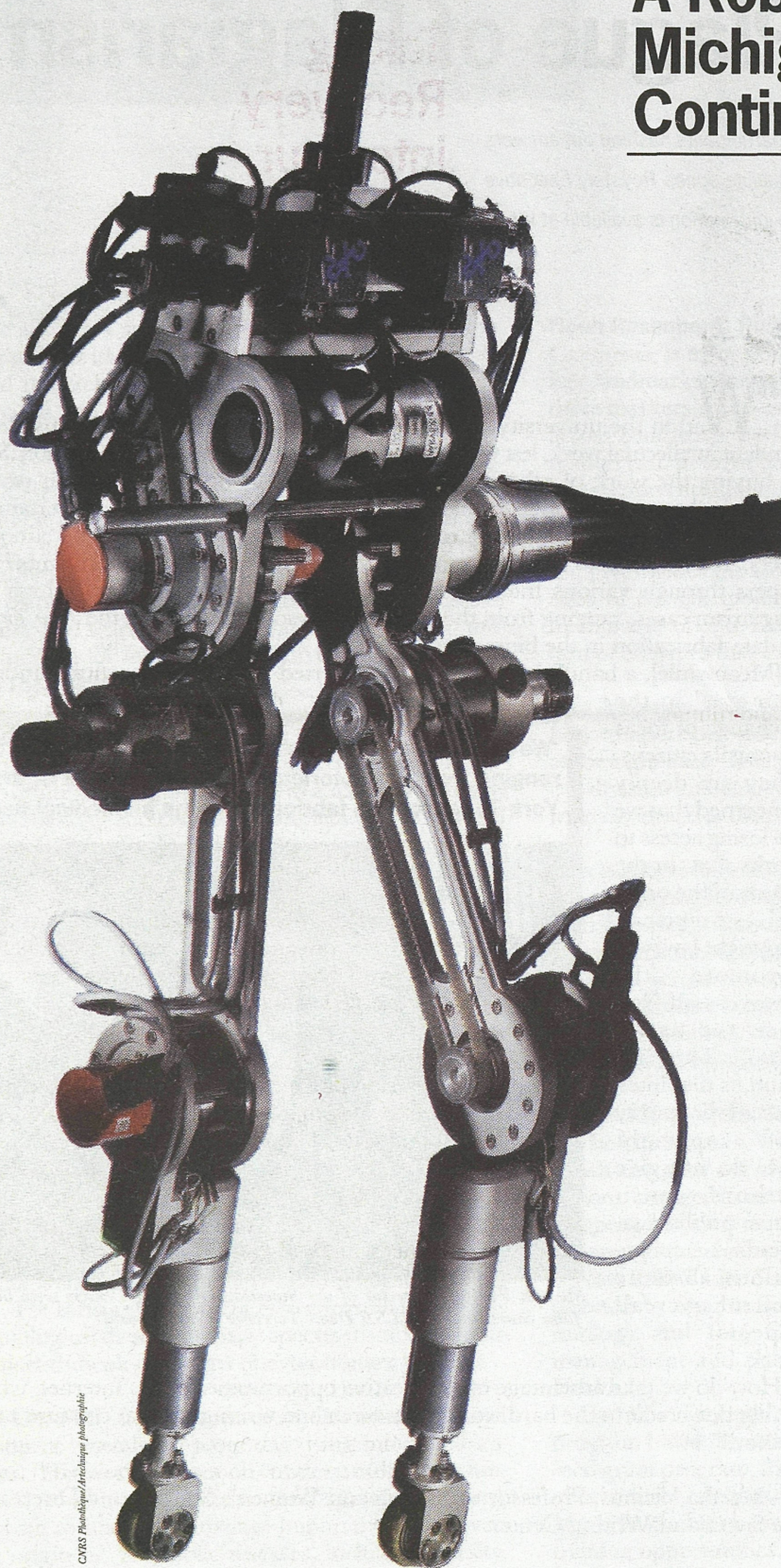


Martha Vicinus, Director of the Sweetland Writing Center, with benefactor John Sweetland and LSA Dean Terrence J. McDonald.

Photo by Lin Jones

A Robot That Walks the Walk Michigan Engineering Research Continues to Improve People's Lives

By Conny Coon



CVRS Photo/Artech House Photography

Going for a stroll isn't something Jessy Grizzle does to clear his mind. On the contrary, it gets him thinking hard about the seemingly simple act of walking. Grizzle, a Michigan engineering professor of electrical engineering and computer science, knows it's not as easy as it appears to be.

For a teenager in Middletown, Connecticut, it was remarkably hard. She had lost part of one leg in an accident and faced a future filled with staggering emotional and physical adjustments. Doctors had told her that even the best prosthetic leg could cause discomfort, feel unstable and produce an unnatural gait that, in time, might cause additional damage to her hips and lower back.

Her best hope lay in research to improve lower-limb prosthetics that allow a person to move naturally. The first critical step in achieving this goal is to understand the dynamics of walking. That's where Grizzle comes in.

Setting the Pace

Two-legged robots are the best models for this sort of study, but most of today's existing bipedal robots walk on the basis of a quasi-static stability notion, which imposes a conservative walking motion in which the foot remains flat on the ground to achieve balance with each step. Human locomotion on the other hand is statically unstable in most points of the gait: if you were to attempt to "freeze" your motion in mid-stride, you'd fall. A human gait uses dynamic stability. The flat-footed walking of current robots is clearly un-humanlike.

With support from the National Science Foundation and the U-M Center for Biomedical Engineering Research, Grizzle began working cooperatively with a French research team to solve the problem of dynamic stabilization in walking robots. Their project, ROBBEA, produced RABBIT, a bipedal robot specifically designed to advance the fundamental understanding of controlled, legged locomotion.

Researchers Take Tremendous Strides

In France and Ann Arbor, Grizzle and team members studied the intricate dynamics of bipedal locomotion and computed the optimal kinetics for walking and running, calculated forces and analyzed a wide range of walking and running speeds. From the start, the team wanted

to create a mechanically simple robot that could run as well as walk, with a natural, efficient and stable gait.

The team built and tested RABBIT at the Laboratoire Automatique de Grenoble in Grenoble, France. It has a torso, two hips and two legs with knees. To emphasize that their robot was not walking flat-footed, they designed it to have no ankles or feet: it walks as if on stilts. RABBIT was designed to be able to walk with an average forward speed of at least 5 km/h and to run at more than 12 km/h -- all with a natural gait.

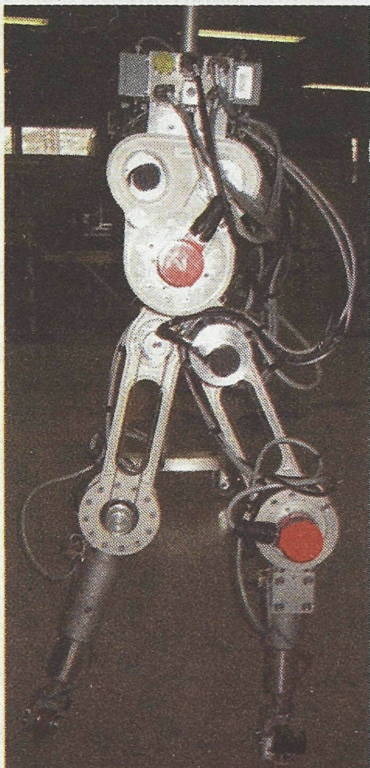
Eric Westervelt (then a U-M graduate student in electrical engineering) said, "Not having the robot in Michigan meant spending a lot of time thinking about what you wanted to do before getting a chance to do it. We spent much of our time in front of the computer."

From November 1998 through June 2003, the team developed a mathematical theory of walking that yields dynamic balance in bipedal robots. Based on the position and velocity of the joints of the robot, the team developed the motor commands that would yield efficient and stable walking without relying on flat-footed notions.

A Giant Leap

In July 2002, the team watched RABBIT walk -- with a natural, humanlike gait -- on the very first try. To date, no other biped walks faster. In September 2004, RABBIT ran for the first time.

In another project partially funded by the National Science Foundation, Grizzle and his students are concentrating on robotics projects closer to home. "I'm currently designing a robot for the University of Michigan,"



RABBIT is a bipedal robot designed to advance the understanding of controlled, legged locomotion.



RABBIT's first steps of running conducted at the Laboratoire Automatique de Grenoble in Grenoble, France.

Grizzle said. "We want to understand running better. The objective is to build a robot that can do everything that RABBIT can do -- and more -- and extend the work to more complex problems, such as walking on uneven surfaces and avoiding obstacles."

Research on mechanically simple, relatively inexpensive walking bipedal robots such as RABBIT is, quite literally, a giant step forward in the development of robots that have a multitude of potential applications with diverse sociological and commercial effects.

Such research might lead to dynamically controlled lower-limb prostheses that could restore natural motion to the injured and disabled, such as the Connecticut teenager who lost her leg in an accident. Bipedal robots that can adjust to and negotiate uneven terrain might someday replace humans in hazardous occupations, such as inspecting nuclear power plants, making remote explorations of extraterrestrial worlds, and finding and removing landmines.

Research conducted on RABBIT and robots like it will continue to advance the understanding of human locomotion. And building better robots will undoubtedly go a long way toward building and rebuilding better lives for many. **MT**

Conny Coon was formerly editor of Big Idea magazine and is now a freelance writer in Berkley, Michigan.

REHABILITATION ROBOTICS RESEARCH

Taking Recovery into Your Own Hands

In addition to those who lose limbs and require prosthetic devices, each year, hundreds of thousands of people suffer neurological damage such as in spinal-cord injuries, strokes or brain trauma and the loss of control over their lower body. The annual cost to the American economy is more than \$100 billion dollars.

Presently, walking rehabilitation for these patients consists of weight-suspended treadmill therapy in which a harness supports the patient while therapists move each leg to simulate the act of walking. Existing machines take over this task from physical therapists by suspending the patient and mechanically forcing the legs to "play back" a normal walking pattern. Neither situation is ideal.

Grizzle and his colleagues (Wayne Aldridge, research associate professor, Neurology, School of Medicine, adjunct associate professor, Psychology, LS&A; Daniel Ferris, assistant professor, Biomedical Engineering, assistant professor, Kinesiology, Division of Kinesiology; David Gater, assistant professor, Physical Medicine and Rehabilitation, School of Medicine; and Brent Gillespie, assistant professor, Mechanical Engineering) are conducting new research into a new class of rehabilitation robotics for patients with disabilities resulting from neurological damage. The project, "Self-Operated Rehabilitation Robots for the Lower Limbs," actively engages patients in the rehabilitation process, rather than allowing them to be passive participants. The study is showing that patients who have control over the amount and timing of their motion will recover more motor movement than they would with traditional methods.

New Funding Expands U-M Initiatives in Nanotechnology

By Sally Pobojewski

Manmade molecules that deliver drugs directly to sick cells; tiny sensors that monitor oxygen levels in the bloodstream; molecular surgery to remove defective genes.

Nanotechnology sounds like science fiction, but researchers in academic units and research centers throughout the University are working to make these and other advances possible.

Underscoring this commitment, the Office of the Vice President for Research has established the Nanoscale Science and Engineering Initiative (NSEI), with \$10 million in funding. Sponsored in cooperation with the College of Engineering, LSA, the School of Public Health and the Medical School, the NSEI will support faculty recruitment, research initiatives, equipment purchase, and infrastructure development.

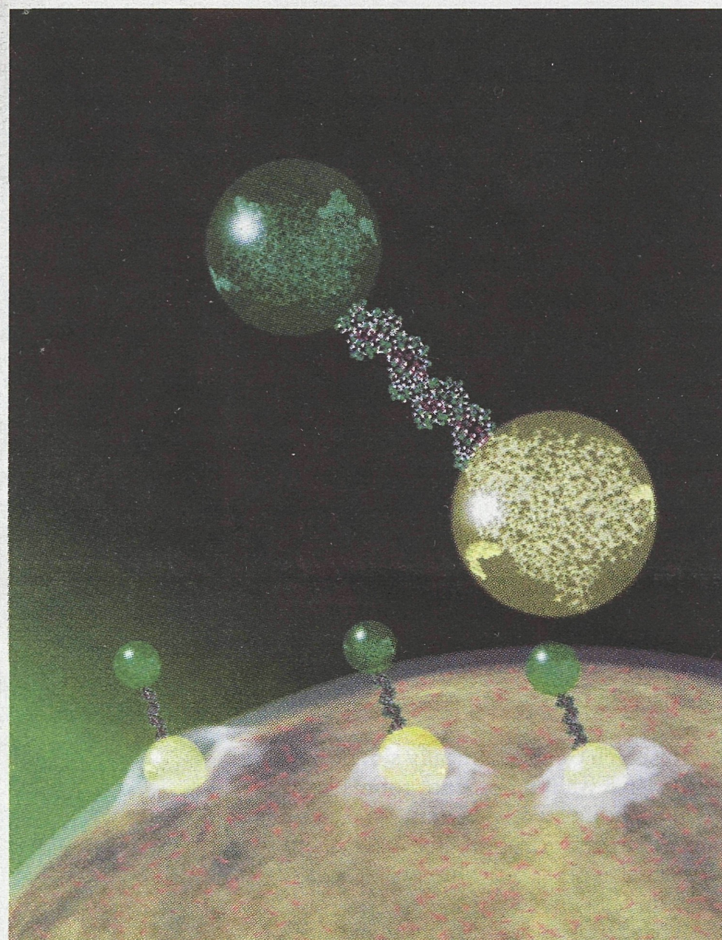
Just a few weeks later, the U-M Board of Regents approved the creation of the Michigan Nanotechnology Institute for Medicine and the Biological Sciences. Its mission: to merge academic expertise and institutional resources across the university to develop and market applications for nanotechnology in medicine, the biological sciences and the environment.

And two months after that, the new institute was awarded a \$6.3 million Grand Challenges in Global Health Initiatives grant funded largely by the Bill & Melinda Gates Foundation. M-NIMBS was one of 43 institutions worldwide – and one of only two in the Midwest – to receive funding.

The grant will support development and testing of a nanoemulsion-based vaccine delivery system that uses a simple nasal swab rather than needle injection. The heat-stable system eliminates the need for vaccine refrigeration, which often is unavailable in developing countries.

“We believe this nanotechnology-based approach can revolutionize how vaccines are delivered and will be an important advance in the prevention of infectious diseases,” said Dr. James R. Baker, Jr., director of M-NIMBS and the study’s lead investigator.

Baker, the Ruth Dow Doan Professor of Biologic Nanotechnology, holds dual appointments in the Medical School and the College of Engineering and is a pioneer in the emerging field of nanotechnology – the science of the



Nanoparticles seen here joined by strands of DNA can be programmed to identify and deliver medications to specific cells.

ultra-small. (One nanometer equals one billionth of a meter; it would take 100,000 nanometers lined up side-by-side to equal the diameter of a human hair).

“The federal government has identified nanotechnology as ‘socially transforming’ technology, equivalent to antibiotics or the integrated circuit,” says U-M Vice-President for Research Fawwaz Ulaby. He chairs the NSEI executive committee which is focusing on three major areas that have been identified as particular strengths within the university: nanomaterials, nanoelectronics, and nanobiotechnology. All of the funds NSEI disburses will be matched one-to-one with funds from the participating school or college.

Prof. Steven Ceccio, associate vice president for research,

chairs the NSEI steering committee which is charged with developing proposal guidelines and proposal review. He is especially seeking proposals from collaborating groups of faculty who envision establishing a major center in nanoscale science and engineering. Smaller scale project proposals are also welcome.

“Nanotechnology is changing how scientists work by giving them the ability to manipulate individual atoms and molecules in biological systems,” Baker remarked. “Its potential to provide innovative solutions to problems in biology, medicine and the environment is unlimited.”

An example is Baker’s study that used nanoparticles to transport a powerful chemotherapeutic drug inside tumor cells, increasing the drug’s cancer-killing activity and reducing its toxic side effects. The results of the study were reported in the June 15, 2005 issue of *Cancer Research*.

Folic acid, or folate, is an important vitamin needed for healthy functioning of all cells. But cancer cells seem to require more, often displaying more folate receptors on their membranes in order to soak up as much of the vitamin as possible, Baker explains.

“It’s like a Trojan horse. We use the folic acid as bait to smuggle cancer-killing methotrexate inside the tumor cells. Folate molecules on the nanoparticle bind to receptors on the tumor cell membrane and the cell immediately internalizes it, because it thinks it’s getting the vitamin it needs. But the cell is also drawing in the methotrexate that will poison it.”

When tested in laboratory mice injected with cancer, the nanoparticle-based therapy using folic acid and methotrexate was 10 times more effective at delaying tumor growth than the drug given alone. Nanoparticle treatment also proved to be far less toxic, Baker said.

As director of M-NIMBS, he has set education of future nanotechnology researchers as a major objective. “Every faculty member in the Institute must agree to support every other faculty member’s students. Graduate students will have seamless access to equipment and lab space, and we will rotate them through different laboratories to give them the varied exposure they need to work in this inherently multi-disciplinary field.”

Enabling funding agencies to work through one academic unit instead of many schools and colleges should facilitate external support, Baker continued. He plans to work with members of U-M’s Technology Management Office and the Stephen M. Ross School of Business to create new spin-off companies to market technologies being developed at the Institute. **MT**

Sally Pobojewski is senior science writer in the Medical School.

THE STUDENT EXPERIENCE AT HEART OF CURRENT CAMPUS PROJECTS

An innovative residential life community, much-needed enhancements to student housing and new homes for two growing academic programs are the latest facility improvements underway on the U-M campus.

New residential life experience in the offing

The phrase “live and learn” is taking on new meaning at Michigan as the University launches three projects designed to enhance student residential life.

Most ambitious is the new North Quad Residential and Academic Complex, blending 21st century technology with a contemporary residential space unlike anything else at U-M. It has the potential to become a model for living and learning communities nationwide, President Mary Sue Coleman stated.

The first U-M residence hall to be built in 35 years will be located on the current site of the Frieze building. The design includes 500 suite-style living spaces, dining facilities, and 190,000 square feet of academic and support space. The academic portion of North Quad will become home to the School of Information and complementary LSA departments such as Communication Studies, Film and Video Studies, and the Language Resource Center. Faculty offices, classrooms, labs, group study spaces and performance venues are all part of the mix.

“There almost certainly is no set of topics of greater interest to our undergraduates than media and information technology,” Coleman noted. “The goal is to create an exciting, engaging environment in which students of all backgrounds and experiences can take advantage of opportunities to connect with one another, with faculty, and with others on campus and beyond.”

Housing renovation addresses student expectations

The plans for North Quad are consistent with the long-range goals outlined in the Residential Life Initiatives (RLI), the result of a two-year study that looked at U-M housing, dining and integration of academic life with learning. The comprehensive report guiding the renovation and expansion of housing facilities across campus concluded that students are interested in modern, suite-style housing; the availability of technology, and convenient dining options with high-quality food, more choice and longer hours.

Mosher-Jordan, a 1930 five-story residence hall for nearly 500 students, has been selected for the first major RLI renovations. The building will retain its historic façade but the interior will be completely renovated.

The 145,000 square-foot, five-story residence hall renovation is expected to begin in spring 2006.

A new Hill Dining Center being constructed as an ad-



Arthur Miller Theatre and Walgreen Drama Center.



Groundbreaking for the Joan and Sanford Weill Hall that will house the Gerald R. Ford School of Public Policy.

dition to the west of Mosher-Jordan will include five to seven food service stations offering a variety of specialty foods, ethnic cuisine and healthy choices, with seating for 700.

“Students no longer eat three sit-down meals a day; they want the flexibility to get food at any time,” Housing Director Carole Henry said.

Arthur Miller Theatre and Walgreen Drama Center going up on North campus

When the University asked Arthur Miller, BA '38, to lend his name to a new theater, the Pulitzer Prize-winning playwright replied with a simple postcard.

“The theatre is a lovely idea,” he wrote in fall 1997. “I’ve resisted similar proposals from others but it seems right from Ann Arbor.”

Construction is underway on a 250-seat Arthur Miller Theatre, part of the new School of Music Walgreen Drama Center on North Campus. The three-level structure of masonry, glass and metal is designed by architects Kuwabara Payne McKenna and Blumberg Associates, whose portfolio includes the Yale University Sprague Memorial Hall and Chicago Goodman Theatre.

Inspired by the courtyard theater style, the state-of-the-art design will include flexible seating and two stage options. A shallow balcony wraps around the sides and rear to create an intimate theater experience.

Miller, who died in February, reviewed the plans late last year. His primary requirement for the theater bearing his name was that it be a flexible space that allows students to experiment with different staging.

As a student in the 30s, Miller washed dishes for his meals and worked as night editor for the student publication, the Michigan Daily. Gaining world renown in the decades that followed, Miller continued to visit his alma mater, often scheduling trips when many students were

on campus because he enjoyed meeting with them.

In addition to the theater, the 100,000 square-foot Walgreen Drama Center will house the departments of theatre and drama, and musical theatre. It will include rehearsal rooms, specialized studios, and classrooms designed for teaching and rehearsing specific skills.

The center’s namesake, alumnus Charles Walgreen Jr., '28, donated \$10 million for the building project. The Walgreen family also has given generously over the years to endow professorships and support facility improvements in pharmacy, education, and LSA.

New home for Ford School of Public Policy

More than 400 faculty, donors, students and alumni attended last fall’s groundbreaking for the Joan and Sanford Weill Hall that will house the Gerald R. Ford School of Public Policy. The building is slated to open in fall 2006.

President Ford, his wife Betty, and their four children participated in the ceremony that also celebrated the School’s 90th anniversary.

“With this building, you have given us our first true home,” Ford School Dean Rebecca Blank told attendees, briefly highlighting the School’s itinerant history. The school currently operates in three locations including Lorch Hall, an annex, and a converted apartment building.

Citigroup Inc Chair Sanford Weill gave \$5 million toward the new five-story, 80,000-square-foot facility, which will feature classrooms, faculty offices, a library, research centers and conference space. Weill and his wife expressed appreciation for their longstanding friendship with the Fords and said they were honored to be part of the former president and first lady’s legacy.

A 1935 graduate, Ford served 25 years in the U.S. House of Representatives, became vice president in 1973 and was president from 1974-77. The campus also is home to his presidential library. **MT**

EURASIA PROJECT CHRONICLES A HALF-MILLION LIVES OVER 200 YEARS

By Diane Swanbrow

What was everyday life like in 18th and 19th century Europe and Asia? Not just for the elite, whose stories are often chronicled, but for the masses of ordinary people?

U-M historian and sociologist James Z. Lee, director of the University's Center for Chinese Studies, offers new insights in *Life under Pressure: Mortality and Living Standards in Europe and Asia, 1700-1900* (MIT Press, 2004), a sweeping examination of how economic stress affected the lives of more than a half million ordinary people over a period of two centuries.

Lee is co-author of the book, the first in a planned five-volume series, and director of U-M's Eurasia Project on Population and Family History that produced the findings. More than 20 scholars around the world have collaborated on the decade-long project.

Analyzing rare historical archives, including household registers from small Asian and European villages, the scholars explore how poverty or food shortages affected who would die or survive, marry, have children, or migrate to a new place.

"Life under Pressure" presents a kind of family history that has never been written before – what life was really like for everyday people, rather than elite groups and exceptional individuals who had the power to protect themselves and their families from economic stress. It also dispels some myths, Lee says.

"Historians have had the idea that ordinary people in pre-modern Asia were not as rational and individualistic as Westerners are," he explained. "They made the assumption that non-Western farm families had lower living standards and did little but suffer when food was scarce."

By comparing data from small rural villages in China, Japan, Italy, Belgium and Sweden, the Eurasia project counters several long-standing beliefs about the differences between life in pre-industrial Europe and Asia – beliefs that continue to color contemporary attitudes about Asians. In fact, a major appeal of the project to Lee, whose parents emigrated from China to the United States in 1946, was the opportunity to disprove Eurocentric, essentially racist, assumptions about everyday life in pre-industrial Asia.

"We've been sold a myth," said Lee, who is also a senior research professor at the U-M Institute for Social Research (ISR).

"The classic 19th century political economic views of Adam Smith and Thomas Malthus maintained that England and Western Europe were unique, and that the success of the English Empire was a result of deep-rooted features of English family life. This kind of ethnocentric view is outdated."

Lee and his co-authors prove their case with empirical evidence, showing how relatively small changes in the price of food grains such as rice, wheat, sorghum and other staples affected individuals' chances of marrying, having children, migrating and even staying alive. The research shows that when times were bad and the price of grain rose by 10 percent, a person's chance of dying rose by as much as 16 percent.

But death rates in the West in-

creased more than they did in the East, and were more selective.

"On the one hand, we found that favoritism was universal," Lee said. "But we also found that there was a different kind of favoritism in different places." In the West, property ownership was the factor that favored you for survival, while the East favored political and family status.

"As we looked at how pressure affects individual lives rather than entire populations, we began to see more and more nuances," Lee said. "We began to see that our understanding of the past had been too simplistic."

Lee made his first trip to China in 1973 during the Cultural Revolution. He had just graduated magna cum laude from Yale, and was headed for graduate studies in ancient Chinese history at the University of Chicago.

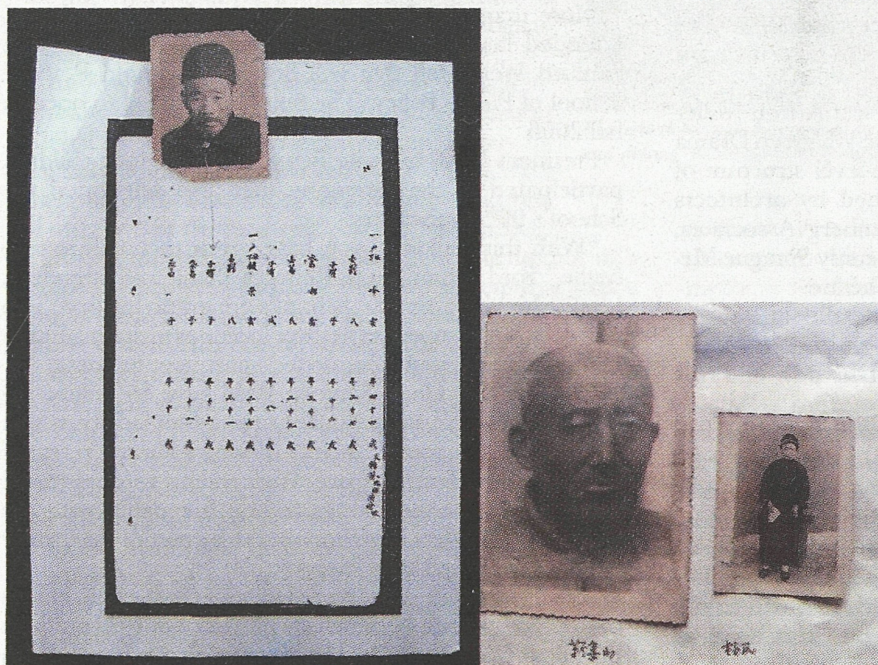
"China's universities had just re-opened, and I encountered only two other foreign students. We had to do physical labor as part of the curriculum," he recalls. "But I really wanted to see what life in China was like." So he worked on a farm and in a factory, attending classes at Fudan University in Shanghai, where his parents lived before they came to the U.S.

Lee's father, Tsung Dao Lee, the 1957 Nobel co-laureate in physics, is a student of U-M graduate Ta-you Wu,



An ancestral altar.

Photo by Cameron Campbell



A 1909 household register and photos of three of those listed.

the father of Chinese physics research. His younger brother, Stephen, a U-M professor of chemistry from 1989 to 1997, was a 1993 recipient of a MacArthur fellowship, the “genius grants,” awarded to exceptionally talented and creative people. Lee’s grandfather gave him the name Zhongqing, literally meaning Qing China, referring to the last imperial Dynasty (1644 to 1911). Growing up in a family of scientists, Lee was at first determined to follow a completely different career path. But coming to study at U-M in 1980, he discovered that he loved working with social science data. He found himself drawn to “a kind of history that was much more scientific than any I had encountered before.”

Lee started writing to Chinese archives and libraries, to find out what kind of data might be available on historical Chinese populations. He hit the jackpot in Liaoning Province, in northeastern China, where he discovered detailed household registries dating from his namesake Dynasty – the Qing. “Who knows?” he said. “Maybe my area of research was fated.”

In 1982, he traveled to the provincial capital to examine the registries, which took up about 5,000 running

meters of shelf space in an old air raid shelter. He returned twice in the ‘80s, slowly accumulating data on births, deaths, marriages and emigration. Then the Mormon Church found out about the archive and worked with the provincial government to microfilm the entire collection for its International Genealogical Index. Since then, Lee has collected data from both Liaoning and Salt Lake City, Utah.

With the synchrony that happens so often in good science, researchers in other places were collecting the same types of detailed historical data on individuals and families. Tommy Bengtsson and colleagues were gathering records of births, marriages, deaths and migration from parish registers in Scania, the southernmost province of Sweden. Others were analyzing data from 19th century population registers in Belgium, Italy and Japan. They all met for the first time in Kyoto in 1994 to formalize their serendipitous collaboration and synchronize their measures and methods, allowing them to compare what life was like in different regions.

To make sense of all this data, the researchers used sophisticated statistical techniques designed to deal with complex data sets that track the same people over long

periods of time. “Until about 10 years ago, we didn’t have either the methods or the data to study trajectories of individual lives in the present, let alone the past,” Lee noted. The techniques were developed for modern longitudinal surveys like ISR’s Panel Study of Income Dynamics and its Health and Retirement Study, which interview the same people over and over again. The Eurasia Project analyzes longitudinal data on what now is more than half a million individuals over a span of 200 years.

Lee describes it as “an epiphany” when he and colleagues realized that they could use event history analyses to reveal what people’s lives were like. Before, historians were forced to imagine how economic forces and family circumstances shaped people’s lives. Now, international conferences are being mounted on the new history of kinship and the genetic implications of population history. The histories of even the most well studied populations are being re-written as the new analytic methods help historians, demographers, economists, geneticists, epidemiologists and other researchers unlock the secrets of genealogical records. “The study of past lives is becoming much more scientific,” Lee said. **MT**

Population Experts Hail New Book

By Diane Swanbrow

It was every writer’s dream: an “Authors Meet the Critics” session ringing with praise and short on criticism.

One commentator at the Population Association of America (PAA)-sponsored event confessed it was hard to say enough positive things without sounding overly effusive. “It is truly a landmark publication,” he declared. “A big science effort to answer big questions.”

Life under Pressure: Mortality and Living Standards in Europe and Asia, 1700-1900, (MIT Press, 2004) co-authored by University of Michigan historian and sociologist James Z. Lee, details findings from the decade-long Eurasia Project on Population and Family History. The first book of the planned five-volume series stirred a lively exchange at the 2005 PAA meeting.

Lee and his colleagues, notably sociologist Cameron Campbell, (UCLA) a former U-M postdoc, economic historian Tommy Bengtsson, (Lund), and sociologist Wang Feng, (UCI), have analyzed data from rare, historical archives, including multi-generational household registers containing life histories of hundreds of thousands of people. Their goal: to learn how economic fluctuations affected certain types of families and members of specific kinds of societies.

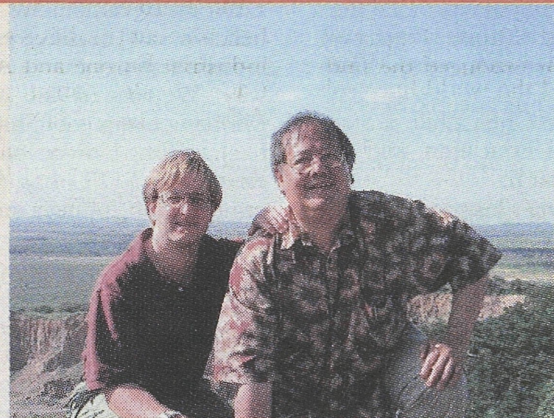
Berkeley economist and former U-M faculty member Ronald Lee, also had high praise for the book, though he questioned whether it was too detailed. Speaking at PAA’s “Meet the Critics” session, he presented a series of analyses based on the book’s findings that took what he called “the intellectually brutal approach of ignoring local variation” to identify aggregate effects and patterns. What would happen if you changed the dependency ratio in a household, adding a working-age or elderly adult,

he proposed. Or, how might the loss of a parent affect a baby’s chances of survival?

James Lee acknowledges the problem but isn’t at all sure that it makes sense to pool the Eurasia Project data to see the big picture. “There’s an interesting tension between pooling and splitting the data,” Lee said. “How do you construct a narrative that can convey some of the richness of your findings but that doesn’t become so diffuse that there really is no narrative?” Using the big-picture approach of traditional historical demography rather than the individual-level analysis the Eurasia Project pioneers, misses the diversity of individual responses to pressure, Lee said.

Ohio State University economist Richard Steckel, president of the Social Science History Association, predicts that the book will have a lasting impact on how scholars do demography of the past. But a big collaborative project of this type raises issues, he said. “Who was the driver, who held the whip, who cracked it? How do you get people to work together over this period of time and these distances?”

“There is no single driver of this project,” Bengtsson insisted. “We are true collaborators.” Indeed, the next volume in the Eurasia Project series addressing fertility will be published next spring, with three more volumes in the pipeline. And Lee, Bengtsson, and others are launch-



Cameron Campbell and James Lee

ing a related project, designed to link past and present by closing the gap in longitudinal micro-data between about 1900 and 1970.

“There is historical material up to 1900, then digitalized data from 1970 on,” Bengtsson said. “In between, nothing. And that’s where everything happened – for example, the transition from the four- or five-child family to the two-child family. We’ll also be adding some societies,

including the Netherlands.”

In the midst of their excitement about the ongoing research, James Lee and his colleagues around the world are working hard to tell an understandable story portraying the lives of ordinary people under economic pressure, while detailing the complex calculus of these lives in different places with different social rules and within very different kinds of families.

“We were aware from the beginning that looking at such vast numbers, there was the danger of imposing order where none existed,” said Cameron Campbell, the UCLA sociologist who is working with James Lee on the Qing Dynasty. “It’s like looking a tile floor. You start seeing patterns that aren’t there.” **MT**

Diane Swanbrow is a lead public relations representative in the U-M News Service.



President Mary Sue Coleman leads delegation of U-M faculty and administrators to China

President Mary Sue Coleman led a delegation of U-M faculty and administrators to China in late June, where they visited several of China's leading universities and met with two ranking Chinese government officials. During the trip, the group finalized collaborative agreements with Peking University, Shanghai Jiao Tong University (SJTU), Tsinghua University and Fudan University. State Counselor Chen Zhili and Minister of Education Zhou Ji both encouraged U-M to explore additional partnerships. The visit also included a meeting with U.S. Ambassador to China Clark Randt, a 1975 alumnus of the U-M Law School, and receptions in Beijing and Shanghai attended by more than 400 alumni and friends, both Chinese natives and expatriates.

President Coleman reflects on the trip in this Q and A.

China has set its sights on creating a much larger and more sophisticated higher education enterprise. What was your impression?

In Beijing we met with Madame Chen Zhili, a State Counselor and former Minister of Education, and the current Minister of Education, Zhou Ji.

Minister Zhou told us about China's long-term aspirations to create some of the best universities in the world. Meanwhile, though, he noted that China is still very short of the number of spots they need for college admission. He pointed out that it is still necessary for them to educate about 600,000 of their students in other countries, including, they hope, in the U.S. I spoke about what I considered critical for the development of a world-class university – deep disciplinary knowledge, robust interdisciplinarity and collaboration within and across universities. Absent from the Chinese university system is the notion that universities can collaborate with each other to produce better research and information.

We discussed the model that U-M might present for top Chinese universities. State Counselor Madame Chen Zhili was extremely positive about the collaborations and gave the important signal that she anticipated that U-M, with its collaboration with Shanghai Jiao Tong University, would function as a “pilot” or developmental project. It is highly significant that almost immediately after our audience with Madame Chen, her office issued a



Barbour scholar Bei Tsung Li talks with Jo Rumsey of the Alumni Association. Barbour Scholarships were created in 1914 for women from Asia to study primarily science, mathematics, and medicine.

statement about the meeting and her encouragement for the UM-SJTU joint institute (www.chinaview.cn). This was widely reported in the news media across the country.

What evidence of expansion did you see?

On every campus we visited we saw massive new building programs under way. We toured the new Minhang campus of Shanghai Jiao Tong University, for example. SJTU has five campuses (including a medical school whose merger with SJTU was just completed). This new campus, about 35 kilometers from Shanghai, is being built on 350 hectares that were donated by the city. The scale of construction is enormous. This campus houses 20,000 students in university-owned apartments. Currently almost 11 million square feet of new space are under construction. By comparison, U-M has about 25 million square feet and we are the largest U.S. campus. The entire campus is beautifully landscaped. We toured a new mechanical engineering building and it reflected impressive architecture.

Another example is Beijing Normal University, which was formerly a university engaged in the preparation of teachers. However, they – like most of the top universities in China – have expanded in recent years to become “comprehensive,” meaning that they want to cover all disciplines and become excellent in everything. Their greatest strength is psychology, which they tie to their historical mission of teacher preparation.



President Coleman and Provost Courant (left) look over plans for the new campus of Shanghai Jiao Tong University with officials of SJTU and members of the delegation James Woolliscroft (third from right), executive associate dean of the School of Medicine and Prof. Jun Ni, director of the S.M. Wu Manufacturing Research Center, who played a leading role in forging the partnership with SJTU.

What is U-M's interest in China?

Many U.S. universities are exploring partnerships with Chinese universities. The University of Michigan is more suited than many, though, to establishing collaborations with Chinese universities. Our attributes as a very large, research-intensive university that is public, rather than private, put us very much in tune with what the Chinese are seeking as a model.

We can see the benefit of nurturing partnerships. For example, we signed an agreement with SJTU to create a collaboration in chemical genomics that will screen through tens of thousands of chemical compounds to identify their properties and their usefulness for pharmaceuticals. This is a massive undertaking. The collaboration gives us a way to involve many more scientists to work on this project and gives us access to an important family of compounds found in traditional Chinese herbal medicine.

We also want to make sure that we are creating programs that will prepare new generations of U-M students to live and work in an international environment. Our Chinese partnerships help give us the means to provide our students with opportunities to study in China and learn the lessons that are taught by exposure to a different culture.

Tell us about the agreements that you signed.

Our College of Engineering has had a robust collaboration with Shanghai Jiao Tong University for more than five years, and as a result U-M is the only U.S. university approved by the Chinese government to award graduate degrees in engineering. We signed an agreement to create a joint institute with SJTU that expands the programs from the point of view of the number of students we exchange and the programs that we offer.

One example will be a program in Shanghai that will make it possible for U-M students to study a combination of technical subjects and non-technical areas such as business and culture. This will be a great asset for students who want to prepare for a professional career in China. Our discussions with SJTU about further collaboration were in depth and substantive. Clearly they are eager to deepen the relationship.

Another very promising future possibility is with the SJTU medical school, as they are converting to a new eight-year curriculum (starting out of high school) and need to change the way they are delivering medical education.

We also signed an agreement with Peking and Tsinghua universities to create a Program to Globalize Interdisciplinary Chinese Studies. We got this off the ground this summer and it will become full-fledged program next year. We are very enthusiastic about the way our Chinese Studies students will be studying in residence at Peking University and be in direct contact with Chinese students and faculty. They will also have the access to libraries, museums and other resources that can only be found in China.

How is the U-M Institute for Social Research involved in China?

The Institute for Social Research is establishing a Program in Quantitative Social Science Research with Peking University with a very exciting agenda in mind. The two universities will collaborate on a bi-annual survey of two Chinese provinces with a combined population of 150 million people.



At left, Dr. James Woolliscroft, executive associate dean of the Medical School and Professor James Jackson, director of the Institute of Social Research were part of the delegation.

There are huge issues facing China in the next decade. The social safety net that existed in the former planned economy is no longer in place as the country moves to a market-based economy. They need to build a public health system.

And the country as a whole is undergoing a rapid movement of previously unknown proportions of a large population into the middle class. All of these issues cry for really good social science research on a massive scale.

Are there other social issues that are implicated in U-M's collaboration with China?

We signed an agreement with Fudan University to create a Gender Studies Institute that will be the first of its kind. Gender studies does not exist now in China as a distinct academic field of study. There is tremendous interest in the topic, but no faculty cohort to carry out research and train a new generation of scholars. Our collaboration will lay the groundwork for creating the first graduate program in women's studies at a major Chinese university and lay the foundation for establishing the field.

What did you learn in your conversation with Ambassador Randt?

We discussed the importance of ensuring that foreign students, including Chinese students, continue to have access to study in the United States. The State Department has made tremendous strides streamlining the visa process for foreign students to enter the U.S. and recently extended the visa period so that renewals are not needed so frequently. Right now the U.S. is processing more student visas than it was in 2001.

Were you able to meet alumni in China?

Our outreach to alumni exceeded our hopes. In Beijing we had a fabulous event with over 213 enthusiastic U-M alumni gathered at the Shangri La Hotel ballroom. We found the demographics of the Beijing group quite interesting. There was a large group who had been at U-M in the 1940s and '50s. The '60s decade was a gap (the Cultural Revolution) and then people trickled back in the '70s and rose in the '80s and '90s. It was exciting to see them all interact so enthusiastically. We were joined by several U-M students who were in Beijing for the summer, as well as a number of Chinese students who are coming to U-M in the fall. We gathered many name cards to start a network of U-M alums in China.

The Shanghai alumni reception was held at the Ritz-Carlton in the center of Shanghai. We were swamped with close to 200 people. Unlike Beijing this was largely a young crowd. There were many U-M students in China for the summer. Also a number of students (both Chinese and American) who were on the UM-SJTU exchange were in attendance. Then there were many, many young and successful Chinese alums who are clearly doing well in the new China. We all sang "The Victors" with great enthusiasm and I posed for many photos. The reception, which was supposed to end at 8:30 p.m., lasted well after 10:00 p.m.!

We told both alumni groups about a new web site: www.umich.edu/pres/china/. We also had the opportunity to meet some of the most distinguished of our Chinese alumni.



President Coleman honored two alumni with Rackham Distinguished Alumnus Awards. Prof. Zhang Cunhao, left, who earned a master's degree in chemical engineering in 1950, was the first president of China's Natural Science Foundation. Also honored was Dr. Zhu Guangya, who earned his doctorate in physics in 1949, and who is a member of the Chinese Academy of Sciences and of the Academy of Engineering of China. Dr. Zhu, who was unable to participate, was represented by his wife, Xu Huijun.

Was there any special highlight of your trip?

I received an honorary degree from SJTU, only the second honorary degree that SJTU has conferred since its founding 105 years ago. The ceremony was held on the original SJTU campus in the heart of Shanghai. First we had the official signing of the collaboration agreements and then President Xie and I changed into our academic regalia and they presented the degree in front of a large audience of students and faculty. I gave my acceptance speech, which was telecast live, and then answered questions from students. For me, that was the highlight of the day! The students were totally unassuming in their questions and it was a delight for me to interact with them. In fact, they were much like our own students.

Are there ways that U-M's outreach to China will have direct application to the business community?

In Shanghai, a number of us met with the president of GM Asia, Troy Clarke. We learned that U.S. multinational corporations are very interested in industrial and plant health and safety programs and can find almost no one educated on these issues in China. Ford Motor Co. officials said much the same thing at a meeting the next day. We already have well-established curricula in these areas in Nursing and the Medical School, so we think there may be a very good opportunity to add such educational programs to our SJTU collaboration.

Were you able to take in the sights on the trip?

One memorable event was a dinner cruise that SJTU hosted on the river that divides Shanghai. It is hard to describe this city, except to say there are probably more new high-rise buildings in Shanghai than any other place in the world. The pace of development is astonishing – something like 25 percent of all the construction cranes worldwide are in this city. One huge area on the river is currently the second-largest shipyard in the world, and it is to be moved to make way for Expo 2010! The views were breathtaking.

In Beijing, our meetings with State Counselor Chen took place in the central compound of the national governmental offices. This large complex – Zhong-Nan-Hai – is located close to Tiananmen Square and the Great Hall of the People. There we met with Madame Chen in what is effectively the oval office (Zi-Guang-Ge) of the White House – a spectacular space in the center of the beautifully landscaped area.

What is your overall assessment of the potential for U-M in China?

I am well aware of the challenges, yet I firmly believe that the University of Michigan is making the correct strategic investments in Asia for the 21st century. This trip has confirmed for me that we are on the proper course in China.

MT

A Day to Remember

By Leslie Stainton

There were no last-minute press releases this time, and the battery of television cameras and radio microphones was absent, but the room was again packed, and you could feel the excitement. At the very hour when, 50 years earlier, Thomas Francis Jr. stood at a podium on the stage of Rackham Auditorium to announce the success of the Salk polio vaccine, University of Michigan President Mary Sue Coleman stood at the same podium, on the same stage, to award the first-ever Thomas Francis Jr. Medal in Global Public Health.

On such days dreams are made, and April 12, 2005, was such a day. To mark the 50th anniversary of Francis's watershed press conference—which led to a vast and immediate drop in the number of polio cases nationwide—U-M staged a day-long program of events that included a documentary video, reflections by polio survivors, and panel discussions on the history of the polio vaccine and the future of global public health, the latter chaired by Harvey Fineberg, president of the Institute of Medicine.

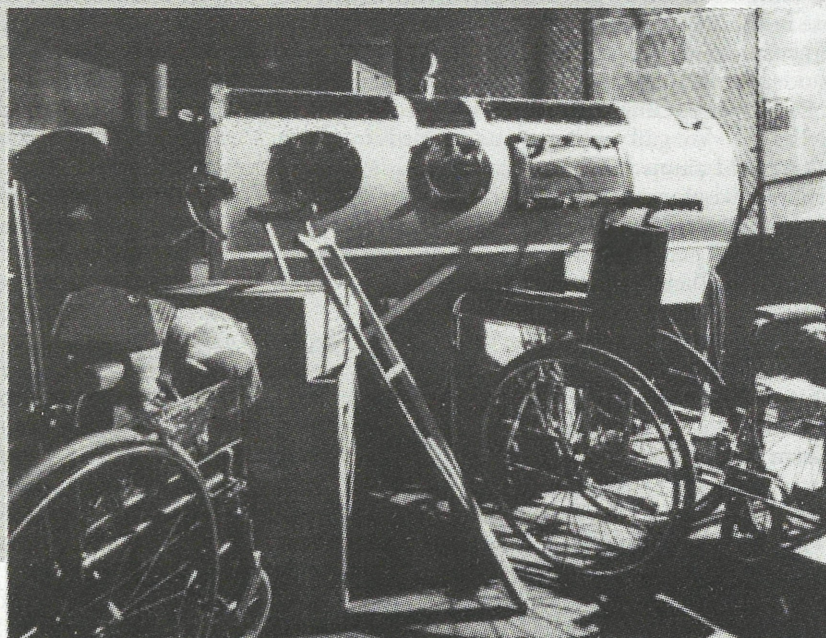
The day's most dramatic moment came when Coleman presented the Thomas Francis Jr. Medal in Global Public Health to William Foege, a past director of the Centers for Disease Control and Prevention and executive director of The Carter Center, and currently a senior adviser to the Bill and Melinda Gates Foundation, who pioneered a strategy to eradicate smallpox in the 1970s. Foege's high achievement and life-time dedi-

cation in public health mirror that of the medal's namesake, Thomas Francis Jr., a world-renowned virologist and founding chair of the School of Public Health Department of Epidemiology, who designed and oversaw the 1954–55 field trial for the Salk polio vaccine. The Francis medal carries a prize of \$50,000.

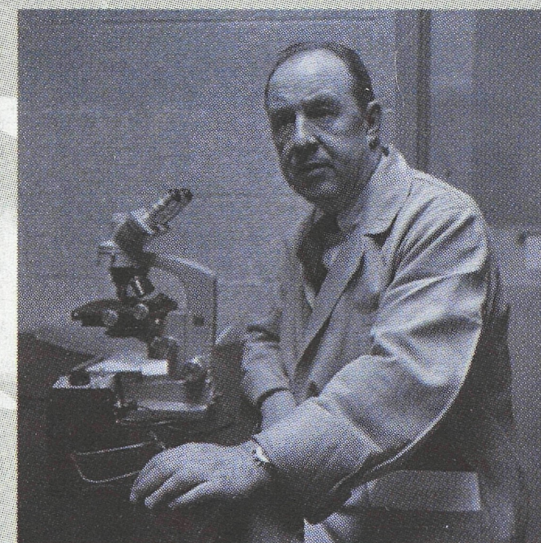
An excerpt from Foege's inspirational Thomas Francis Jr. Lecture follows, as do remarks by six historians who took part in the 50th anniversary celebration.

MT

Leslie Stainton is editor of Findings.



An iron lung.



Thomas Francis Jr.

Reprinted with permission from Findings, spring 2005, published by the School of Public Health.

2055: A New Age of Enlightenment

Remarks by William Foegen

After insisting he did not deserve the Thomas Francis Jr. Medal in Global Public Health, but thanking the University of Michigan nevertheless for giving him the award, William Foegen—whose groundbreaking work led to the eradication of smallpox in the 1970s—turned his thoughts to the anniversary at hand and to all that it signifies. He considered the future, too:



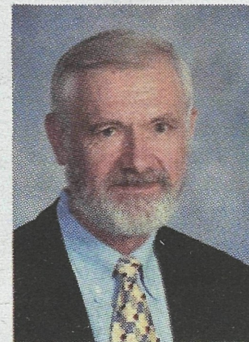
Thomas Francis Jr.

They will still
marvel at the
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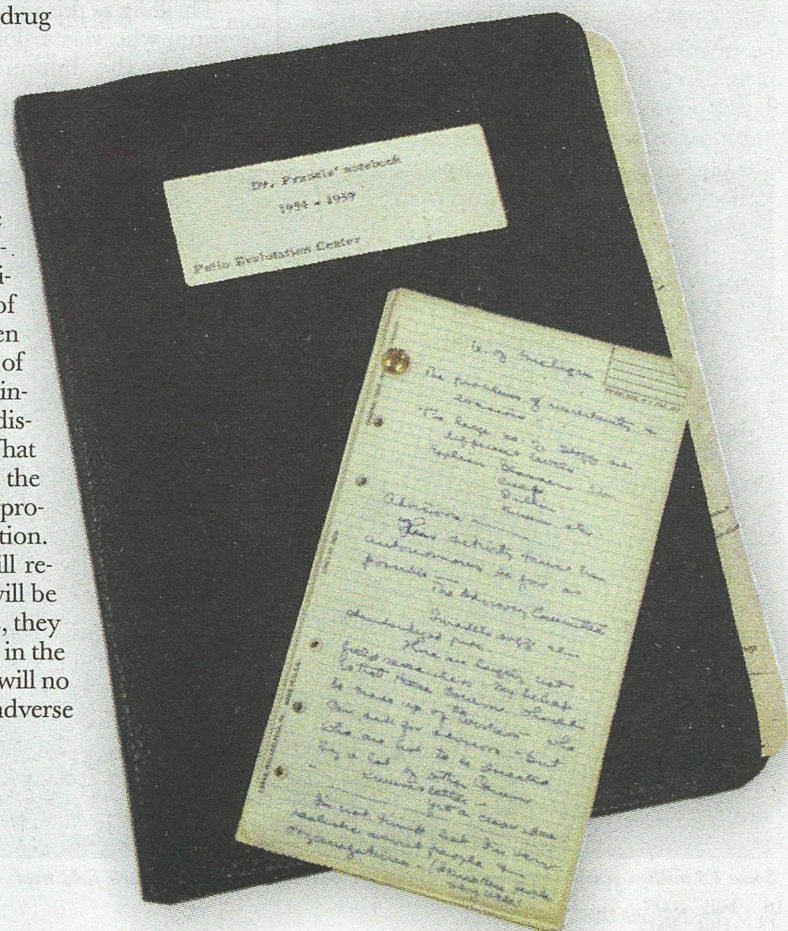


In April 2055, there will be another celebration at this university, to remember the centennial of this announcement. I won't be here—although I intend to try—but there are some people in this audience today who will be here 50 years from now, and someone, in giving the Thomas Francis lecture, will describe the true legacy of the 1955 press conference. They will point out what in 2055, a hundred years later, is simply accepted—namely, that the place or country of birth, ethnicity, wealth of parents, the education of the family, will no longer be the deciding factors which determine whether a child is protected by vaccines or not protected. Because the legacy of the 1955 field trial, the subsequent U.S. government decision to make resources available for the use of polio vaccine for all children, the elimination of smallpox and polio from the world, the promotion by Bill and Melinda Gates for more vaccines, safer vaccines, and equitable distribution, and a hundred other steps, will have led to a world where this is an accepted part of global conventions. In the words of Richard Horton, the editor of *Lancet*, “We will have discovered that equity is as precious as any drug or vaccine.”

And even given the enlightened approach to global health that finally became the norm, those gathered will still express their astonishment over the number of vaccines given. Dozens of vaccines will be part of the standard childhood immunization program, and an additional computer-generated array of various other vaccines will be given to children, determined by a scan of their genome disk. And they will include vaccines against infectious disease, cancer, and chronic diseases. What will be reiterated is that vaccines are the very foundation of public health, providing inexpensive lifelong protection. The vaccines will be combined, will require no needles or syringes, they will be given orally or through skin patches, they will be heat-stable—therefore usable in the tropics without refrigeration. They will no longer include the small number of adverse reactions that we now have.



William Foegen



But a hundred years later, they will *still* marvel at the audacity of a field trial that kept track of 1.8 million children before the days of computers. The speaker will say it was just a moment in time, but you will have learned the lesson. Every moment in time ripples on forever, and that moment in time changed the world. It allowed the expected lame to walk, and it ushered in the expectation that not only will government support the search for new knowledge and the sharing of that knowledge, but it will also mold the tools of that knowledge into effective immunization programs, and those vaccines, as they go into children around the world, will carry messages that instruct immune systems on how to serve that person better. And every message will carry the social DNA of Thomas Francis and Jonas Salk, and the University of Michigan. **MT**



Some 1.8 million school children, *Polio Pioneers*, participated in the historic field trials.

April 12, 1955 — Tommy Francis and the Salk Vaccine

By Howard Markel, M.D., Ph.D.

Adapted from the New England Journal of Medicine, April 7, 2005

April 12, 1955, was supposed to be Tommy Francis's day. At 10:20 a.m., the distinguished epidemiologist was scheduled to conduct an international press conference in Rackham Auditorium at the University of Michigan. The topic was the field trial he had just completed—the largest of its kind ever—evaluating the efficacy of the poliovirus vaccine developed by Jonas Salk at the University of Pittsburgh.

It is hardly hyperbole to note that the speech by Dr. Thomas Francis, Jr., was eagerly awaited by most of the world. Few diseases were capable of arousing more fear than poliomyelitis. Almost every summer, polio epidemics left behind a wake of paralysis and death; horrific images of children struggling to walk or trapped inside iron lungs were etched into every parent's brain.

Before a jam-packed audience of scientists and dignitaries, Francis approached the lectern. He began his speech with two simple declarative sentences: "The vaccine works. It is safe, effective, and potent."

Thrilling as this news was, there was one person in the auditorium who was visibly unhappy with Francis's report: Jonas Salk. As the diminutive virologist took the podium after Francis's speech, an avalanche of applause greeted him. Yet

this public show of appreciation on the part of his scientific peers—a group that had never been accused of being overly effusive—was not enough for Salk, who felt compelled to insist that he had created nothing less than the perfect vaccine. Too flustered even to mention the names of the colleagues who had worked with him at Pittsburgh, Salk assailed the accuracy of Francis's findings. The failures encountered in the trail, he declared, were caused by merthiolate, a mercury-based antiseptic that had been added to the batches of vaccine, against Salk's wishes,

at the express orders of the U.S. Laboratory of Biologics Control. With a dramatic flourish, Salk proclaimed that his new and improved (Merthiolate-free) vaccine might well be 100 percent effective.

Salk's comments created a controversy that his critics used to disparage him for the rest of his career. Backstage, a furious Francis was heard scolding his former student. "What the hell did you have to say that for?" Francis railed. "You're in no position to claim 100 percent effectiveness. What's the matter with you?"

Salk's failure to recognize the achievements of his coworkers and his injudicious (albeit ultimately correct) claims aside, the rest of the world was eager to lionize him as a bona fide medical hero. As the journalists scrambled out of the auditorium to call their editors, the spotlight of fame permanently shifted from the epidemiologist to the young creator of the polio vaccine. For many days, there wasn't a front page of the newspaper, a television or radio show, or a newsreel that did not shower Jonas Salk with praise and gratitude. For millions of parents and their children around the world, Salk became the avatar of medical progress. Even so, a decade later, Salk admitted, "I was not unscathed by Ann Arbor."

It takes little imagination to understand why April 12, 1955, turned out to be Jonas Salk's day [rather than Thomas Francis's.] After all, he developed the first effective vaccine against polio; his teacher merely undertook the chore of testing its efficacy on a mass scale and then confirmed to the world that Salk had succeeded. The annals of medical history are replete with such distinctions. **MT**

Howard Markel, M.D., Ph.D is the George E. Wanta Professor of the History of Medicine in the School of medicine and the author of When Germs Travel: Six Major Epidemics that Have Invaded America and the Fears They Have Unleashed (2004).

For the full text of Dr. Markel's article, www.polio.umich.edu/history/markel.pdf. For more information about the anniversary, visit www.polio.umich.edu.



Jonas Salk

The Epidemic

Naomi Rogers

Associate professor, Section of the History of Medicine and the Women's, Gender, and Sexuality Studies Program, Yale University; author of *Dirt and Disease: Polio before FDR* (1992).

In 1900, about a decade before Jonas Salk was born, polio was an invisible disease. The polio virus was ubiquitous—like the common cold. Everyone was infected as infants, and few ever developed paralysis. In 1916, all this changed with the world's then largest, most severe polio epidemic. It began in New York City and spread to surrounding states. As an epidemic disease, polio was new and terrifying, and so it was explained the way most public health crises were explained—as the fault of America's immigrants, pouring into cities with strange languages, clothes, eating habits, and probably strange germs. This picture of polio did not alter until after 1921, when a wealthy lawyer who'd just run as the vice presidential candidate for the Democratic party, and lost, Franklin Delano Roosevelt, got polio. Now, polio was no longer personified by an immigrant, an outsider, but by an ordinary American.

The Vaccine

Jeffrey P. Baker

Associate clinical professor, pediatrics, and medical historian, Center for the Study of Medical Ethics and Humanities, Duke University.

At the end of the 1940s the great question was: "How do you make the vaccine?" There were really two, fairly divided, schools of thought. Most vaccines from the earlier part of the 20th century were actually inactivated, or killed, vaccines. In general, these vaccines were the old style of vaccine by the 1940s. The newer approach was to try to take viruses and modify them somehow into a harmless form that could still induce immunity—the live-attenuated vaccines. This was championed by the great majority of virologists, including Albert Sabin. Well, there were a couple of exceptions to that, who remained from the other school, and Tommy Francis was chief among them. He still was convinced the idea of a killed vaccine made sense, and Francis, of course, is the mentor of Jonas Salk. So we need to appreciate that Salk is in the killed-vaccine school, Sabin in the live-vaccine school—two kinds of orthodoxies—and they don't easily see the other's point of view. And in addition, Sabin's camp is by far the stronger—a lot of leaders are in his group. So Salk is very much on the defensive. You can imagine, when Salk was ready to have his vaccine in a field trial, he was in a defensive position,

and I think that's very important to understand when we try to understand why this trial here was done so well, why it had to be done so rigorously. It had to be an elegant trial because it did not rest on the most elegant science.

Jonas Salk

Jeffrey Kluger

Senior writer, *Time*; author, *Splendid Solution: Jonas Salk and the Conquest of Polio* (2005).

Whenever he could, Salk lived in the country. He lived as far away from the city as he could, which sometimes meant a 45-minute or an hour commute each day. The reason he did that wasn't so much that he needed that reclusiveness and seclusion at the end of the day, as much as it was that Salk saw the world, the universe, as a series of self-repeating fractals. At all different levels the same patterns were repeated. A man spending his free time in his garden, immersed in that nature writ large, is no different from that same man going into his laboratory the next day and looking into his petri dishes and into his microscope and seeing nature writ microscopically small. It was Salk's belief that if he could immerse himself in those rhythms in his everyday world, he'd be better able to recognize those rhythms when they presented themselves to him in his microscope and in his dishes. That was why at the pivotal moment, in 1952, when he saw that his early work with antibodies—which he had drawn from the blood of patients who had been given an early version of his vaccine—when he saw that was working in vitro, he called that his "yes" from nature. Nature just told him that the process could work. Now all that was left for him to do was to scale it up and make it work in humans, in vivo, on a massive scale.

The March of Dimes

David Oshinsky

George Littlefield Professor of History, University of Texas-Austin; author, *Polio: An American Story* (2005).

The March of Dimes was unbelievable when it came to advertising, fundraising, and public relations. Think back. It was the poster child that came from the March of Dimes, that's so ubiquitous today; the Mother's March against Polio—there are so many marches now, with AIDS and breast cancer and the like; unbelievable fashion shows at the Waldorf Astoria, where you would have Grace Kelly or Marilyn Monroe walking down the runway with the latest creations of Christian Dior; the Harry Winston trav-

eling jewel extravaganza, where people would pay small amounts of money to see the best jewels in the world. I have in my book a picture of an extremely unhappy and uncomfortable-looking Richard Nixon pumping gas for polio. The March of Dimes, however, raised hundreds of millions of dollars, and a lot of it went into research. So when we remember polio, I think we should remember the engine behind the polio vaccine, and that was the March of Dimes.

The Aftermath

Daniel Wilson

Professor of history, Muhlenberg College; author, *Living with Polio: The Epidemic and Its Survivors* (2005).

Thomas Francis's announcement of the success of the Salk vaccine was a bittersweet announcement for polio patients and polio survivors alive in 1955. They were certainly happy that the trial was a success, that future generations would grow up free of the fear of polio—but they were also sad that the vaccine had come too late to help them. It's important, I think, to note that the success of the Salk vaccine trial and the immediate licensure of the vaccine did not bring an immediate end to the disease. In 1955 alone, nearly 29,000 cases of polio would be diagnosed. Between 1955 and 1960, over 67,000 cases would be diagnosed. In my own case, in northern Wisconsin, there was a shortage of vaccines, and in a good public health decision, they were giving it only to students going to school, and I was a year too young to go to school and got the virus instead of the vaccine. **MT**



ADVANCE making progress to bridge the gender gap

Following a three-year effort to bridge the gender gap in the science and engineering disciplines, the University has more than doubled the number of jobs offered to women faculty in those fields.

In 2001, the year that U-M launched the National Science Foundation (NSF)-sponsored ADVANCE program, the University had 47 openings for faculty in science and engineering, and it filled six of them, or 13 percent, with women. By 2004, the rate of female hires had tripled. Of 31 slots to fill in science and engineering, 12 hires, or 39 percent, were women.

Abigail Stewart is the U-M professor of psychology and women's studies who has led the ADVANCE project, created by NSF to address the poor representation of women on science and engineering faculties across the nation.

"Gender is not 'about women;' it's about the structured relationships between men and women, both the ones we recognize and the ones we don't," Stewart said. "So what we're working on is important for all scientists, and should improve science for everyone."

Amid ongoing attention to the underrepresentation of women in the sciences U-M's efforts have been cited by the NSF and in national media as a model that works to not only address the underrepresentation of women but the environment in which they work. A survey in 2001 showed that Michigan's climate felt quite chilly to women scientists, but a January 2005 follow-up survey suggests that women scientists find the climate warmer. A full follow up is scheduled for Fall 2006.

The U-M approach draws upon social science research findings that provide empirical evidence showing unconscious bias permeates the thinking of both men and women, and uses the research to stimulate faculty discussion about ways to counteract some of that bias. In one frequently cited experiment, people who entered a room with both men and women seated around a table were asked to identify the leader. If a man sat at the head of the table, respondents would identify him as the leader. But when a woman was at the head the table, most respondents looked elsewhere and decided that one of the men was the group leader. This unconscious association between gender and leadership creates extra labor for women in leadership roles.

Anthony England, associate dean of academic affairs and professor in engineering, said the ADVANCE project has changed the campus' attitude toward unconscious stereotypes. "When I first participated in this activity I was confident, but I heard from some of my colleagues that they were indifferent to the problem," England said. "In fact, there was even skepticism that there was a problem. What I find now is that they recognize that the problem is real and we are now talking about what we can do to change things."

Other accomplishments of ADVANCE in the last three years include 43 grants to women faculty. Some of the grants enable women to carry out the scholarship that leads to tenure while others provide women training for faculty leadership positions.

ADVANCE also brings in top women faculty from peer institutions to speak on the U-M campus. The quality of the speakers refutes notions that there is a limited hiring pool for female faculty. The series also helps cultivate potential recruits. U-M's electrical engineering program lost three of its six female faculty in 2002-2003 but brought in 16 women seminar speakers from other campuses and recruited four of them. The department is now 8.1 percent female, compared to a national average of 7.3 percent.

M-PACT increases financial aid to 2,900 Michigan students

The University has committed \$9 million to jump-start a new financial aid program benefiting some 2,900 in-state undergraduates at the Ann Arbor campus.

Called M-PACT, the program will reduce loans and increase grant assistance to \$12,200 per year for students at the lowest income level – those whose family financial circumstances make them eligible for a full federal Pell grant.

M-PACT aid will top off the University's existing financial aid package with additional grants of \$1,500, \$1,000 or \$500, depending upon the student's financial need. In every case, the new aid produces a dollar for dollar reduction in loans.

For a typical first-year student at the lowest income level, the new program means that combined grants and work-study will cover more than 80 percent of the total cost of attendance—not only tuition, but also room, board, books and related expenses. Some students also receive merit-based grants which further reduce their loan balances. Unlike loans, grants and work-study income do not have to be repaid.

M-PACT is a continuation of U-M's longstanding commitment to accessibility and diversity, President Mary Sue Coleman stated. "We are determined to tear down the barrier of cost for Michigan students of every financial circumstance. M-PACT is a means to heighten awareness that a college education is affordable."

Coleman will draw \$3 million a year from pri-

vate gifts to launch and sustain the first three years of M-PACT. She also announced that The Michigan Difference campaign will seek to raise at least \$60 million to endow the program permanently.

M-PACT will increase the total grant aid from all sources given to U-M resident undergraduates to more than \$55 million a year. Of that total, the University draws \$33 million from its own resources, reputedly one of the largest financial aid investments of any public university.

Although it will deliver the most assistance to lowest income students, M-PACT also is designed to help families with earnings in the \$50,000 range who do not qualify for a Pell grant. "We recognize that there are many moderate-income families who still struggle to meet college expenses," Provost Paul N. Courant noted. "We want this program to assist them as well."

M-PACT will be open to all income-eligible in-state undergraduates this fall. The University projects that the number of recipients will grow as Michigan's high-achieving high school students realize that U-M is an affordable option.

And, U-M alumnus Richard Rogel, co-chair of The Michigan Difference campaign, promises, "The \$60 million for M-PACT is the first stage of what we believe will be an even larger and sustained fundraising effort for need-based aid for both in-state and out-of-state students in the years ahead."

U-M lends a SPARK to A2 development

The University has pledged up to \$1 million over five years to support a group of entrepreneurial, university, business, government and community leaders who have banded together to form SPARK—an economic development and marketing organization for the greater Ann Arbor region.

SPARK's goal is to "ignite innovation" by doubling the number of technology companies and tripling technology jobs in the region by 2010. SPARK is aimed at high-tech companies built on innovation, such as biotech, information tech, small tech, energy, advanced manufacturing and security.

Promoting greater Ann Arbor as a hub of entrepreneurial energy and a great place to work, live, and grow a business, the organization will offer five primary services to new and emerging high-tech companies: business acceleration, business outreach, talent development, early-stage funding, and regional marketing and events.

The impetus for SPARK came from U-M's Technology Transfer National Advisory Board which concluded that for the University's technology transfer efforts to reach full potential, the greater Ann Arbor region must become a more fertile ground for innovation and business creation, with a matching reputation to attract additional talent and resources.

U-M designer hatches emergency shelter



Photos by Marcia Ledford, U-M Photo Services

The wake of Hurricane Katrina has produced searing images of tens of thousands of Americans, helpless and homeless. Such catastrophes dramatize the need for the kind of cheap, transportable, biodegradable shelter that has just been designed by a professor at Michigan.

In addition to putting a roof over one's head, the shelter designed by Prof. Allen Samuels of the School of Art & Design, provides storage for some personal belongings, a modicum of privacy and a clearly delineated sense of personal space.

The unit consists of a bed tray, which can hold a single foam or standard mattress, with a disposable or reusable canopy attached at one end. When the canopy, or roof, is lowered, it provides occupants with visual and audible privacy. When the canopy is raised and made vertical, its "C" shape, coupled with an attached fabric screen, provides private standing room for grooming and changing clothing. It includes a paperboard disposable toilet device for personal hygiene.

"This shelter can be used indoors or outside in an emergency situation where many individuals are hurriedly gathered and space, privacy and other amenities are lacking," Samuels noted. "It can be outfitted with a portable filter-fan and interior lighting to help establish the outside boundaries of each shelter."

Because the unit has wheels on one end, it can easily be lifted and moved. When space allows, separate foam-filled mats can be placed between the structures to function as an outdoor seating or play area.

"A larger version of the individual shelter can accommodate a number of users such as a family," Samuels added. "They have all the same attributes as those designed for individuals."

The shelters may be made of lightweight materials that are either biodegradable or durable for long-term storage. No tools are required for assembly.

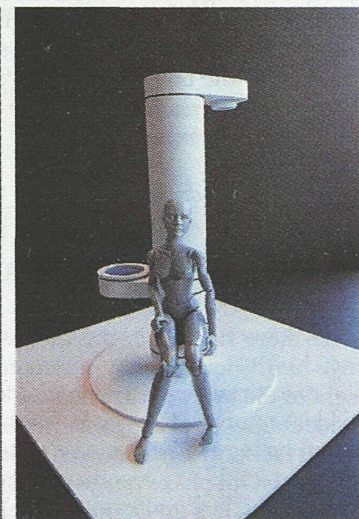
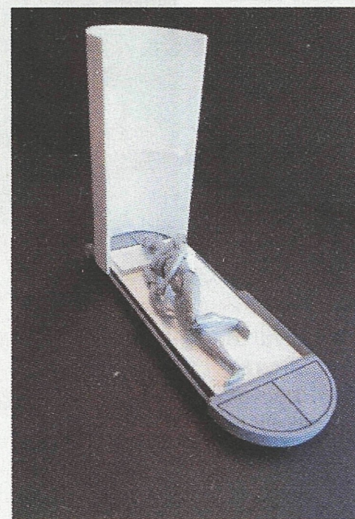
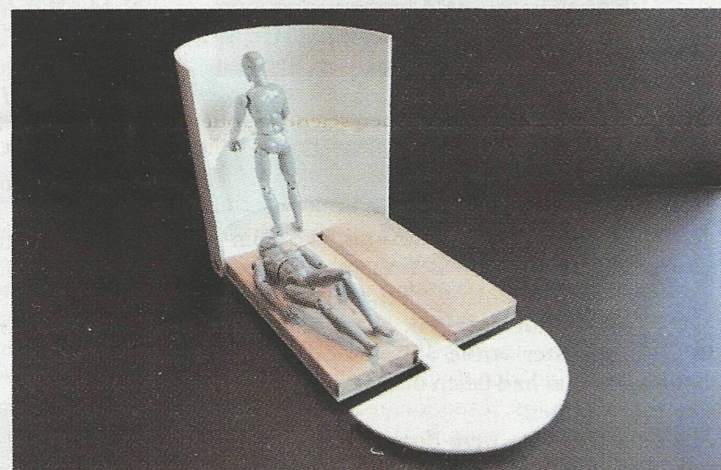
An industrial designer for 40 years, Samuels has developed new products for 29

corporations, ranging from consumer cookware and furniture to medical equipment that supports all aspects of heart by-pass surgery. He developed a line of dissection microscopes geared to students from fifth grade level through medical school.

He initially became interested in emergency shelters after reading about jail overcrowding and the use of portable stacking beds for prisoners in those situations.

"Although the plastic trays that held the mattresses were simple, inexpensive and easily cleaned," Samuels said, "they did not provide other necessities including basic comfort and a sense of individual space."

Samuels hopes to partner with manufacturers interested in a collaboration that refines and prepares the shelter design for commercial distribution. **MT**



InsideOut

celebrates the poetry, art, and promise in Detroit youth

By Mary Beth Lewis



The boy was “rambunctious, like a pinball, always bothering other kids,” Robert Fanning, ’93, director of InsideOut recalled. One day the youngster wrote about showing his mother a tooth that had fallen out. It was the last time he ever saw her.

“The next week we were doing poems about dreams,” Fanning says, “and he asked if he could write about the dreams of dead people. I told him, ‘Sure, anything.’” In his poem, “In the Dream of Dead People” the boy wrote:

*Dead people are your legal guardians.
They help you if you need it or not...
They are driving
you to school and driving
you back home. Some are
having so much fun,
their bones are falling apart.*

“The more he wrote, the more it seemed to change him,” Fanning says, a statement that goes straight to the heart of the program’s philosophy.

InsideOut’s work—like its name—is about bringing forth emotion for empowerment. Founded in 1995, InsideOut places professional poets and fiction writers in over 20 Detroit elementary, middle and high schools.

From the start, the program has drawn on the

strong support of U-M alumni, students and faculty, and the partnership continues.

A “Day of the Poet” workshop sponsored by U-M’s Institute for the Humanities was one such instance, when a few dozen teenagers, sprung from several Detroit high schools, spent a sunny day in Ann Arbor working on their art.

Typical was this scene when Fanning, a coach of the Citywide Poets, gestured across the oak table in Rackham to Naidra Walls, a bespectacled senior from Cass Technical High School, who had written a new stanza for a group poem called *If I Couldn’t Write*.

“Hit me,” Fanning said.

Naidra’s words were magnetic. *Probably nothing* would happen if she couldn’t write anymore, Naidra recited, because she spent the first years of her life not writing, *and nothing happened then*. She looked at Fanning, who nodded. He’s an award-winning poet who shares his students’ passion for the art form, and he seems to love his job as program director for InsideOut. He turned to Shawntai Brown, also from Cass Tech, and asked, “What have you got?”

Shawntai’s dramatic imagery suggested that whenever she’s not writing *some sad little child/is evaporating into the African soil*.

The group poem was coming together, in time to be

performed at InsideOut’s annual gala fundraiser. Also reading would be some of InsideOut’s 2,000 students from 24 Detroit elementary, middle and high schools. Featured for sale would be the schools’ four-color literary magazines produced on computers by students at InsideOut’s new Literary Magazine Production Center (funded by U-M’s Arts of Citizenship program). It’s located in the InsideOut office on Woodward Avenue, across from Detroit’s new baseball and football stadiums, and just blocks from a new downtown bookstore.

Clearly, InsideOut plays a supporting role in the hoped-for renaissance of Detroit, and U-M alumni and programs are central to the effort. Most recent in the long list of partnership programs is the new U-M Civitas Fellowship that will allow four incoming U-M MFA students to work as InsideOut writers-in-residence in the 2005-06 academic year. English Department creative

writing coordinator Keith Taylor, who helped set up the program with the Provost’s Office, says, “We were trying to find ways to involve some MFA candidates in the InsideOut Detroit project. This seemed like an obvious connection, because these graduate students are focused on imaginative work and many of them are also interested in community projects.”

The connection works in the other direction as well. Angel Hackett joined Citywide Poets as an 11th grader at Martin Luther King Jr. High School. Visiting Ann Arbor with the group



Peter Markus and Robert Fanning.



Robert Fanning, '93, director of InsideOut meets with InsideOut students.

Photos Martin Vloet, U-M Photo Services

emboldened her to apply to Michigan.

"We did so much – poetry slams, editing and artwork for poetry books, stage work. It was a great opportunity," Hackett, now a U-M senior, recalls. "And it showed me how to express myself, to not be afraid of talking in front of people."

InsideOut master writer Peter Markus, '89, a 10-year veteran of InsideOut, believes artists-in-residence "change the power equation" when they enter classrooms. "We can come in and clown around once a week, and it's easier for the students to be forthcoming. They start to believe their voice can be made public and that people will listen." He remembers his first session at Henry Ford High when he suddenly realized that "this is who I was born to be: a teaching writer working in the city where my grandparents first settled." He says English Prof. Ralph Williams was his most inspiring U-M professor, someone "who had contagious energy" and "knew deeply and loved what he was teaching."



Foundation of an Institution

InsideOut traces its roots to U-M alum Robert Shaye '60, founder of New Line Cinema (and profiled in the June 1993, *Michigan Today-Ed.*). Following a premiere of his 1991 movie, *Book of Love*, Shaye revisited his high school where he met English teacher Terry Blackhawk, who convinced him that a literary magazine could foster creativity. Shaye went on to fund magazines at several Detroit schools, an effort that later expanded to include the residencies, the Citywide Poets troupe, and an extension of the Washington, DC-based PEN/Faulkner program that brings authors into classrooms.

Dozens of donors have joined Shaye in supporting InsideOut, including the National Education Association, Michigan Council for the Arts, DaimlerChrysler, Ford Motor Co., Marshall Field, and Detroit banks. Still on the program's advisory board, Shaye credits InsideOut's success to Blackhawk, "a teacher by training and saint by personality."

Now retired from teaching, Blackhawk writes poetry and continues to oversee InsideOut. "It costs about \$13,000 a year to put a writer or artist in a school for three classes a week, of which the school pays \$4,000. This is a good deal for cash-strapped schools that have eliminated enrichment programs.

"Teachers tell us our programs show them a side of kids they wouldn't see otherwise," Blackhawk says. "And it's not always the most obedient students who are the best writers. For the hour we're there, the classroom becomes a community, with no mocking or put-downs."

And if everything goes right, Blackhawk adds, "Children learn to be honest, and they learn they're deeper than they thought." **MT**

Mary Beth Lewis contributes to various publications on cultural topics and is the web editor at the University of Michigan School of Public Health.

Written Word

by Shawntai Brown

*I am the new wing
the century
rhetoric of society
story of humanity
I am the written word
in corners my ideas splatter
onto pages with no direction
or carved path
made by the thousands who have traveled
down this same route before
born unique
conceived in courage every time
by a bashful hand
afraid to shout
but under the skin
strong enough to wet the page with fluids
identical to its own*

*I am the new wing
the century
rhetoric of society
story of humanity
I am the written word*

*you cannot silence what isn't said
this type of art
crawls under the skin
leaching onto the heart
beating into it a pulse
its very own pulse
it survives off of those who try to kill it
It is the source of every empire's success
and bloody fall
it is heavily involved in every religion
it is the chains that keep poverty imprisoned
because when you read you see
but when you write you become the glasses of the world
all this power packed into a voice so small that life has ignored it
as something that merely breathes
a tree
beaten by the wind
that stitches into the air*

*I am the new wing
the century
rhetoric of society
story of humanity
I am the written word*

*They knew it all along
teach them to read and write
pop goes the world
use it boy in the corner
use it girl with no tongue
pen
pencil
keyboard
section the page off into a war zone
clone your brain and soul
and draw it with the letters on the page
and then let them chant
let them work their magic into some
fantastic fantasia
where centuries of classics fall into the pallet of
today's artist
I want to see you plant a seed in the paper
and watch it grow
then chant to the beat of the enemy's heart*

*I am the new wing
the century
rhetoric of society
story of humanity
I am the written word*



Yvette Amstelveen Rock

Yvette Amstelveen Rock

U-M alumni who have held key positions with InsideOut agree that teaching—and being well taught—influence their artwork and their lives.

Former InsideOut artistic director Yvette Amstelveen Rock, MFA '99 recalls the transforming experience of painting a large mural with students at Crosman High. "Even teachers would walk by and say, 'You're never going to finish.' Personally, I wanted to persevere, and we did."

Michael Klinkman, MD, works on the frontline of modern medicine: the primary care office.

TREATING MENTAL ILLNESS

By Jas Obrecht

As many as one out of two Americans will experience some form of mental health problems during their lifetime, a recent federal study estimates. Yet only a third of those afflicted will seek treatment.

To confront this challenge, primary care physicians should be equipped with the tools to diagnose and treat mental illness, according to Associate Professor of Family Medicine Michael Klinkman, M.D.

As a practicing primary care physician and as Director of the Primary Care Programs for U-M's Depression Center, Klinkman (MD '82, residency '85) is on a mission to codify the most effective ways to treat mental health problems in a primary care setting. Klinkman co-directs the U-M Health System's participation in the national STAR*D study, the largest clinical trial ever funded by the National Institute of Mental Health, and oversees the Depression in Primary Care program sponsored by the Robert Wood Johnson Foundation. "In essence," he says, "we're taking things that work for other chronic diseases and putting them into play to help doctors who are treating depression."

In June, Dr. Klinkman was the featured speaker for the "Mental Illness Goes Untreated" segment of National Public Radio's *All Things Considered*.

Michigan Today: In your work as a primary care physician, do you often see "hidden symptoms" of mental illness?

Michael Klinkman, MD: Yes. It's hard to know sometimes whether they are hidden symptoms of mental health problems or whether they are just symptoms of physical problems. For example, I take care of many people who have one or more chronic diseases. People who have lupus, diabetes, or heart disease of some type are often very tired. They have trouble concentrating. They are fatigued with routine daily activities. And those are three main symptoms of depression. So, how do you sort out whether they are depressed, or just have the disease you already know about?

The way that we decide whether somebody has depression is based on a set of symptoms that were standardized by researchers in psychiatric settings. They didn't look at primary care practices to try to figure out what symptoms were indicating depression in that group of patients; they simply took the symptoms that seemed to work in specialty settings and said, "Well, it must be the same in primary care." I am finding that that's not the case, and I think that the researchers in psychiatry are beginning to understand the same thing.

Beyond the sense of "feeling blue," what are warning signs of depression?

You can start with just knowing your family history – did anyone suffer from depression? For example, your Aunt Grace, who you just knew wasn't "quite right" and seemed severely withdrawn. If there is a tendency for people in your family to have depression, you might be susceptible to it yourself.

If you find that everyday life is getting hard, that you're accomplishing less at work, that you're more irritable around your family and friends, that you're withdrawing from usual activities – those might be signs of something coming on. It may not be a full-blown major depressive disorder, but it maybe means you should chat with somebody about it. Check it out with people who are close to you to see if they notice it too. On the other hand, you don't want to just jump to the conclusion that you're having a major depressive episode and must have medication to get better, because that is not always the answer.

What are the challenges of diagnosing depression in teenagers?

For adolescents, it's a lot of up and down, up and down, in part because of the influence of hormones. When the downs go on for a longer period of time, it could very well be depression that needs to be managed. And it's really, really hard to talk about depression with teens – even when you're a specialty provider and parents have brought their teen to see you. It's harder still if you're a primary care doc, because you're seeing kids who come in with fatigue or simply are not doing as well in school. Teens don't necessarily trust you because you don't see them very often when they're in adolescence. So how do you break through that in a 10- to 15-minute visit? That's a *huge* issue, and it's one that we're just starting to come to terms with.

What about women going through menopause?

As with teenagers, hormones can cause depressive symptoms in women going through menopause. Depression can come from the mix of hormone changes, life-cycle transition stress, and concerns and issues about aging. When you put that on top of a family history of depression, depressive symptoms can be very common.

Why do so many patients reject an initial diagnosis of depression?

I think it's mainly stigma. You come in thinking you have a physical disorder than can be easily treated, and instead you're told you have a diagnosis of this stigma-laden condition that somehow implies you're a failure as a human being or that you have some moral weakness.

Common example: A patient comes in because he's tired and just can't concentrate. Let's say he's a law student. He thinks that the problem is attention deficit disorder, and he wants to be treated with the newest medication for ADD so he can concentrate and do better on his exams. Instead, I find out he has a strong family history of depression, he hasn't been sleeping very well, and he's been really irritable, so I suspect he's depressed. But he doesn't want to hear that. He wants his pill so he can concentrate better. It takes time, education, and trust before he may be willing to accept the fact that it's more complicated than he thought.

Are there legitimate reasons to fear antidepressants?

Yes. There is a lot of new information, especially regarding adolescents, that suggests that antidepressant medications can activate patients. After starting treatment, they may have a burst of energy, which may be placebo effect or a real effect of the medication. There's a slightly higher risk that an activated person who is still quite depressed may do impulsive things. We know that impulse control is an issue in adolescence. So it may be harder to talk away an impulse of self-harm in the case of a teenager, especially one who is on medication.

Why do many primary care physicians seem uncomfortable discussing "feelings" with patients?

People are people, and some people who are uncomfortable talking about feelings go into the field of medicine. This is probably less true for primary care doctors. I think many of us choose our field because we really want to empathize with our patients. Regardless of our openness and good intentions, the opportunity isn't always there. As a doctor at a clinic, you find that when you're seeing a patient you're dealing with a lot of different problems and time is limited. Talking about feelings takes time, familiarity and trust. The opportunity that lets you both open up cannot always be planned or predicted. It just happens. **MT**

To learn more about depression and its treatment, visit the U-M Depression Center website at www.depressioncenter.org.

For information about the Department of Family Medicine, visit www.med.umich.edu/fammed.

To hear Michael Klinkman's interview on NPR's *All Things Considered*, visit www.npr.org/templates/story/story.php?storyId=4698390

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