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John A. White
Chancellor

Message from the Chancellor:

World-class research cannot be done without graduate students. Doctoral candidates do the day-to-day work that underpins important research. Their work provides them with valuable experience and establishes a firm foundation for their careers.

Becoming a nationally competitive research university requires graduating successful graduate students. A recent survey of University of Arkansas doctoral students shows that we do just that. In fact, about 88 percent of University of Arkansas doctoral alumni who responded to a recent survey feel their degree programs prepared them well for their careers.

Our doctoral graduates work in 42 of the 50 states and the District of Columbia, as well as in South Korea, China, Taiwan and England. More importantly, one-fourth of the graduates remained in Arkansas to pursue careers and contribute to strengthening the state's economy.

Nearly 60 percent of doctoral graduates work at educational institutions. About 20 percent work in industry or government. And about 8 percent have pursued additional education since graduating from the University.

The doctoral survey was sent to all doctoral alumni from 1996 to 2000 for whom addresses were available. Forty-six percent of those contacted responded. In less than a decade, these alumni have already amassed patents, research awards and an array of

recognition, publications and federal and private grants.

Further, these doctoral alumni cited high-quality advisers and programs, research, course work and the university library as having prepared them well for their jobs. Eighty percent of respondents said they would attend the University of Arkansas for their doctorate if they had to do it again. And about 85 percent of doctoral alumni reported that they were satisfied with their current careers.

This satisfaction bodes well for the future of graduate research at the University of Arkansas. With the generous gift of the Walton Family Charitable Support Foundation of a \$100 million endowment for the graduate school, we will be able to ensure that our graduate students continue to receive a high-caliber education and continue to put University of Arkansas research on the map.

We have just approved proposals from academic departments across the University for 250 Distinguished Doctoral Fellowships and Doctoral Academy Fellowships, which are being established and endowed with proceeds from the Walton gift. Distinguished Doctoral Fellowships offer stipends of \$30,000 per year, and we have authorized 41 of these for the academic year 2003-04. Doctoral Academy Fellowships are variable, consisting of \$3,000 to \$5,000 supplements to existing assistantships to make them competitive. We have authorized 209 Doctoral Academy Fellowships for next fall.

Building on the success of the graduate education experience at the University of Arkansas, as our survey confirms, these endowed fellowships will fuel the growth of our graduate school, from 3,106 this year to 5,500 by 2010. The increasing numbers of outstanding doctoral candidates will expand the capacity of our research programs and also deepen the pool of advanced degree recipients our state needs to compete in the global economy.

Happy reading,

John A. White
Chancellor, University of Arkansas

I heard that French fries contain a known carcinogen. Should I stop eating them?

Jack Lay, director of the Mass Spectrometry Laboratory at the University of Arkansas, replies:

It is helpful to put this question in proper perspective. Will eating French fries increase the risk of cancer, and if so how much? Foods already contain carcinogens. Perhaps most surprising is that potent carcinogens and toxins occur naturally in foods. Molds growing in food can produce some of the most potent carcinogens known. While molds cannot be completely eliminated they can be substantially reduced. To complicate matters, cooking processes that reduce the risk of disease from microbes can nevertheless increase cancer risks resulting from compounds produced in cooking.

Foods such as peanut butter — made from peanuts that sometimes contain molds — are allowed to have trace levels of potent, naturally occurring carcinogens. Why? Because the risk associated with these levels seems to be very small. The effect of most carcinogens and toxins decreases with dose. While it is debatable if there is such a thing as a “no-effect percentage” level, it is clear that there are levels at which the risks are too small to measure.

The significance of the current risk from acrylamide in French fries is not yet completely understood. There is likely some — probably small — cancer risk associated with other foods, and there are plenty of other health-related reasons to be concerned about eating too many fries. My answer to the question is a simple one. Moderation. Until additional studies are completed it would be hard to say with certainty that these recent findings demonstrate an unacceptable increase in risk, but then I wouldn't go overboard on eating fried foods of any sort. ■

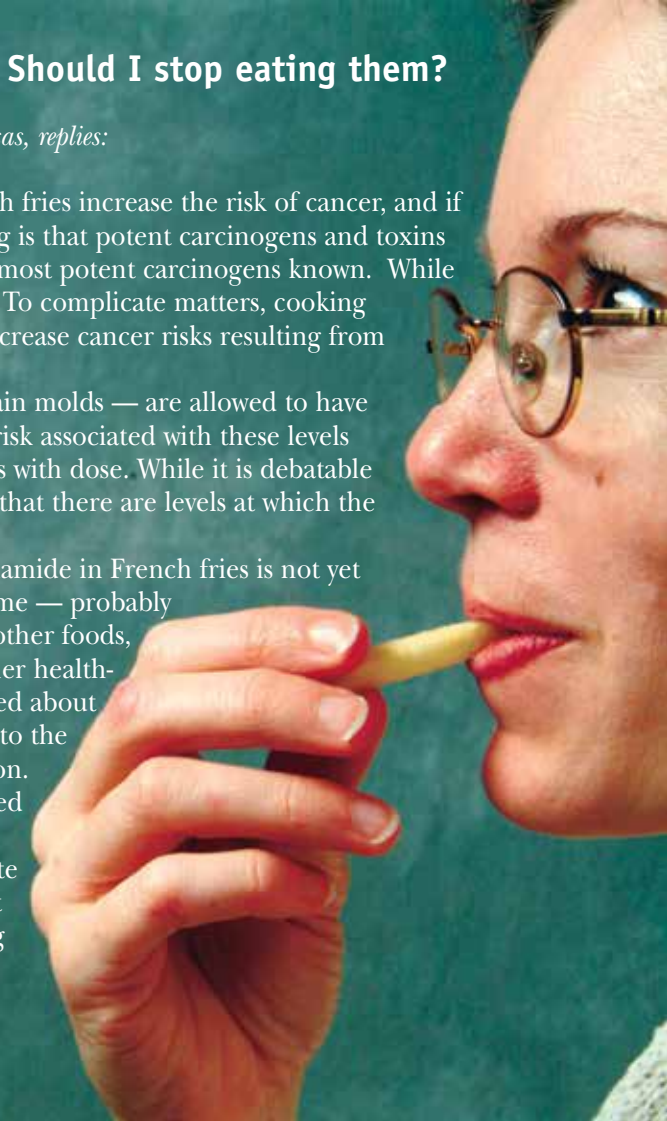


Photo by: Russell Cochran

Got a question? Send it to UA Q & A, 800 Hotz Hall, Fayetteville, AR 72701, or send questions by e-mail to <blouin@uark.edu>.

When money is lost in the stock market, where does it go?

Wayne Lee, department chair and professor of finance, replies:

If I build a house and the house burns down, was there a real monetary loss? After all, the money spent on construction did not disappear; it went to pay for labor and materials. But there is a real monetary loss because the expenditures incurred in construction produced no future economic value. My personal loss is the value of current consumption foregone, and I am poorer as a consequence.

By the same token, firms make investments to grow and expand their businesses. High share prices induce firms to increase their level of investments, and firms finance these

investments through retained profits, borrowing and the issue of new equity shares. But when these investments generate no future economic value, then money is lost, share prices fall and shareholders are less well-off.

The stock market is not simply a casino. There are real economic consequences when share prices decline. Investors lose their savings and consumption plans are curtailed. As demand falls, firms compensate by reducing prices and by cutting costs to avoid losses. The objective of fiscal and monetary policy is to reverse the contraction in economic activity by stimulating demand and investment. ■



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ADVENTURE TOURISM

Sky diving, roller coasters, river rafting: Many people seek thrills during their free time. Sociologist Lori Holyfield examines the social constructs behind tourism companies that appeal to peoples' sense of adventure.



BALANCING ACT

Through the Mack Blackwell Transportation Center, researchers strive to make traveling safe, cheap and efficient whether by land, water or air.



WHALE TALES

Anthropology professor Allen McCartney has devoted his career to tracing the history of whaling and its influence on Arctic cultures. His insights into historic whaling practices have influenced modern-day whaling practices in the north.



GAMBLING HOUSE

Architecture professor Kim Sexton traces the role of the loggia in gambling, usury and other community practices in 13th century Italy.



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If French fries contain the carcinogen acrylamide, should I stop eating them?
When money is lost in the stock market, where does it go?

Cover: From mountain climbing to mountain biking, more and more Americans are turning to thrills in their leisure time. Sociologist Lori Holyfield explores the cultural circumstances behind this trend.



Bear-ly There: DNA Shows Black Bear Relationships

Black bears in Louisiana and Arkansas have historically dubious pedigrees. Biologists have long debated whether the bears represent genetically distinct sub-species, deserving protection under the Endangered Species Act, or hybrids of Minnesota bears introduced when bear populations plummeted. University of Arkansas biologists have used genetic techniques to examine the genetic distance between the sub-species, and their results may change the way the two states manage their black bear populations.

To determine the genetic relationships between bear populations, biologists Kimberly Smith, Douglas Rhoads and their colleagues examined the DNA of three populations of bears in Arkansas, two in Louisiana and one in Minnesota, examining a total of 82 bears.

The researchers found that the White River Refuge bears and the Louisiana coastal bears demonstrated the most genetic distance from the others, indicating that their populations had been isolated from the others for longer. The genetic markers from the Ouachita, Ozark, inland Louisiana and Minnesota black bears showed that they were more closely related.

The White River Refuge population has bloomed to about 600 bears, and as their numbers have increased, so have their interactions with humans. The Arkansas Game and Fish Commission started a limited hunting season on these bears in 2001, and 70 animals were harvested. If the 600 White River Refuge black bears become lumped in a family with the Louisiana black bear, the increase in population could bump the mammal off the threatened list. However, if the inland Louisiana bears prove to be hybrids of the Minnesota sub-species, then they may not be protected under the Endangered Species Act, which leaves the bears and their habitat vulnerable to exploitation. ■



Photo Submitted

Poultry Scientists Use Viruses to Fight Bacteria

Scientists at the University of Arkansas and the USDA Agricultural Research Service are updating century-old technology to fight illness-causing bacteria in poultry by infecting them with viruses.

“There has been growing concern that use of antibiotics has been causing an increase in antibiotic-resistant strains of bacteria that cause diseases,” ARS researcher Bill Huff said. “We felt it was important to find alternatives to antibiotics. These viruses, called

bacteriophages give us another tool to battle disease-causing bacteria and reduce pressure on bacteria to develop resistance to antibiotics.”

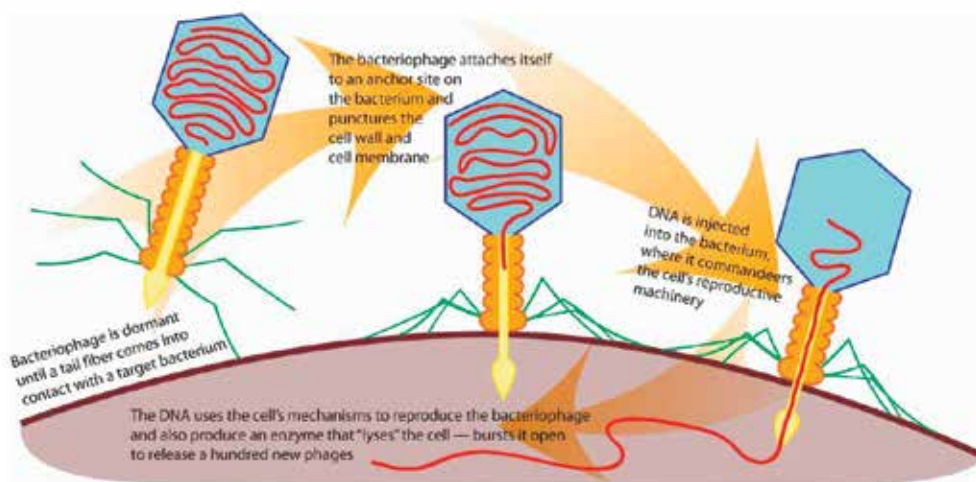
“Bacteriophages are very specific viruses,” UA poultry scientist Billy Hargis said. “They don’t harm people, animals or plants — only a narrow range of bacteria.”

Hargis works with bacteriophages that attack salmonella, and Huff works with bacteriophages that attack E. coli. In both studies, they use them to protect poultry from respiratory infections.

Bacteriophages are much smaller than the bacteria they attack. When one comes into contact with a target bacterium, the phage attaches to a site on the cell’s surface. It penetrates the cell wall and injects its DNA into the host. The DNA rewrites the cell’s reproductive programming to replicate bacteriophage. It also produces an enzyme that “lyses” the cell — bursts it open, kills it and releases new virus.

The entire life cycle takes about 30 minutes to complete.

Both scientists found aerosol spray worked best for delivering the phages to large numbers of chickens or turkeys. The birds needed large doses for effective and consistent protection, but researchers can grow large quantities in the lab. ■



Plus Ça Change... National Identity in Europe

A geosciences professor looked to Scotland to create a four-part model for nationalism that characterizes both the unity of the European Union and the individuality of its constituents.

Fiona Davidson follows the shifting tides of political parties in Scotland, and likens changes there to shifting nationalism elsewhere in Europe.

“We’re seeing the wave of the future,” said Davidson. “This is the last gasp of colonial extension.”

Her four types of nationalism include state, ethnic, cultural and territorial. Until recently, state nationalism dominated Europe. Ethnic nationalism has served as the basis of many bloody conflicts, including strife in Northern Ireland, the Austro-Hungarian Empire and Basque separatists. Cultural nationalism can be seen in modern-day Wales, where most people want just enough power to preserve their own culture and language, but otherwise have no interest in self-governance. And Scotland embodies territorial nationalism — a government composed of those who live in the country making decisions for themselves.

“All of these things are fluid,” Davidson said. She likened

changes in the geopolitical arena to earthquakes, where pressure builds up, cracks and fissures appear and relieve the pressure, and then the cycle begins again.

The erosion of British identity can be seen on the football field.

Scotland has been using the St. Andrew’s cross during its games since the 1960s.

Teams from Wales have refused to take the field until the Welsh national anthem plays along with the

“God Save the Queen.” And at English matches, some flags now feature the symbols of England instead of Britain.

“The things that held Britain together are gone,” Davidson said. “In Scotland and Wales, there’s no need to be British.” ■



School Nurses and Superintendents

Little Sarah has lice. Jimmy needs his Ritalin. And the sixth grade gym class is lined up and waiting for their scoliosis check.

Between mandatory screenings and everyday maintenance, school nurses in Arkansas and across the nation find they don’t have the time or resources to address the bigger picture of health services. It’s a problem that limits their impact on overall student health and one they frequently blame on school administrators.

But a survey conducted by researchers Marianne Neighbors and Kathleen Barta in the UA school of nursing along with Carleton Holt and Roland Smith in the department of educational leadership, counseling and foundations, finds that lack of funding is what ails these nurses, not lack of administrative support.

The researchers submitted their survey to school nursing supervisors and superintendents in all 313 Arkansas school districts. The survey asked each respondent to estimate the amount of time the school nurse spent on various activities; to assess the amount of time the school nurse ought to spend performing the activities; to identify activities most important to the mission of the school; and to evaluate which activities could be delegated to other personnel.

With a return rate of 74 percent from nursing supervisors and 53 percent from superintendents, the researchers found nearly identical responses. In other words, nurses and administrators hold the same vision for school health services.

“I was surprised to see so much agreement between nurses and superintendents,” Barta said. “The activities that took up too much time were mutually recognized, and they agreed on areas where nurses needed to spend more time. It’s a starting point for discussion on how we can redesign the workload.” ■



Photo by Russell Cochran



Shell-Shock: Students Find World-Record Fossil

On Jan. 20, three undergraduate geology students made a discovery that would have left Captain Nemo quaking in his boots: the fossilized shell of a prehistoric squid-like creature of gigantic proportions. Measuring eight feet in length, their find represents the longest actinoceratoid nautiloid fossil in the world.

Freshman Sarah Kee and senior Kevin Morgan discovered the fossil in a drainage ditch beside two of Fayetteville's busiest roads. As the unusual size of the fossil became apparent, the two called junior Jonathan Gillip to help with excavation and notified their adviser, geology professor Walter Manger.

Manger was initially skeptical, knowing of only one other nautiloid fossil of such tremendous size – a seven-foot, two-inch specimen also discovered in Fayetteville in 1963. Belonging to the extinct species *Rayonnoceras solidiforme*, both creatures would have lived about 325 million years ago, when much of the southern United States lay submerged beneath a shallow sea.

Most examples of their species grew no more than three to four feet in length, but researchers estimate the creature discovered by Kee, Morgan and Gillip would have spanned more than 20 feet while alive, with 10 to 15 feet of tentacles stretching from its 9 to 10-foot shell.

This specimen represents what Manger calls a pathological giant. Its discovery lends credence to a theory Manger first proposed to scientific community in 1999 – that these nautiloids exhibit semelparous reproductive behavior. Like modern-day squid, these creatures would have mated and laid eggs within three to four years and then died.

Manger suggests that the giant specimens may have been rendered reproductively sterile by parasitic trematodes. Unable to reproduce, they could have lived for decades, diverting their energy to growth.

"The new fossil will definitely bolster that theory. When you only have one example to go on, you wonder. But the students have given us another example that fits perfectly with the hypothesis," Manger said. ■



Photo by Russell Cochran

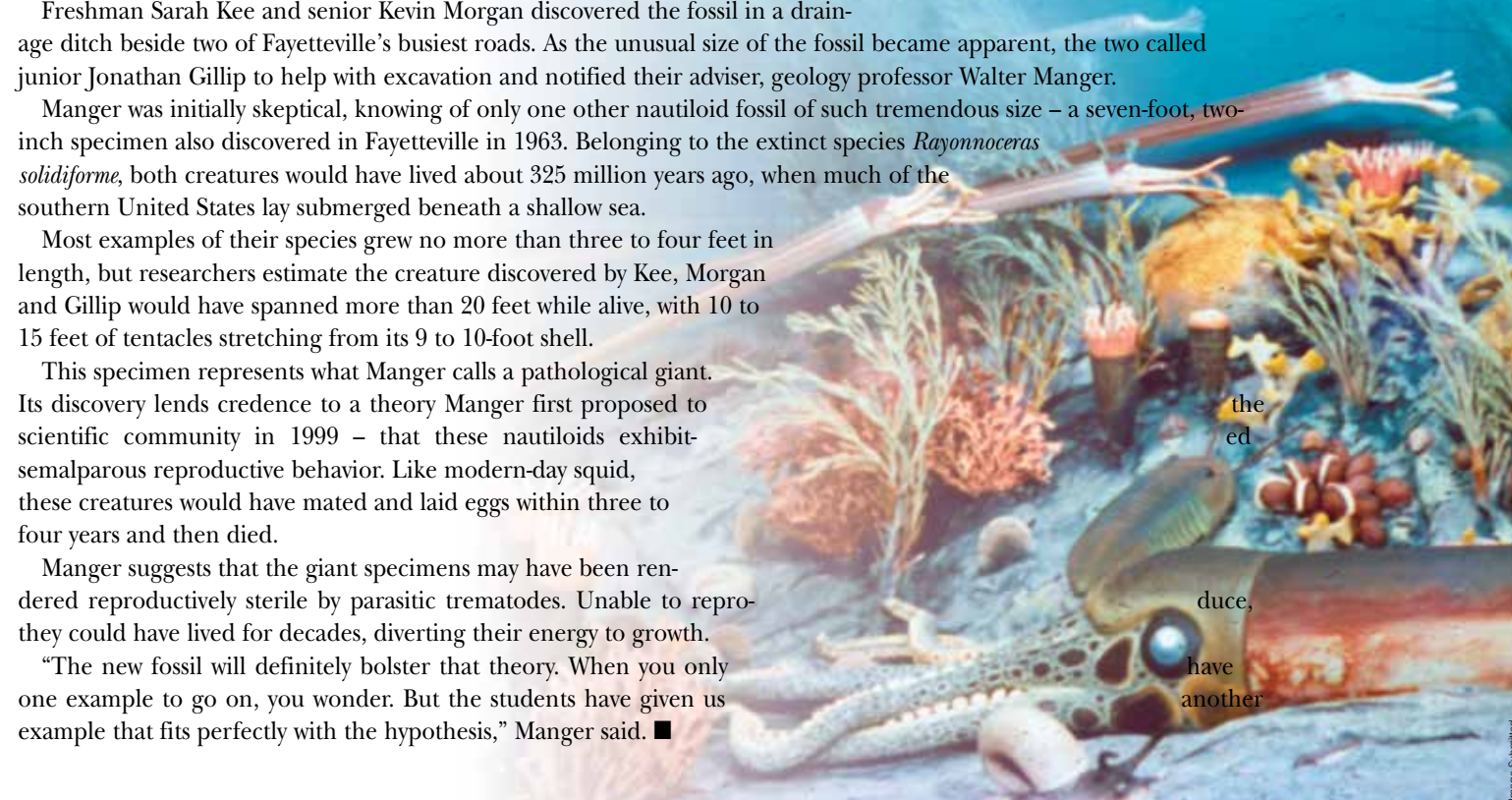


Image Submitted

GAUGING WEB CUSTOMER SATISFACTION

The U.S. economic downturn has produced a strange paradox: online retailers and dotcom companies are failing in record numbers, but online purchasing increased 24 percent in the past year. University of Arkansas researcher Vicki McKinney has developed a tool to help online retailers stay on the profitable side of this puzzle.

"In a turbulent e-commerce environment, Internet companies need to understand how to satisfy customers to sustain their growth and market share" explained McKinney, assistant professor of information systems.

McKinney, along with Kanghyn Yoon and Fatemeh Zahedi of the University of Wisconsin, Milwaukee, published their findings in the journal *Information Systems Research*.

To measure customer satisfaction e-commerce retailers must first know what counts toward online customer satisfaction. McKinney has identified two primary components: information quality (IQ) and system quality (SQ). Although distinguishing between

information and system quality is not common in IS research, McKinney found that the distinction between IQ and SQ as it relates to customer satisfaction had practical implications for the Web-design process.

"For example, customers dissatisfied with site retrieval and delivery mechanisms are likely to leave the site even if the information available on the Web site is of high quality," she explained.

"Conversely, if a Web site lacks the information that customers need, its entertaining design or ease of search will not keep customers from leaving the site."

The researchers looked at issues related to IQ satisfaction, including relevance, timeliness, reliability and usefulness. SQ factors included access, usability, navigation and interactivity. They designed experiments to assess the importance of these qualities. They also measured customer expectations and how the Web site failed or succeeded in meeting those expectations.

"These elements bring the marketing aspect of Web sites into focus for retailers," said McKinney. "This is crucial to the effective design of Web sites for online business." ■



Mutant Bacteria Become Microscopic Motors

As technical devices become smaller, basic processes like fluid flow become more difficult. University of Arkansas researcher Steve Tung is creating a novel solution to this problem by incorporating living bacteria into microelectromechanical systems (MEMS) to form living motors for pumps and valves. These tiny bioMEMS devices could be used in systems for drug delivery or DNA sequencing.

"It is hard to move fluid on a micro scale because it takes a lot of pressure," explained Tung, associate professor of mechanical engineering. "Current systems are expensive and inefficient, requiring high voltage or very good seals."

MEMS devices are machines so small they cannot be seen by the unaided human eye. With gears no bigger than a grain of pollen, they range in size from micrometers to a millimeter. MEMS combine electrical and mechanical components into an

integrated micro device or systems that can function individually or in groups to sense, control and actuate larger devices.

The tiny devices have a big impact on both the consumer and defense industries. The market for MEMS devices was estimated at more than \$8 billion in 2001, and it is growing rapidly.

BioMEMS use a specific type of bacteria, which has a tendency to attach itself to a surface by one of its many flagella, the long filaments that protrude from its surface. Bacteria use the whip-like motion of their flagella to move about. While each flagellum normally turns counter-clockwise about 80 percent of the time, it is possible to introduce a mutation that will lock the motors in one direction of rotation, either clockwise or counterclockwise, according to Tung.

While several MEMS-based pumps have been developed, non-mechanical designs have limited applications because they rely on the electrical properties of the fluids. Mechanical micro pumps require a very large pressure drop, which severely limits their performance. ■

Architect's HoneyHouse Wins International Competition

An architecture professor recently received a prestigious international award for his building's sophisticated relationship to a natural landscape within a small budget.

Marlon Blackwell's design of the Moore HoneyHouse was one of five designs chosen for the international ar+d awards. The award is given to architects 45 years old and under, said Peter Davey, editor of *The Architectural Review*.

About 700 entries were received from 60 different countries, Davey said.

The HoneyHouse shares the award with four other designs located in Croatia, Germany, Japan and Australia.

"The jury decided to give the small building an award because it uses materials with great sensitivity and sophistication, and it suggests new relationships between artifact and nature with the simplest of means," said Davey.

The HoneyHouse sits on Little Terrapin Mountain in North Carolina and serves as a carport and a storage and processing area for honey. Built from tongue-and-groove pine boards and rectangular section steel tubes, the structure preserves Blackwell's trademarks: attention to detail and spectacular use of light. His detail work included weathering the steel for nine months to give it a rustic look and placing the structure on concrete block piers to allow proper drainage and prevent bug infestation.

The HoneyHouse resembles a honeycomb. A single load-bearing wall fabricated from steel plates and faceted glass planes provides multiple reflected images of the surrounding forest. Within this wall made of voids sit jars of honey.

The Royal Institute of British Architects in London displayed the winning design in March.

"We were concerned to find invention, tectonic quality, exploration of ideas and respect for the planet," Davey said. "In different ways, all award-winning and commended projects improve the quality of human life." ■



Photos Submitted

Women Helping Women

By Barbara Jaquish



Professors Barbara Hinton and Kit Brooks have conducted many needs assessments during their academic careers. When they took their skills to the Middle Atlas Mountains of Morocco, they became part of a research team of divergent cultural perspectives, united by the desire to create better opportunities for women globally.

On the one hand, the study offered two female Caucasian university professors from the United States the unusual opportunity to work alongside Arabic professional women. At the same time, the project provided young urban Muslim university students an arena for interacting face to face with impoverished native Berber women who have little or no education.

"We conducted a field study that gave us and, as a consequence, our students an in-depth look at women in a culture very different from our own," said Hinton, professor and head of the department of rehabilitation, human resources and communication disorders. "The 35 Berber women we interviewed exhibited a high degree of community interaction, often sharing their limited resources with one another while living in a harsh, cold environment. I was impressed with their warm hospitality and their social skills. What a wonderful experience this was for us!"

In Morocco, Hinton and Brooks joined colleagues from Al Akhawayn University to assess the needs for services at the Azrou Center in a rural area close to the university. The center, a collaborative project that receives some of its support from the UA King Fahd Middle East Studies Program, serves rural women and youth.

Translators and researchers from the University of Arkansas and Al Akhawayn University in Morocco interviewed Berber women in the Middle Atlas Mountains to learn about their lives and needs.



"What a privilege it was to be welcomed into the homes of poor Moroccan families to conduct research that focused directly on improving the lives of women and indirectly on improving the lives of their families," said Brooks, assistant professor of adult education. "The experience amplified the commonalities that cut across cultural, ethnic, and socio-economic divides. We all share as human beings who care about the next generation."

Brooks explained that, because women in Morocco have limited rights, researchers had to secure permission from the men of the households and local government to interview the females.

"I have tremendous respect for these very private men and women who embraced this effort and the diverse research team," Brooks said.

Researchers found that 65 percent of those interviewed had three or fewer years of school. While the women desired educational opportunities, lack of transportation would prevent many of them from participating. In rural areas, most travel is by foot or donkey because there is no public transportation. The roads are unpaved, and the weather and terrain make travel treacherous.

The preliminary study results were presented in Fez, Morocco, at the Women and Education Annual Conference in 2002. Results of the needs assessment will appear in the summer 2003 issue of *Convergence*, the quarterly journal of the International Council for Adult Education. ■

From Wombats to Wallabies: It's Different Down Under



By Carlyne García

David Douglas gained a new perspective on distance education last Fall. In July 2002, he traveled more than 8,000 miles to Australia. He taught and conducted research for six months at the University of Southern Queensland, which has an extensive international distance education program.

"USQ is unique in that it has about 5,000 students on campus, but over 13,000 off-campus," explained Douglas, professor of information systems in the Walton College of Business. "Many of these students are off-shore as well. The largest concentration of students is in Asia."

At the USQ main campus in Toowoomba, Douglas taught two graduate classes in information systems project management with a total of 90 on-campus and distance students. Both on-campus and distance students obtain course materials, participate in class discussions and take exams online. He found the students intelligent and hard working, similar to those in the Walton College, but the approach to instruction was quite different.

In Australian universities students have more responsibility for learning. At both the undergraduate and graduate levels, they are expected to read more than just the textbook. Exams rarely include multiple choice or true/false questions, relying instead on short essays and case study analyses that allow students to demonstrate the breadth and depth of their knowledge as well as the quality of their writing skills.

Students do not evaluate faculty members. Instead, each course

has a faculty moderator who must assess and approve the course syllabus, assignments and examinations. At the end of each semester, faculty members must present their grades for each course in a faculty meeting, where they may be questioned or challenged.

"This approach alleviates the problem of having students evaluate faculty on issues where they are generally not knowledgeable enough to make sound judgements, such as course content or appropriateness of the exams," Douglas said.

The diverse student population represented many cultures, which posed some challenges. In teaching ethics, for example, the role of culture in ethics became apparent, but this allowed his students to see the impact of culture on business decisions. It also provided insights for his research on software piracy.

"Equity theory says that people develop beliefs about what constitutes a fair reward for their contributions," explained Douglas. "In developing the Equity Theory of Software Piracy, we found that four types of fairness – reciprocal, procedural, allocation and distribution – were statistically significant factors in software piracy."

Douglas has extended his theory to include a cultural dimension, based on Hofstede's dimensions of cultural differences, and is testing his theory in various cultures. He is collaborating with Australian faculty on a research project to determine the impact of introducing new learning tools on student performance in a database course. ■



You're riding a roller coaster, cresting a rapid on a class IV stretch of river, stepping from an airplane door into a 13,000-foot plummet toward earth. A University of Arkansas researcher says, if you're up for it, you're in for it:

ADVENTURE TOURISM

BY ALLISON HOGGE

If you're like most Americans, you've already had a taste: a family pilgrimage to Disneyland or a summer night at the state fair. You've felt the adrenaline surge as your roller coaster hurtled into that first loop, and you've sat gasping as it lurched to a halt. That hunger for excitement has made theme parks a \$4 billion industry in the United States.

But a growing number of people are no longer satisfied with the passive thrills these theme parks provide. A 1998 report from the Travel Industry Association of America shows that half of all adults in this country – more than 98 million people – have sought out something even more exhilarating. From mountain biking to mountain climbing, scuba diving to sky diving, more and more Americans turn to interactive adventure as a means of entertainment. In doing so, they spend millions of dollars on equipment, lessons, outings and guides for a chance to experience the thrill of real danger, however brief or illusory.

Lori Holyfield, University of Arkansas sociologist, has spent

the past 10 years studying this trend. She's one of a growing number of researchers looking into the adventure tourism boom. Many of these researchers focus on marketing and demographics, finding out who participates in adventure activities. But as a sociologist, Holyfield's interest reaches beyond the individual participants to examine the social circumstances that seem to be driving people – in ever increasing numbers – to embrace risk as a form of recreation.

“This is becoming a big enough phenomenon to raise interesting questions. What is it about everyday life that leads people to seek an adrenaline rush in their leisure time?” Holyfield said. “Some social critics would say our days are so routine and mundane that we have to go looking for spectacle, excitement. But others say the modern culture so bombards us with imagery, slogans and hype that we're desperately searching for something authentic.”

Either way, what could be more exciting, more authentic, than the most primal of human emotions: fear?



Far left: David Brussin and companions perform a sit-fly maneuver during freefall. In his recent jumps, Brussin has taken to mastering body position and aerodynamics to simulate flight. Read more about his experiences on the Research Frontiers Web site.

Photo Submitted



Photos By: Chris Davis



RECREATION ON THE EDGE

“The first few times, you wonder why you’re doing it. For me, I had that feeling right up until I got to the door. Once I got in the door, I knew I was committed. Once you leave the airplane and are in the wind, there’s no more fear or anxiety. You’re just overwhelmed with the experience. You’re 100 percent in that moment. There’s no past and no future. There’s only then and what you’re doing right then.”

David Brussin has been jumping out of airplanes for three years – booking excursions nearly every weekend when the weather and his schedule permit. At 27 years old, he’s the chief technology officer for a privacy consulting firm in Philadelphia. He’s tall and trim with dark hair and a straightforward manner. He’s intelligent and intensely focused, and although he doesn’t realize it, he’s a model example of what sociologists have come to call “edgeworkers.”

First coined by sociologist Stephen Lyng in 1990, the term edgeworkers refers to individuals who pursue activities involving the highest degree of risk. Mountain climbers, sky divers, base jumpers – these individuals

place themselves in situations that would render most people inert with fear, honing their strength and skill to overcome ever more challenging obstacles or to perform increasingly fantastic feats.

Holyfield and Lyng speculate that such extreme risk-taking may be a reaction to the highly ordered and secure nature of our day to day lives. “When almost every aspect of your life is regulated, bureaucratically or otherwise, it’s really hard to feel any sense of self-determination – that what you do is a consequence of your own decisions and abilities,” said Lyng, a professor of sociology at Virginia Commonwealth University. “But in edgework, you do have that sense. Every choice you make directly and immediately impacts your situation.”

In a society that takes great pains to eliminate risk, to protect the safety of all its citizens, our lives have largely ceased to contain fateful events – moments of truly meaningful action. In addition, the social institutions that define and guide us – work, family, religion – demand increasingly disciplined control over emotion.

More and more, success in the social realm requires people to suppress their own feelings and display those most beneficial or acceptable to the institution.

Living in an insulated world, full of insincere sentiment, people have begun to feel anaesthetized, out of touch with their true identities and emotions, Holyfield explained.

Social psychologists have proposed that human beings experience four primary emotions: fear, anger, sorrow and joy. Unlike other, socially constructed emotions, these contain a physical component. The sinking stomach of fear, the throb and heat of anger, the dizzy euphoria of joy – each represents a rush of sensation integral to the experience of that feeling.

Holyfield refers to these as “felt” emotions, a term she borrows from sociologist Norm Denzin. She believes that by placing ourselves in situations where we encounter them, we may regain contact with what we believe to be authentic in ourselves. Edgeworkers

accomplish this by pushing themselves to physical and psychological extremes. They seek to confront and then control their most basic human reactions.

But in the process, something extraordinary happens. Many edgeworkers report experiencing a sort of transcendental high in their exertions – a profound elation that includes feelings of omnipotence and oneness with nature, an obliviousness to the passage of time, and an intensity of focus that makes their actions and surroundings seem hyper-real.

It’s the sense of immediacy and purpose that our lives most noticeably lack. Unfortunately, the vast majority of Americans never attain the level of strength and expertise required to perform edgework.

“Most people crave adventure, but they don’t have the time or wealth or inclination to master all the skills and own all the equipment,” Holyfield said. “So do you discount those people, or do you provide a place within the culture for services that meet their needs?”

The tourism industry has been quick to answer that question. From white water rafting trips to outdoor excursion packages, access to adventure has never been more convenient. It's a trend that true edgeworkers scorn – the seeking of self through an intermediary. But Holyfield considers it a natural, perhaps necessary, service, one that allows even novice adventurers an

opportunity to experience fateful action and encounter felt emotions.

Adventure must be measured on a continuum, she says, from the most passive forms of risk — riding a roller coaster — to the most active — edgework. Not every person requires the same dose of fear to achieve the benefits of heightened awareness. Somewhere in the middle, commercial outlets provide a sense of danger while safeguarding customers against the

imminent threat of injury. The result is a chance to take risk without necessarily taking responsibility.

RAPID TRANSIT

“Rock climbing, white water rafting, extreme sports – a decade ago, society stigmatized these types of risk-taking,” Holyfield said. “Now we valorize them. We broadcast them on TV. It's so mainstream, we've built a whole industry to ensure that anyone who wants to participate can.”

Among the most significant contingents in that industry are the white water rafting companies that, every summer, convey hundreds of thousands of people down rivers across the nation. Holyfield notes that in South Carolina alone, water tourism on the Chattooga River surged from about 800 boaters in 1971 to more than 70,000 in 1993. Information from the U.S. Forest Service suggests that within the next 30 years, white water sports will come to represent the second most popular outdoor commercial recreation, surpassed only by downhill skiing.

Curious about the way white water rafting companies orchestrate adventure and about the customers who keep these companies afloat, Holyfield spent the

summer of 1994 conducting fieldwork at two commercial outlets on the Chattooga River. Over the course of several months, she attended guide training sessions at each company, observed customer orientation and safety speeches, and personally participated in 10 rafting trips. In addition, she conducted 47 interviews with managers, guides and clients, collecting information about their expectations, goals and experiences.

Holyfield's interviews with customers confirmed that participation in these guided excursions produced an emotional catharsis similar to that experienced by edgeworkers. But her glimpse behind the curtain – into the training and techniques of raft guides – revealed the extent to which commercial providers package that experience for their clients.

Rafting outfitters portray themselves as the liaison between edgeworkers and couch potatoes – enabling average people to experience wilderness and adventure first hand. But their involvement in the process constitutes much more than simply furnishing equipment and expertise. From the moment customers arrive in the parking lot, they are snared in a highly orchestrated event, Holyfield said.

Part entertainers and part physical trainers, river guides use organizational scripts to draw customers' attention to the beauty of their surroundings, to introduce them to rafting technique and to deliver important safety information. Guides often employ humor to downplay potentially frightening warnings and to defuse emotionally tense situations. Yet they simultaneously must be prepared to hype the dangers and amplify their own enthusiasm at the first sign of a customer losing interest.

“There's only a narrow range of fear that is impactful yet rewarding enough for novice adventurers to come back and pay for again. So commercial providers perform a continual balancing act between downplaying and emphasizing the actual danger of white water rafting,” Holyfield said.

In addition to regulating customers' emotions, raft companies use customers' expectations to help shape the experience. Life vests buckled and paddles in hand, rafters prepare to play an integral role in delivering themselves down the wild stretch of river ahead. In actuality, experienced guides can maneuver a raft full of tourists down the route without anyone else's paddle touching the water. Holyfield says some guides are so skilled they can control which position in the raft gets splashed and which person gets thrown in the event of a spill.

By allowing customers to consider themselves participants in the action rather than passengers, however, rafting companies heighten the sense of excitement and risk. The purpose is not to dupe the consumer, Holyfield contends, but to furnish them with a satisfying experience.

In her research, she likens white water rafting to a magic show, comparing the interaction between raft guide and customer with the relationship between a magician and the audience. Both activities generate uncertainty and amazement, she argues, but to accomplish the effect, an implicit understanding has to exist between the individual providing the experience and those who partake of it.

“Both parties engage in appropriate roles in order for the experience to occur,” Holyfield said. “Just as an audience agrees to be entertained and tricked, the adventure consumer agrees to be excited, challenged, always anticipating an extraordinary experience.”

The main difference, of course, is that perceptions of uncertainty and risk have more serious implications on the river. Holyfield notes that deaths associated with white water sports occur every year. And she can personally attest that – despite the manufactured experience – the fear one feels when being tossed out

of a raft and sucked down a rapid is as real as it gets.

“Edgeworkers say the only way you can have an authentic experience is to seek it out yourself – test your physical limits, cling to rocks, learn the skills to save yourself. I don't agree,” Holyfield said. “As a novice myself, I know how deeply a 'safe' experience can affect you physically and emotionally. Believing you're at risk can be just as profound as actually being at risk.”

LESSONS IN FEAR

Commercial rafting companies may attempt to shape the adventure experience, but another form of adventure recreation endeavors to shape clients' interpretation of the experience. In addition to studying white water rafting, Holyfield has dedicated much of her time to conducting research on ropes courses.

Like an obstacle course on steroids, ropes courses pit participants against a variety of physical and psychological challenges. Structurally, they're designed to test the limits of an individual's strength and courage. But socially, the courses are administered to build teamwork and promote group reliance.



Nurse and white water enthusiast Ginny Masullo prepares to take on a set of falls in Browns' Canyon, Colorado. For a first-hand account of her adventures, visit the Frontiers Web site.



Photos Submitted



Corporate employees and court-ordered youth offenders – groups most interested in the development of personal strength alongside social cohesion – represent the main constituents of commercial ropes courses.

As a sociologist, Holyfield understands that social forces play a powerful role in determining how people process and define their experiences. Theodore Kemper, the social theorist who posited that humans are hard-wired for four primary emotions, also proposed secondary emotions – guilt, shame and pride – which originate, not from physiological sensation, but out of social interpretation.

“Primary emotions are so powerful and so raw that the personal and social meaning they carry has to be refined into another, secondary emotion,” Holyfield explained. “Our social group teaches us which secondary emotion to associate with certain primary emotions – for example, whether fear should elicit feelings of shame or guilt.”

According to Holyfield, ropes administrators manipulate this emotional duality to reform an individual’s attitude and outlook. Inherent to the commercial ropes experience is an institutional, ideological agenda, she said, which aims to manage emotions in accordance with social values and norms. The goal, particularly when working with adjudicated youth, is to transform potentially deviant risk-taking into a socially meaningful activity that underscores the value of courage, leadership and interdependence.

In 1993, Holyfield conducted 11 months of field research, interviewing ropes consumers and administrators, observing their interactions and participating in numerous ropes events. She witnessed how facilitators indoctrinate the group with expectations of teamwork and definitions of supportive behavior. The result was that, each time participants placed themselves at risk and confronted a primary emotional reaction, the facilitator and the group were present to help the individuals interpret the experience in a socially desirable manner.

While this approach can be effective in promoting teamwork and bolstering self-confidence, Holyfield believes it generates a troubling paradox. People who seek the genuine emotions and fateful action of adventure often do so as a means of escaping the restrictive institutions of their everyday lives. But the emotional management conducted by some commercial adventure providers can amount to another form of social restriction.

“Some sociologists say that we feel a need to seek the

authentic self because it doesn’t exist in the real world. We can’t find it at work because we’re all so focused on the institutional directive. The only way to get in touch with the real self is to get out from under all those layers, and the only way to do that is to get out of the institutional framework,” Holyfield said. “That’s why solo adventurers are so leery of adventure companies – because they place you right back inside an institution.”

The effect can be particularly problematic when participants have not voluntarily opted to put themselves at risk. Ropes courses developed out of a theory of experiential education – that the most effective means of learning is doing. Further, they operate on the idea that pushing people to the point of real fear helps drive the lesson home. The juvenile justice system – a staunch supporter of this philosophy – reports significant anecdotal success with using ropes courses to alter anti-social attitudes and behavior.

But Holyfield found a different picture. Her observations showed that, when mandated to perform a particularly daunting challenge, some participants found themselves overwhelmed by the fear, unable or unwilling to perform subsequent emotional interpretive work. In other words, Holyfield’s research indicates that the voluntary nature of risk is crucial to its therapeutic or educational function.

ADVENTURE CAPITALISM

“Lori’s research has added an important element to the study of risk-taking,” Lyng said. “In my research describing edgework, I emphasize the contrast between institutional life and adventure. There’s a definite polarity there. But Lori points out that a certain amount of adventure is, itself, being institutionalized. The polarity collapses as we see the growth of these adventure industries, offering packaged risk. That’s an important observation to make.”

Serious edgeworkers and, for that matter, certain sociologists consider the attempt to commodify

adventure misguided. Edgeworkers view adventure tourism as a degradation of the very purpose behind risk-taking: to develop strength, skill and self-determination through the testing of one’s emotional and physical limits. Sociologists see it as a placebo – a means by which society can offer emotional release without actually freeing people from institutional boundaries.

Holyfield acknowledges these objections, but she maintains that even commercialized adventure has

value. To the average American, perceived risk can make just as powerful an impression as actual risk, she asserts. And any method of generating authentic emotion gains increasing importance as modern life becomes more regulated and mundane.

“The idea that we now have to go to institutions to provide emotions and experiences that free us from institutional constraints can be good and bad,” she said. “A lot of that depends on the institutions we go to.”

As the adventure tourist industry gains momentum, it proves that recreation is not all fun and games – that, in fact, it raises serious questions about the function of leisure and the state of our social environment.

But Holyfield is not overly concerned. In her opinion, adventure may be manufactured for profit, but it constitutes something more than a typical, store-bought product. Its emotional significance raises its value above that of physical commodities to provide symbolic and necessary meaning in our lives.

“It’s the symbolic nature of adventure that prevents it from being trivialized, regardless of the organizational aim to make a profit,” Holyfield said. “Adventure isn’t concrete in the sense that it can be brought back if it doesn’t meet the needs of the consumer. You can’t touch, smell, hear or see adventure. It must be experienced in an emotional context.” ■

Read about the experiences of real adventure seekers, in their own words, on the Research Frontiers Web site, http://advancement.uark.edu/pubs/Research_Frontiers/.



Photo By: Russell Collins

Balancing Act

Mack-Blackwell Meets the Challenges of Rural Transportation

By **Carolyn Garcia**

Bill sat in the dock at the MBC terminal in Fort Worth, Texas, watching workers load his truck with canned goods, bags of sauces and seasonings, boxes of detergents and bales of paper products. It was 2 a.m. as he began the coveted Northwest Arkansas run. He would deliver to seven restaurants, pick up a load of canned goods, return to the Dallas terminal and sleep in his own bed tonight.

As he dashed off a quick e-mail on his laptop and sent it over the satellite uplink to his son in Colorado, Bill considered how much trucking had changed during his 30 years on the road. Just a decade ago, today's short-haul trip took two or three days. The old, often dangerous, two-lane road passed through dozens of small towns in Texas and Oklahoma before careening north to Fayetteville, Ark., through mountains famous for their steep grades, sharp curves and long drop-offs.

Although he could cite dozens of improvements in trucking and rural transportation, Bill never realized how many of those changes were linked to work done at the Mack-Blackwell National Rural Transportation Study Center (MBTC) at the University of Arkansas in Fayetteville.

Authorized by Congress in 1991, Mack-Blackwell was established by a grant from the United States Department of Transportation (USDOT) in 1992 as a national center of excellence for rural transportation. It is named for Arkansas state senators Y.M. Mack and Lawrence Blackwell, who co-sponsored legislation to create the Arkansas Highway and Transportation Commission in 1952.

Originally there were only three national transportation centers, according to Walt LeFevre, University Professor of civil engineering and the first director of MBTC.

"We were the only one that focused on rural transportation," he explained.

The USDOT initially provided the centers with broad guidelines and left it up to each center to develop its procedures. LeFevre enlisted graduate student Melissa Tooley, who helped to



set up the center and worked on ensuring compliance with federal and state laws.

"Essentially they told us 'we've decided what we want you to do, but we can't tell you how to do it,'" LeFevre laughed.

"They gave everyone the same blueprint, but we each did something different with it. We had the ability to create it in the form that we liked."

Tooley

As the number of University Transportation Centers (UTC) has grown, new centers have turned to MBTC as a model for setting up their administrative functions. MBTC leaders also have been asked to present their methods at the national meetings of UTC directors.

From the beginning Mack-Blackwell linked its education and research mandates. "We decided at the beginning that we would not fund any research that did not involve students at some level," said LeFevre. "I am proud to say that we still have that requirement."

After setting up a process for evaluating research proposals, MBTC began to actively solicit proposals from outside of the College of Engineering and outside of Arkansas.

"It took a long time to get people to apply," LeFevre explained. "They didn't think they would actually be considered. But we funded a project at the University of Oklahoma and then one at Kansas. From then on, people started to accept that we really were a national center."

LeFevre retired as MBTC director in 1997 and was succeeded by Rear Admiral Jack Buffington, professor of civil engineering. After earning her doctorate, Tooley accepted a teaching position at the University of Florida. She returned to Arkansas in 1999 as an assistant professor of civil engineering and became director of MBTC a year later.

To date, MBTC has funded more than 100 research projects at nine universities in seven states. All MBTC grants require a 100 percent match from non-federal dollars. MBTC now reviews around 40 preliminary proposals annually and, depending on the funding allocation, supports 8 to 15 projects each year. Since 1992, Mack-Blackwell has supported more than \$20 million in transportation research projects.

"When we select projects, we look for overall balance in the program and try for a mix of infrastructure design and maintenance, trucking and social sciences," said Tooley. "We want to be sure we are addressing all aspects of rural transportation — business, infrastructure and socioeconomic issues."

Tooley believes that Mack-Blackwell's diverse approach was key in making the center a strong competitor for funding in 2002. Seventeen centers competed for 10 available slots. MBTC succeeded and was awarded \$1 million per year for the next two years.

"When the grants were announced, Mack-Blackwell was right at the top," said Congressman John Boozman (R-Ark.), who serves on the House Transportation Committee. "Mack-Blackwell is truly recognized as a national center for excellence. You can say that name, and anyone who knows about transportation knows them."

Mack-Blackwell is also unique in that it has strong relationships with both the highway and trucking industries. While other transportation centers focus on one aspect, MBTC works on relationship building between various interests in the transportation sector.

"When the grants were announced, Mack-Blackwell was right at the top. Mack-Blackwell is truly recognized as a national center for excellence. You can say that name, and anyone who knows about transportation knows them."

Congressman John Boozman, House Transportation Committee.

"We work with the highway department, trucking companies, politicians and educators. We work with everyone to try to make the system better," Tooley said. "We were originally charged by USDOT to have a diverse, interdisciplinary and intermodal program, and we have accomplished that. MBTC focuses on education, research and technology transfer to improve the quality of rural life through transportation."

Education

An essential component of Mack-Blackwell, education has a role in every project. In addition to supporting workshops and internships and offering MBTC Fellowships, MBTC worked with the University of Arkansas to develop courses and three new degree programs:

America's Rural Roads*

- ◆ 83 percent of the nation's land
- ◆ 21 percent of its population
- ◆ 80 percent of national road miles (4 million miles)
- ◆ 50 percent of vehicle miles traveled
- ◆ more than 450,000 rural bridges
- ◆ limited or non-existent public transportation
- ◆ challenging geography
- ◆ higher frequency of crashes (58 percent of fatalities and 55 percent of work zone fatalities)
- ◆ slower emergency response time (5 percent of crashes were unreported for more than 30 min.)
- ◆ support the movement of the nation's goods
- ◆ fundamental to local economies and tourism

* Federal Highway Administration, 2003

The Master's of Science in Transportation Engineering (MSTE) is the first program of its kind to be accredited by the Accreditation Board for Engineering and Technology. It draws from courses in civil and industrial engineering and business and provides a path to engineering licensure for graduates with non-engineering undergraduate degrees.

The Master's of Transportation and Logistics Management was developed with funding from MBTC. Housed in the Sam M. Walton College of Business, this degree is available as a traditional course of study or as a night program for working professionals.

The Ph.D. in Public Policy, Transportation Option was created in 2001 and is housed in the political science department. This interdisciplinary policy program has a strong emphasis on public affairs, training policy leaders to address transportation policy issues.

MBTC sponsors four distinguished lecture series each year. Recent speakers have ranged from Dan Turner, president of the American Society of Civil Engineers, to David Renfro, the forensic engineer who investigated the crash that killed Princess Diana, to Charlie Thornton of Thornton Tomasetti, who spoke on the collapse of the World Trade Center.

MBTC also develops internship opportunities with transportation industries and the Arkansas Highway Department. It names an outstanding student every year and sends students to the Transportation Research Board and other national and regional transportation conferences.

Research

Mack-Blackwell has established three areas of excellence in transportation research: transportation infrastructure design and maintenance; traffic/logistics planning and management; and transportation policy. In addition, it has focused on rural public transportation and application of advanced technologies in rural areas.

But diversity is the hallmark of MBTC research. Although "traditional" projects like civil, industrial and mechanical engineering are well represented in the MBTC research program, other projects involve working with the Arkansas Archeological Survey to develop a GIS-based map that will expedite building projects throughout Arkansas while protecting cultural resources and working with trucking companies to increase driver retention. MBTC has conducted research on the impact of an aging population on rural transportation, welfare-to-work policies and innovative uses of GIS technology, including preventing slope failures and managing hazardous waste spills.

"At Mack-Blackwell we have always stressed interdisciplinary and intermodal projects," said Tooley. "We are currently providing a leadership role for the development of the waterborne transportation industry in Arkansas."

Technology Transfer

MBTC established the Center for Training Transportation Professionals (CTTP) to provide certification programs for individuals in highway construction. To date, more



CTTP director Frances Griffith demonstrates a new, more accurate method of density analysis with an asphalt core sealed with the Corelok® vacuum system. Density correlates with asphalt strength: too dense and it ruts easily, not dense enough and it breaks down too fast. As the cores at left show, asphalt composition and density vary greatly, depending on the application.

than 900 people have received certification in highway construction quality control testing through CTTP. Directed by Frances Griffith, CTTP has issued more than 2,000 certificates in aggregates, asphalt, concrete and soils. CTTP has recently added a laboratory certification program and is developing a course in construction staking.

For working professionals who want to pursue advanced degrees, or those wanting Professional Development Hours for renewing their professional engineering license, MBTC has developed a series of courses on video so that individuals will not have to come to Fayetteville to complete coursework. In addition, MBTC has developed a series of workshops, which are taught the two days before the Arkansas Academy of Civil Engineering annual meeting.

The Mack-Blackwell Rural Transportation Study Center addresses the infrastructure, business and socioeconomic needs of rural America by maintaining a balanced program of education, research and technology transfer. But it also is building relationships and bringing people together. John Delery, associate professor of management, noted another benefit of the MBTC balancing act: "As a contractor, I attend their meetings and it is great that they bring together researchers from different disciplines to work on transportation issues. It develops a network of scholars that have worked together on projects." ◆

ERSA Major

University of Arkansas civil engineers Kevin Hall, professor, and Stacy Williams, assistant professor, are working on an MBTC research project to reduce the cost of highway degradation by developing a way to predict rutting tendencies for asphalt pavements before they are constructed. Better pavements improve driver safety and decrease car repair expenses while producing roads that last longer.

Hall and Williams study flexible pavements – more commonly known as asphalt – which represent more than half of all road surfaces in the United States. Faced with poor correlation between laboratory and field data, they developed ERSA (the Evaluator of Rutting and Stripping in Asphalt), a wheel-tracking device used to screen flexible pavements before they are constructed to ensure they will perform as expected.

The correct formula for an asphalt mixture depends on the environment and traffic levels where it will be used. Many factors such as temperature, wetness, and slope impact asphalt's performance. ERSA can test each mixture at a variety of temperatures and wetness conditions to determine if that batch will perform appropriately in a specific situation.

"Identifying problems ahead of time can result in better deci-



Stacy Williams loads weights onto the track arm of ERSA. Developed through research funded by Mack-Blackwell, ERSA allows asphalt samples to be tested under varying simulated traffic and weather conditions.

sions about asphalt composition," explained Williams. "We're talking billions and billions in tax dollars, and we want to be sure what we put out there is going to last. It's a huge expense to build a road, so we want to make sure we build it right. An extra week and a few dollars up front to test it before it is built has got to be worth it." ♦

Culture Clash

Before any transportation project – a road or railroad track or airport – can be built, the National Historic Preservation Act of 1966 requires that any agency receiving federal funds assess the impact of the project on all archeological and historical properties within the project right of way. Complying with the law could become a difficult and expensive process.

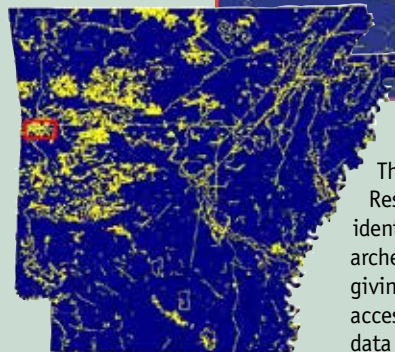
In 1995 MBTC funded a proposal by Arkansas Archeological Survey (AAS) director Tom Green and survey research associate Lela Donat to develop a computer-based geographic information system (GIS) map layer and an associated digital database containing comprehensive information on every archeological site and survey in Arkansas.

To track the more than 35,000 archeological sites and 4,500 archeological projects in Arkansas, AAS began building AMASDA (Automated Management of Archeological Site Data in Arkansas), in the 1980s. The first of its kind in the United States, AMASDA is a relational database containing 130 data fields about each site. The GIS system links to AMASDA, which was expanded to include boundary information and information on sites where surveys had been conducted, but no historic materials found.

"Knowing that a site has been surveyed, but nothing was found is important," Donat explained. "It saves the agency the time and money of repeating a survey."

A 2002 MBTC project will create three new databases and update two existing ones. The new databases will provide photographic images of the sites and associated artifacts. Ultimately, AAS wants to make some levels of the system available on the Internet.

"This computer-based system will provide key information allowing highway project managers to better assess the significance of archeological sites and the impact of new transportation developments on those sites," Green said. ♦



The GIS-Enhanced Cultural Resource Management System identifies the location of every archeological survey in Arkansas, giving land and project managers access to a wealth of site-specific data and images.

Safe In the Zone

Highway work zone safety is an important issue in the United States. According to the Federal Motor Carrier Safety Association, 768 people are killed and another 40,000 are injured in motor vehicle crashes each year in highway work zones. Sixteen percent of these fatalities involve non-motorists, and 24 percent involve large trucks.

To address work zone safety issues, MBTC teamed with the Arkansas Highway and Transportation Department (AHTD) to produce a series of work zone safety videos. Created by Jim Gattis, professor of civil engineering at the University of Arkansas, the videos are used for training and refresher courses for highway workers, supervisors, foremen, inspectors – anyone who needs to know about safe practices.

"The videos contain the same information that can be found in the Manual on Uniform Traffic Control Devices," Gattis explained. "But videos allow us to show terrain features and other visuals to make the information more understandable. A work zone is a dynamic situation and a written manual can't show that."

Gattis has produced five work zone safety videos: Drop-offs, Diversions, Signs of Work, Lane Closures and Pavement Markings, which are targeted to construction professionals. He is currently working on a sixth video that is intended to inform the general public on safe driving practices in work zones. AHTD uses the videos to train inspectors and project engineers.

"Our inspectors put safety first all of the time. Safe travel for the public is the biggest part of their job," said Alan Meadors, assistant division engineer for planning and research at AHTD. "These videos serve as a review for new employees to make them aware of the standards we need to follow. Jim Gattis took a different approach and made the videos accurate and easy to understand." ♦



Data by the Truckload

When John Delery and Nina Gupta, management professors in the Sam M. Walton College of Business, talk about the importance of their MBTC projects they point to the unique data set that they have accumulated on employee turnover in the trucking industry.

"Mack-Blackwell funding has allowed us to accumulate data over a long period of time," Gupta explained. "Accumulating such a massive set of data would not be possible otherwise. Most trucking industry studies are done piecemeal and have a low response rate. Having their support allowed us to do something significant and systematic. It gave us the luxury of doing it right, which will benefit the industry, academe and the research process."

Delery and Gupta have accumulated data on a wide range of management practices and other aspects of operations and outcomes. To date, they have produced eight journal articles and more than a dozen conference presentations, and they have just begun to mine the data.

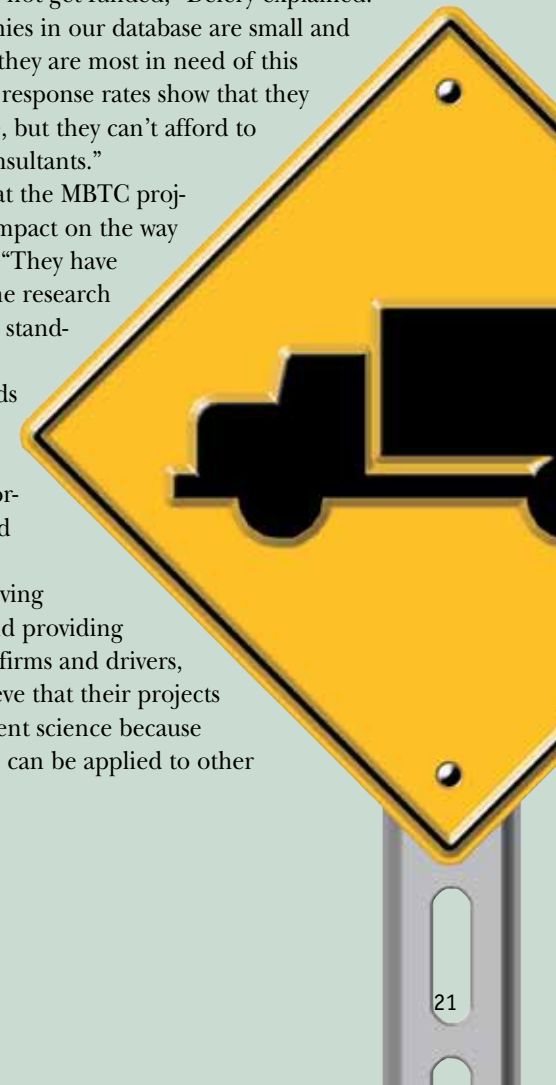
Their work has had an impact on the trucking industry and caused some companies to change their management practices. "We showed them that the management of the driver workforce has a very relevant impact on organizational outcomes," said Gupta. "It is not just a matter of who pays the most money. There are many things going on and it isn't just one aspect that matters."

MBTC-sponsored research has been very beneficial to the many small firms in the trucking industry. "Without Mack-Blackwell, this kind of research would not get funded," Delery explained.

"Most trucking companies in our database are small and under-researched, but they are most in need of this information. The high response rates show that they are anxious to improve, but they can't afford to do research or hire consultants."

Delery points out that the MBTC projects also have had an impact on the way research is conducted. "They have allowed us to look at the research from a methodological standpoint – what affects response rates, the kinds of things that encourage people to respond, what kinds of valid information can be collected from an individual."

In addition to improving research techniques and providing useful information for firms and drivers, Delery and Gupta believe that their projects will advance management science because what they have learned can be applied to other organizations. ♦





Douglas Veltre

At the tip of the iceberg

By Melissa Blouin

Allen McCartney has spent his career among the native peoples of the Arctic, studying their origins and their cultures. His pioneering work has helped forge links among researchers, government agencies and native peoples and has led to new insights into the human history and ecology of the region.



Back in 1978, anthropology professor Allen McCartney and his colleagues drove a greasy, oily, 15-foot whale bone to a Fayetteville car wash. They unloaded the unwieldy object onto the concrete floor of the building, sat down on the car wash floor and proceeded to spray it with heavy-duty hoses to clean it off. Then McCartney chopped the bone into small bits.

The episode is one of many firsts in McCartney's 40-year career spent exploring prehistoric and modern Arctic whaling communities, and it illustrates how far he'll go to gain new understanding for his field.

McCartney performed this task to study the structural properties of whale bones. By examining the bones of prehistoric whales washed up on beaches and modern-day whales butchered by Eskimos, McCartney and his colleagues can make determinations about the size and age of whales hunted in modern and prehistoric times.

During his career, McCartney has published, presented and edited more than 100 papers, articles, reviews and books on native Arctic peoples and their prehistoric ties to whale hunting. He has also edited the journal *Arctic Anthropology*, published by the University of Wisconsin Press, served as assistant editor for the *Journal of Alaska Anthropology* and directed the Thule Archaeology Conservation Project.

McCartney's prolific work has earned him a reputation among native Arctic people and Arctic researchers as the world's foremost expert on prehistoric bowhead whale hunting. Unlike most Arctic researchers, however, McCartney chose not to specialize in one area. Instead, his work has stretched the boundaries of knowledge in place and time — from the tip of the Aleutian Islands to the eastern Canadian Arctic, from the earliest known signs of human habitation in the Arctic to modern-day culture.

During his career, McCartney became the first researcher to study Thule (too-lee) Eskimo culture, whale hunting and their relationship to environmental change. With the Canadian government, he pioneered a program to survey and preserve the Thule Eskimo heritage in Canada. He also studied Arctic maritime cultural adaptations and used them to predict adaptations in other maritime environments — predictions later confirmed by the research of other scientists. He has worked in the Aleutian Islands to examine the influence of Russian contact on native populations. Most recently, he and a colleague have studied whale biometrics — their size, shape, age and structure — and its link to historic and current native whale hunting practices.

"Allen brings something to our work that I lack," said Douglas Veltre, professor of anthropology at the University of Alaska in Anchorage. "He's one of the few people whose work has spanned both the east and west part of the Arctic. It gives him a broader perspective to interpret from."



Opposite page, anthropology professor Allen McCartney photographs the Reese Bay archeological site on Unalaska Island in the Aleutian Island chain in 1990. McCartney has studied archeological sites from the western Arctic to the eastern Canadian Arctic. **Top**, a map of the New World Arctic shows some of the locations where McCartney has conducted field work. McCartney's career has spanned 40 years and 25 seasons in the Arctic. **Above**, coastal mountains at Misak Bay, Katmai Monument, Alaska Peninsula. McCartney's research has helped predict common traits among societies that live in cold coastal climates.



Top, McCartney inspects a fin whale skull in the Los Angeles County Museum in 1997. **Above**, metal artifacts excavated at an early Russian contact site in the eastern Aleutian islands.

McCartney and Veltre have worked together since 1984 in the Aleutian and Pribiloff Islands, when they initiated an archeological survey on one of the big bays. The survey was the largest site project of its kind in the Aleutians at the time, and students from Fayetteville and Alaska came each summer to help recover and document the more than 20,000 artifacts found there.

On the treeless, open tundra, McCartney and Veltre found the telltale depressions left behind by houses dug into the earth and more — a longhouse 45 meters long, the largest and most complex structure found in the Arctic. Through the years they have continued to uncover evidence of how Aleutian culture changed when the Russians arrived in the mid-1700s to pursue fur seals for their coveted pelts. Villages appeared on previously uninhabited islands, houses shrunk as extended families became smaller and metal tools appeared. The midden piles show evidence of dietary changes, possible evidence of shifting food-gathering patterns.

Two years ago McCartney and UA geosciences professor John Dixon found themselves in a small plane about to land in Kaktovik, Alaska, in March. Outside, the sun shone in blue skies and the temperature read minus 32 degrees Fahrenheit.

“That was without the wind,” Dixon recalls. The wind chill brought the temperature down to about minus 80 degrees. “It was a little nippy,” Dixon admits.

But for McCartney and Dixon the journey represented another visit to an area they have studied extensively. Dixon arrived at the University of Arkansas in 1981 and began work on cold climates that eventually led him to collaborate with McCartney in the Arctic. McCartney first visited Alaska in the summer of 1962, and has spent 25 seasons in the Arctic since that time.

What impulse did McCartney follow almost 40 years ago that led him again and again to travel thousands of miles from the mild spring of Fayetteville, Ark. to a frozen, foreign landscape to do research?

“I saw it as an opportunity to make a contribution to a part of the world that is not well understood,” McCartney said of his decision to specialize in Arctic anthropology.

Forty years of research later, McCartney has accomplished that goal. In the fall of 2002, the National Science Foundation sponsored a workshop in Fayetteville: “Four Decades of Advances in Arctic Anthropology: A Workshop in Recognition of Dr. Allen McCartney’s Contributions to Arctic Anthropology.” The workshop featured 12 researchers from all over the United States and Canada, some of them McCartney’s former students, who discussed their research and McCartney’s contributions to the field.

At the beginning of his career, McCartney worked in the Hudson Bay area of Canada. At the time, native land rights issues became paramount, and the Canadian government sought a sense of the history of Canadian Eskimos. Arctic researchers were engaged in an ongoing debate about the presence of histor-

ic whale hunting, arguing that whale bones found at prehistoric sites offered no evidence that Eskimos took to the seas to hunt whales. The Canadian government sought out McCartney’s research. He had written a paper on Thule culture and bowhead whale hunting that has become a classic in the field.

“That represented the first discussion of the Thule Eskimos, whaling and environmental change,” Dixon said.

Over the years, McCartney continued to build on the evidence of whale hunting in Thule coastal cultures, citing prehistoric depictions of whale hunts, whale hunting equipment, whale bones in midden sites and whale bones used in structures.

McCartney does not just study the history and archeology of Arctic people, but also works alongside them. He initiated the first major archeological survey in North America that employed Eskimos. He used the survey as the basis for training native peoples in their own prehistory. Some of the teenaged students he employed, who spent time both on Arctic sites and in Fayetteville, went on to become ethnographers and anthropologists. Others developed a sense of their own history and culture that they can now pass on to their children. George Wenzel, an ethnographer with McGill University in Canada, tracked down some of McCartney’s former students, including Jassi Akpaljaluk, who lives in Iqaluit with his five children.

“What Jass remembers most is that working on the project instilled in him a curiosity about his culture, but also the world in general,” Wenzel said. Jassi also took something from his sojourn in Fayetteville — a love of basketball. He organized a league in Iqaluit that plays every week.

July Papatsi, who was 16 in 1976 when he worked with McCartney at Avvatatuq, credits the anthropologist with his strong interest in Inuit culture. He became, among other things, an interpreter and a trail warden.

In addition to involving native people in his archeological projects, in the mid-1970s, McCartney directed the first cultural resource management project in the Northern Arctic, which aimed at stopping the looting of whale bones for ivory carving. He launched a program to educate people about the importance of whale bone location to cultural history, and encouraged people to inform the Canadian government of prehistoric sites before taking the whale bones for commercial purposes. In this way, the bones could be properly studied and documented before they disappeared.

“It was a project that showed people that by selling the bones, they were really destroying their heritage,” Dixon said. The whale bones represented the winter homes, meat caches, kayak rests and midden heaps of their ancestors, the Thule.

“He has always focused on the meaning of things for the native people,” Dixon said.

McCartney’s research covers several thousand years, but his influence on modern-day whaling culture can be seen in discussions with the International Whaling Commission and native land claims in Canada, said James Savelle, professor of anthropology at McGill University in Canada.

“A lot of the basis of quotas and access to bowhead whales has come from historic records of hunting bowheads,” Savelle said. “In research on prehistoric whaling, Allen would be considered the world’s foremost expert.”

Savelle and McCartney have collaborated on research projects since Savelle worked as a graduate student under McCartney in the late 1970s. They have spent four seasons in the Arctic together, searching for stranded whale carcasses that can be up to 10,000 years old. The remains occur as parts of individual skeletons — usually just the skulls, but in other instances mandibles, and the occasional rib or vertebra. They are often slightly embedded in raised gravel beaches.

By studying these remains, they can determine information about the prehistoric abundance and size of these animals. They can then use this information when studying prehistoric sites where native people used whale bones to build structures. They can compare the size, shape and age of the bones used in houses and those found on beaches to help determine the size of whales that might have been hunted.

Below, a wrecked World War II Japanese ship on Kiska Island in the western Aleutian Islands remains as a silent reminder of the passage of time. **Bottom**, McCartney and UA honors student Michael Yarborough place whale bones back in an excavated house in Izembeck Lagoon, Alaska, in 1971.





McCartney and Savelle found that bones at Inupiat and Thule Eskimo sites come disproportionately from yearlings — whales not yet grown to full size. This would make sense because younger whale calves would swim with their mothers, making them a potentially dangerous target. Larger whales could easily sink a boat, drowning its occupants. The size of whales taken today remains consistent with historic observations.

As he studied the Arctic cultures from eastern Canada to western Alaska, McCartney began to see patterns in the cultural adaptations in the very distant sites. He began to explore these similarities and wrote several papers about Arctic maritime adaptations, predicting that the limitations of flora and fauna would drive native people in such lands to forage at sea.

The Arctic people have adapted their lives to man-made and environmental change. With the advent of commercial whaling in the Arctic, whale stocks worldwide plummeted. Many of the Eskimo tribes incorporated modern-day equipment, including outboard motors and aluminum boats, into their traditional hunts. But when the bowhead populations appeared to be endangered, the International Whaling Commission moved to ban Alaskan Eskimo subsistence harvesting of bowhead whales in the early 1970s.

The Eskimos formed their own commission, the Alaska Eskimo Whaling Commission, and worked with scientists to show that the bowhead population was higher than previously thought. In 1977, Alaskan Eskimo subsistence hunting of bowheads began once more. McCartney's research helped the Alaskan Eskimos argue for whale hunting quotas for different villages.

Another concern comes from environmental change. As global temperatures rise, the permafrost recedes. Traditional "refrigerators" built into the ground no longer act to keep the whale meat cold year-round as they once would have, creating a storage problem for native people, Dixon said.

McCartney and his colleagues have created a Web site that contains information about traditional whaling in the western Arctic and more information about the Arctic region at http://www.uark.edu/misc/jcdixon/Historic_Whaling/index.htm. This project, spearheaded by McCartney, involves Arctic specialists in many different areas — a signature of the way he works.

"Allen finds personal satisfaction in sharing success with other people," Veltre said. ■

Top, McCartney inspects a late prehistoric/early historic whale bone house at Point Hope, Alaska.
Above, basalt and obsidian projectile points excavated at the Reese Bay site, Unalaska Island, Alaska, 1989.

People of the Ice Whale

A letter to the Minerals Management Service from Winton Weyapuk, President of the Wales Whaling Captains' Association, Oct. 12, 2000:

My father once asked me, as I was leaving to attend an Alaska Eskimo Whaling Commission meeting ... who would speak for the bowhead? I believe what he meant was that, as members of the AEWWC, we should attempt to communicate with federal and oil company officials from the bowheads' perspective, because, through our lifestyle, we are connected with them. He meant that the disrespect we show to bowheads is disrespect we show to ourselves. He also meant that in speaking of them, we are disrespectful if we dare to discuss how and where they should live their lives. Putting up man-made islands and disturbing whales through associated activities in effect tells them they are not welcome in what was once their home.

■ ■ ■

In the spring, as the ice begins to break, a group of men from Wales, Alaska, begin to stake out whale-watching posts at the edge of the water. The posts can span up to 12 miles along the ice. On an April morning just before dawn, the omialiq, or boat captain, wakes the men, who rise, drink a cup of water, and set out into the bone-chilling cold.

The men wear white parkas so they blend in with the snow. In groups of eight, they huddle silently and still at the whaling grounds, eyes scanning the landscape for a sign of a whale. When someone spots a whale, they place their boats in the choppy water and glide silently through the newly formed channels.

The bowhead has been called the "ice whale" because it travels through the ice. The Eskimo have been called "the people of the ice whale" because, it is said, without the bowhead they would not exist.

The hunters spot the bowheads when they break through the surface of the ice to expel plumes of vapor. The hunters must get close to the whale to strike. There's always a chance that a surfacing whale could swamp a boat. Bowhead whales can weigh 50 tons or more. But it is said the whales are ticklish, and will ease away from the boat if touched.

Once a group has struck a whale, they signal to the other boats to come assist them.

Several whaling crews work together to tow a whale to shore for harvesting. It can take up to 10 hours to tow a 35- to 50-foot whale many miles to shore. Timing is essential, because the meat begins to spoil after 12 hours. The crews must often rely on compasses to navigate the return journey in the dark, and must negotiate drifting icebergs, which can block their path.

The women greet the umiaks where the ice meets water, and help tow the creature onto shore, where they begin to butcher it. The skin and blubber, or muktuk, is removed first, then the women divide the carcass into sections and remove the meat. In previous generations, baleen and bones were also used to build structures or to make tools and utensils.

Part of the meat goes to the family of the captain of the boat that captured the whale, who then hosts a feast for the whole town. The village elders often take over the harvest and distribution of the whale meat. The whole community comes together to celebrate aqvuqtuut, which means, "We have taken a whale."

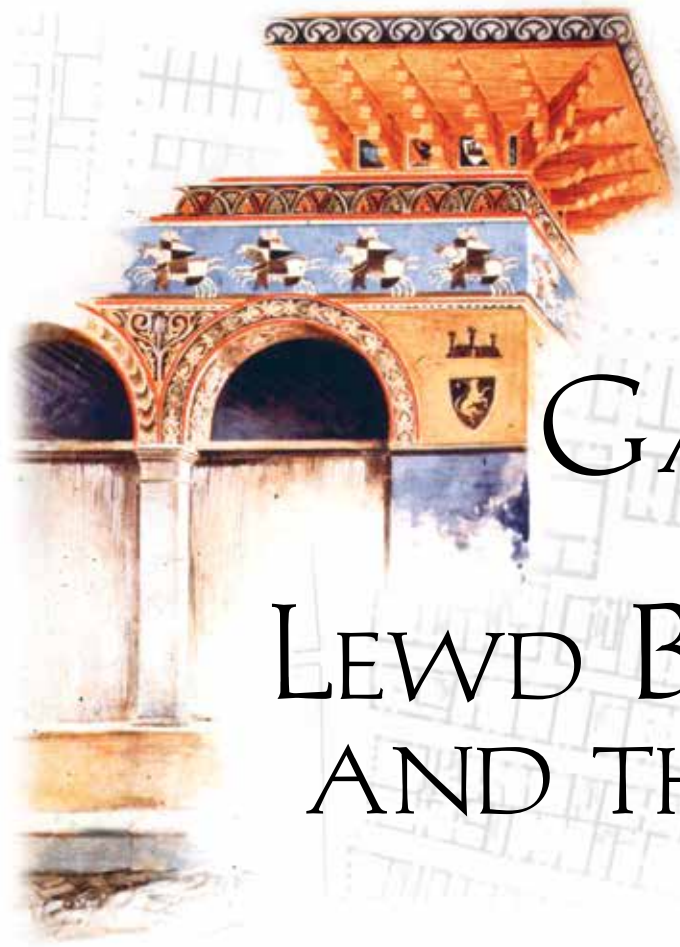
The women pack much of the meat and blubber away to store in the permafrost that allows them to keep the food almost year-round. The villagers use the bones to build houses and storage units.

Because of the size of the whales, one animal could easily provide enough for the needs of a community for a year or more. ■

—With thanks to Herbert Annungazuk, cultural anthropologist with the National Park Service, Wales native and colleague of Allen McCartney.

Below, surfacing bowhead whale.
Bottom, McCartney inspecting excavated bowhead whale bones at the Cape Garry site, eastern Canadian Arctic, 1976.





BY AMY RAMSDEN

GAMBLING BORROWING LEWD BEHAVIOR AND THE LAW

PROFESSOR KIM SEXTON'S RESEARCH EXAMINES 13TH-CENTURY ITALIAN ARCHITECTURE AS A PORTAL THROUGH WHICH TO GLIMPSE THE CULTURAL IMPLICATIONS OF MERCANTILISM

When you mention gambling, the architecture that probably comes to mind is a metallic pyramid or circus tent jutting out of a desert landscape — a capitalistic pastime gone awry. To architectural historian Kim Sexton, however, gambling and its relationship to architecture date back to 13th-century Italy. In her research and book prospectus, “Loggia Culture and the Practice of Space in Italy: 1200-1600,” she claims that the portico, a seemingly ubiquitous and utilitarian architecture, reemerged in the 13th century to legitimize gambling and its relatives, usury and gaming, and to provide a public forum for everything from socializing to sentencing criminals.

With a series of archways or colonnades, loggias are similar to covered porches and can be interchanged with porticoes. They were built on bridges, on second stories or in the midst of market places like the Piazza San Marco in Venice. Specifically, Sexton's research addresses the “independent or free-standing loggia” as a portal through which to glimpse the cultural implications of mercantilism.

“Loggias were intimately connected by ethical, moral and

intellectual dilemmas that resulted from the rise of mercantile communes,” she said. “The scope of my research is broad, both in a chronological and analytical sense, tracing a unique loggia type in Italy from its origins to its decline as a vital civic form.”

During the 13th century when loggias began to reappear, for example, Venice had already become an important port, and Italian merchants were middlemen between Muslims and what would later be dubbed the West. Yet, like today, people were conflicted between money and values: Tempted by exotic goods arriving from the East, these 13th-century Italians realized that the only way they could afford spices or ceramics would be to borrow money, the root of all evil according to a Christian world view during the early Middle Ages. Clerics warned Christians against usury by citing moral tales, one of which Sexton uses in her opening: A deceased woman can't be placed in her casket because her dead hands are moving as if she were counting money. And if that didn't scare them from the lure of financial gain, then a statue of a usurer in Hell might have.

Hence came the loggia in circa 1200, according to Sexton's thesis. This semi-outdoor space allowed people to congregate, gamble, game and even hold court in the public eye. It was an archway used to frame and legitimize business and transform the justice system from a private interrogation into a public forum. In a way, it was a medieval television or medium through which to advertise, persuade and bear witness to — or even be horrified by — popular culture.

“Professor Sexton's research emphasizes the importance of both the use of space and the cultural context from which it emerged, not the architecture per se,” says dean Jeff Shannon of the School

of Architecture.

For instance, she makes an important distinction between 13th-century loggias and the porticoes that disappeared after the fall of Rome in the 5th century. The loggia did not evolve from its lost Roman predecessor, but instead emerged as a new “free-standing, self-contained portico,” she says. If you look further at the etymology, loggia is derived from the Old High German *laubia* meaning arbor or porch. There was not a space used in this same way in antiquity. Thus by comparing and contrasting early porticoes with later loggias, she finds differences based not on the architecture, but on the intention of the space itself.

Consider the Loggia of the Merchants and the porticoed square (circa 1284) at the Rialto Market in Venice, one of her frequent examples. Although this loggia appeared at first glance to be impractical for commerce, Sexton believes that its center square may have created a forum-like arrangement, bringing history and legitimacy to trade. She points out that the vernacular character of this so-called forum did not recall Constantinople as much as the architectural forms of nearby medieval neighborhoods. Therefore, the similarities between the two spaces would put people at ease with mercantile practices.

The Loggia dei Lanzi in Florence (circa 1374-82) also faced onto a public square, according to Sexton, but it was used to induct government officials instead. Like commerce and trade, 13th-century Italian government was viewed as a necessary evil, but now that the church was losing its reign (think late Crusades and forthcoming Protestant Reformation), the success of government depended on fairness and legitimacy. So what better way to coerce the people to embrace a new judicial system than to bring government into an open venue?

For hundreds of years the loggia thrived, as commerce and government were well underway. Examples she discusses at length in her forthcoming book include the Loggia dei Cavalieri in Treviso or the Loggetta in Venice. She divides her chapters among the loggia's origins and its use in the marketplace, for leisure activities and civic rituals and its decline in circa 1600 when it began to become scarce. Why? Trends swung toward privacy as people,



ANNALES IANVENSES C. 113R,
SHOWING GIACOMO MAINERO,
PODESTA IN GENOVA, WITH NINE
CONSULS IN 1191. PARIS:
BIBLIOTHEQUE NATIONALE,
MS. 10136

perhaps paranoid about new laws, started installing glass windows and heating their loggias. What used to be a public gathering became a members-only affair. And now that lending, borrowing and gambling were popularized, she says, Italians started fleeing to the country to take out mortgages, build villas and buy land.

For example, Sexton cites the Loggia of the

Merchants at the Rialto Market, which was thriving in the 1200s and then burned in 1513 but was not rebuilt. In contrast to attitudes of the so-called Commercial Revolution (circa 1000-1350), the people were beginning to snub commerce; land ownership and statecraft



ABOVE, VENICE LOGGETTA, FAÇADE 1537-45 JACOPO SANGOVINO, ARCH. LEFT, LOGGIA DEICAVALIERI FRESCOS AND ITALY VENICE RIALTO MARKET PLAN

were the only dignified occupations for noblemen. In a sense, it was money that brought the loggia to life and money that killed it again.

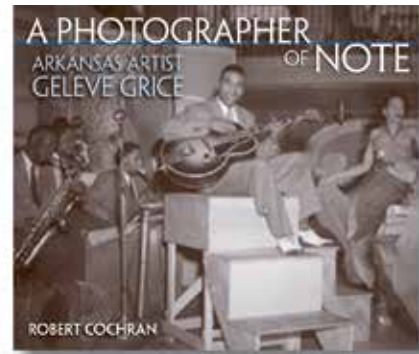
So how did she devote over 15 years of research and write her first book about the rebirth and death of a piece of architecture in the midst of cultural chaos and civic transformation? Sexton's role as culture critic may have come from her multidisciplinary background and varied interests.

Raised Russian Orthodox in upstate New York, she earned her bachelor's degree with honors in French and German at Binghamton State University of New York. After graduating, she decided she didn't want to teach language courses or translate, so she resumed her studies in art history at Yale, where she earned two master's degrees and her doctorate, specializing in Italian Renaissance architecture. It was a whim that led her to Italian Renaissance, which provided a starting point for a myriad of research topics, such as “Ethni-City: Isfahan, ‘Half the World,’” “Architecture and Historicism in Communal Italy” or “Architecture and the Social Landscapes of Jefferson's Monticello,” presented at recent conferences.

Why Italian Renaissance? She says her best courses and teachers specialized in medieval and Italian Renaissance art and may have influenced her research, but she can't really pinpoint why or how this period became one of her primary interests. This answer is very characteristic to her world view: a complicated messy patch of gray, in which there is no one answer to any question, no blacks and whites.

“The loggia remains an ideal architectural form through which to investigate issues of power, space, wealth, class, ethnicity and even theology,” she said. “It's also an exceptional lens through which to assess the transformation of late medieval Italy into the Renaissance. I seek to unpack the multi-layered meaning and practice of loggia culture.”

While working on her dissertation, “A History of Renaissance Civic Loggias in Italy,” she also lived in Florence, Rome, Venice and Bergamo and received two pre-doctoral research grants while at Yale: The Gladys Kriebel Delmas Foundation Grant and the Fulbright-Hays Full Grant. In 1998 she taught at the University of Virginia at Charlottesville before coming to the University in 1999 with her Italian husband, Roberto Sangalli. ■

**A Photographer of Note:
Arkansas Artist Geleve Grice**

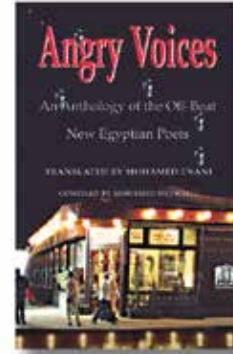
By Robert Cochran

University of Arkansas Press

“A Photographer of Note: Arkansas Artist Geleve Grice” chronicles the life of a remarkable photographer and small-town African-American life in the middle of the 20th century. Geleve Grice, born and raised in Pine Bluff, has documented the daily life of his community: parades, graduations, weddings, club events and whatever else brought people together. Through his lens unfolds the story of an African-American community and the daily patterns of segregated Pine Bluff. Grice also captured the excitement of greeting extraordinary visitors to town – Martin Luther King, Jr., Mary McLeod Bethune, Harry S. Truman and others.

Folklorist and English professor Robert Cochran worked with Grice to select over 100 black and white images from the thousands of photographs he has taken over a lifetime, spanning 60 years. The book portrays the images chronologically, reflecting Grice’s early years in small-town Arkansas, his travel as a serviceman in World War II and his long career in Pine Bluff.

Cochran’s chapters link Grice to the tradition of American community photographers and show how Grice not only made a living taking photographs for jobs, but also made his own life by making photographs for himself and for history. ■

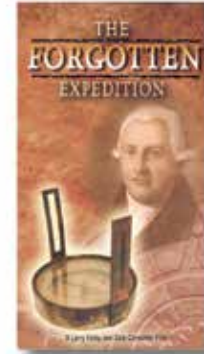
**Angry Voices: An Anthology of the
Off-Beat New Egyptian Poets**Translated by Mohamed Enani
Compiled by Mohamed Metwalli*University of Arkansas Press*

For centuries, Arabic literature employed traditional, unchanging, highly structured language and forms. Then in the 1960s and 1970s, writers rebelled to write in a variety of vernaculars. But today’s young Egyptian poets are inventing new ways of writing.

Rejecting both traditional Arabic formalism and the vernacular rebellion — and contradictorily drawing on these traditions and others — they radically combine and recombine influences and bring new experiences into their poetry. They embrace experimentation.

Initially rejected by the literary establishment, these poets founded their own magazines, one of which appropriated a derisive term that had been used to dismiss them: locusts. Now Mohamed Enani, the editor of *Sutour*, an international literary magazine and the Egyptian Theater magazine, has joined forces with Mohamed Metwalli, the co-founder and co-editor of *Locusts* magazine to gather this writing in one place for the first time.

This new, emerging movement in Egyptian literature is urban in its energies; cosmopolitan in its national, Arabic and western influences; and independent and rowdy in its voice. With its edginess and play of styles, this collection showcases a dynamic, emergent scene that embraces experimentation. ■

**The Forgotten Expedition**

Larry Foley and Dale Carpenter

Arkansas Educational Television Network

Written and directed by Emmy-award winners Larry Foley and Dale Carpenter, associate professors of journalism, with original music composed by professor James Greeson, “The Forgotten Expedition” resurrects the story of two nearly-forgotten adventurers: William Dunbar and George Hunter.

While Lewis and Clark set out to explore the northwestern reaches of the Louisiana Purchase, Dunbar and Hunter journeyed south, where they offered the first reports on Arkansas and Louisiana, traced the Ouachita River, and discovered the natural hot springs that would become one of America’s first national parks.

Foley and Carpenter’s film paints the courage and intellect of these explorers while acknowledging the disappointments that plagued their journey – from the Indian hostilities that cut their expedition short to the shadow cast by their more famous counterparts, Lewis and Clark.

The documentary features interviews with archeologists, biologists and historians, including Trey Berry of Ouachita Baptist University and history professor Jeannie Whayne. It was produced through a collaborative effort between the University of Arkansas, AETN and Ouachita Baptist University. The Arkansas Humanities Council and the Department of Arkansas Heritage funded the project.

For information call AETN at 1-800-662-2386. ■

**I, Rhoda Manning,
Go Hunting with My Daddy**

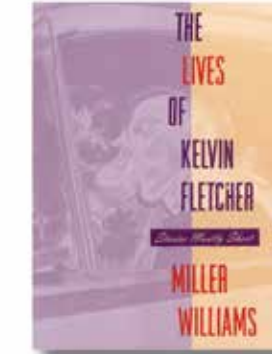
Ellen Gilchrist

Little, Brown and Company

Already nominated for a Pulitzer Prize, English Professor Ellen Gilchrist’s latest collection of stories revisits some of her best-loved characters and introduces new faces as well. The collection begins with several stories told by Rhoda Manning – a series of perspectives from various ages as she reflects on her father, his shaping of her life. The collection then progresses through the stories of other characters to reveal the influence of family, friends, even enemies.

As in all her works of fiction, this book hums with vibrant personalities – the characters amounting to co-conspirators in Gilchrist’s exuberant outlook and style. But the new collection contains an ominous overtone unseen in her previous work: the rumble of catastrophe in each of her characters’ lives.

Fans of Gilchrist need not worry, however. The author fills this collection with stories about loneliness and terror – stories titled “The Abortion,” “Remorse,” “Entropy,” and “Alone.” But in the end, she lifts her characters and her readers from the dark. She finishes the collection with “Light Shining Through a Honey Jar” – a story about that moment when doubt and fear quiet into consciousness and leave us, if not brilliant, illuminated. ■

**The Lives of Kelvin Fletcher:
Stories Mostly Short**

Miller Williams

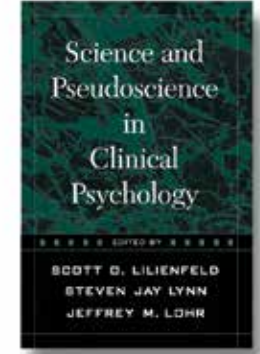
University of Georgia Press

Acclaimed poet and English professor Miller Williams’ first book of fiction consists of seven short stories and a capstone novella, linked, by a single protagonist, into the sequences of a life.

At the beginning, we find Kelvin Fletcher, age 10, struggling to grow up in small-town Arkansas. The stories follow his life over the next decade, through adolescence, faith, envy, lust and rage to an unsteady grip on manhood and salvation.

Throughout these stories, Williams wields remarkable control over the narrative voice, allowing it to mature as Kelvin does. By the time the reader reaches the ending novella, the narration has become more concentrated and keen. For the first time, it shifts from third person into first, allowing the 20-year-old Kelvin to tell his own story.

Beyond the character of Kelvin, what links these stories is a question of choices. Kelvin begins the collection believing in the stark line between right and wrong and our ability to choose which side of the line we stand on. By the end, Kelvin believes in a different sort of line – the one that pulls us forward into our lives, whether we want to follow or not. ■

**Science and Pseudoscience in
Clinical Psychology**Edited by Jeffrey Lohr, Scott Lilienfeld,
Steven Lynn*Guilford Press*

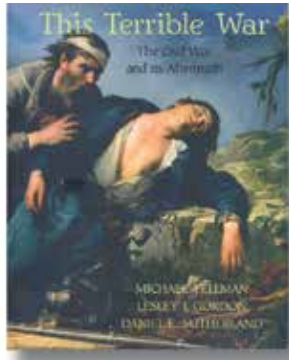
Psychology professor Jeffrey Lohr has dedicated much of his research to distinguishing between psychological therapies backed by empirical evidence and those based merely on speculation.

With co-editors Scott Lilienfeld of Emory University and Steven Lynn of Binghamton University, Lohr has published a book that subjects numerous, popular psychological treatments to scientific scrutiny and finds many of them lacking.

In “Science and Pseudoscience,” renowned experts in the fields of psychology and law examine the lack of scientific evidence behind controversial therapies for ADHD, multiple personality disorder and repressed memories as well as alcoholism, depression and trauma. Contributing authors also scrutinize the use of herbal and alternative remedies for psychological conditions and question the growing commercialization of the mental health industry.

Says Harrison G. Pope, doctor of psychiatry at the Harvard Medical School: “At last – a book that pulls no punches, names names, and isn’t afraid to portray junk science for what it is. This will be invaluable reading for anyone in the mental health professions and an essential reference for students.” ■





**This Terrible War:
the Civil War and its Aftermath**

Daniel Sutherland, Michael Fellman,
Lesley Gordon

Longman Press

A new textbook on the Civil War offers fresh perspective on this much-studied conflict, including the proposition that it could have – and probably should have – been avoided.

With co-authors Michael Fellman of Simon Fraser University and Lesley Gordon of the University of Akron, history professor Daniel Sutherland attempts to impress upon readers the overwhelming national, regional and personal costs of the war. In the process, the authors suggest that political compromises might have saved more than a million Americans from being wounded or killed on the battlefield.

What has elevated the Civil War to a glorious triumph in American history is, in part, the myth that it was fought to end slavery and that its outcome represented a moral victory for justice and freedom. By exploring the conflict from its origin in regional tensions to its aftermath in Reconstruction, the authors provide an expanded history that exposes the truth: that political motives drove the war, that soldiers endured unspeakable brutality on the battlefield, and that emancipated blacks, both North and South, found themselves as destitute and disenfranchised at war's end as they had been when it began. ■



**Remapping the Home Front:
Locating Citizenship in British Women's
Great War Fiction**

Debra Rae Cohen

Northeastern University Press

“Everyone knows the master narrative of the war: the manly experience on the front, the struggle to survive and the disillusionment after seeing friends killed. The soldier’s narrative gets privilege. It always has,” said Debra Cohen, assistant professor of English.

But in “Remapping the Home Front,” Cohen examines war literature from a different perspective — that of women, whose writing during World War I showed a struggle to reconcile their war-assigned roles of domesticity with their growing desire for individual space and identity.

Cohen’s book discusses the fiction of four writers – Violet Hunt, Rose Macaulay, Stella Benson and Rebecca West. Though thematically different, the works these women produced show a common element. Each features characters who, in response to the pressures of war society, retreat to inner spaces and imaginary worlds. They construct physical, psychological and emotional enclosures from which they can observe the war and its impact on the real world without allowing it to shape – or distort – their identities.

Yet Cohen’s analysis shows how these sheltered spaces ultimately collapse, leaving characters exposed to the eyes of society and the effects of the war – a disillusionment on the home front to match that of the battlefield. ■



**Genetics of Mate Choice: From Sexual
Selection to Sexual Isolation**

Edited by William Etges
and Mohamed A.F. Noor

Kluwer Academic Publishers.

A new book edited by biology professor William Etges takes the mating game to the genetic level.

Etges and Mohamed A.F. Noor of Louisiana State University have co-edited a book addressing topics including hybrid infertility, sexual signaling, reproductive isolation, speciation, inheritance and mate choice — all from the standpoint of genetics. The book examines genetic issues in the mating characteristics of guppies, domesticated birds, lacewings, butterflies and fruit flies.

Until recently, studies of species formation focused on complex behavior in mating and sexual selection. Mammals, birds, insects and reptiles all have novel — and sometimes multiple — ways of attracting mates: singing, dancing, displaying their colors or sporting big horns. But little is known about the genetic basis of mating and courtship rituals, and how this relates to the formation of species.

The book presents an overview of current genetic research as it relates to mating behavior.

The research addresses the genetic evolution of cues that form the basis of courtship. Researchers have studied mating and courtship behavior in many animals. They also have genetic information on many of these creatures. But rarely have the two been paired together. ■