Institutional effectiveness is the mantra accrediting bodies use in their reviews of colleges and universities, and outcome assessment is the centerpiece of such effectiveness criteria. In the past year, Southern Methodist University underwent an accreditation review by the Commission on Colleges of the Southern Association of Colleges and Schools that resulted in a favorable conclusion.

In an institutional effectiveness review, results are compared to institutional objectives. One of the missions of the University is to strengthen scholarly research and creative achievement. The material presented in this magazine provides a partial picture of our achievement in this area. SMU has schools for the humanities and sciences, business, engineering, communication and fine arts, law, and theology. The profiles, research news, samples of publications, and sponsored research activity show that faculty in all six schools are active in scholarship and creative endeavors.

This is the eighth volume of SMU Research, and every year, as the one who chooses the articles for inclusion, I always wish I had more pages at my disposal. The difficulty of making these choices is a reflection of the quality of our faculty and the productive environment of our institution. I congratulate the faculty on their achievements and scholarship.

This volume includes three feature articles: two on distinguished faculty members and one on the Meadows Museum. Professor Louis Jacobs, an internationally known paleontologist, has taken on the presidency of the Institute for the Study of Earth and Man. Charles Curran, the Elizabeth Scurlock University Professor of Human Values, is a Catholic dissident of international acclaim. Thanks to funds raised during the Campaign for SMU: A Time to Lead, the Meadows Museum, which houses one of the finest Spanish art collections outside of Spain, is moving into a new building. It will serve as a research resource for generations to come.

I hope you enjoy reading this volume as much as I enjoyed assembling it. We thank you for your continued interest.

U. Narayan Bhat
Dean of Research and Graduate Studies
Dean's Message

Research News  From nanotechnology to the Earth's hot spots, research by SMU faculty members is making news.

Research Update  Two SMU professors update their research on immigrants in Paris.

Faculty Profiles  A philosophy professor who studies medical ethics, a voice professor who traced the music her ancestors grew up singing, and an engineer who is helping design buildings to withstand earthquakes are among nine faculty members profiled in this year's issue of SMU Research.

There's an Art to This Scholarship  The new Meadows Museum provides more space for SMU's renowned Spanish art collection.

Voice of Dissent  America's most famous Catholic moral theologian finds a home at SMU.

Beyond Dinosaurs  Popular paleontologist Louis Jacobs uses clues found in the fossil record to further our understanding of Earth's history.

Faculty Recognition

Sponsored Research

Faculty Publications

Portrait of an Artist

On the cover  An illustration by Dallas artist Karen Carr shows what a fossil snake with legs might have looked like. SMU paleontologist Lou Jacobs published a description of the snake last year in Science magazine. The snake with legs is one of many interesting fossils found in a limestone quarry north of Jerusalem, where Jacobs is unearthing clues about Earth's history. See story page 19.
Two SMU geology researchers have discovered a symmetric distribution for the "hot spots" on the Earth's surface. Scientists have located 47 places on the Earth's surface where volcanic activity unrelated to plate tectonics occurs, including Hawaii, Yellowstone, Iceland, and the Galapagos Islands. Hot spots mark the sites of ancient "mantle plumes" where huge amounts of volcanic material rose from deep within the Earth. Today, residual material representing the tails of these mantle plumes still comes up at these hot spots. Although previous studies have reported that hot spots tend to occur in broad clusters, an orderly arrangement in their distribution had not been recognized.

SMU geologists Rebecca Ghent and Douglas Oliver studied the location of major hot spots and determined that a disproportionate number occur at latitudes between 20 and 30 degrees north and south of the equator. Their observation became much more significant when the hot spots were weighted according to the amount of volcanic material that they produced. Statistical analysis shows that the likelihood of this distribution arising by chance is less than one percent. "This hints that there is something going on deep within the Earth that hasn't been suspected before," Oliver says.

Oliver and Ghent are investigating processes within the Earth that may be responsible for this phenomena. Oliver presented their research at the 112th annual meeting of the Geological Society of America in November. For more information: Doug Oliver oliver@mail.smu.edu

Teaching Tools

How do cell phones work? How are images transmitted digitally? SMU engineering students now have a user-friendly way to learn such concepts because of software developed by two of their peers.

Engineering students Mark Westerman ('00) and Joe Williams ('01) used funds from a National Science Foundation grant to develop new software for teaching classes in communications and signal processing.

Westerman, now a graduate student in electrical engineering, developed a software program called "Peruna" that helps students learn how to understand the components of a very complicated signal such as the human voice. Students learn how to remove noise and other interference to produce clean, clear speech signals. Westerman won the School of Engineering's Research Award for undergraduate students last May.

Williams, a senior with a double major in electrical engineering and mathematics, developed a program called "Pony Express" that enables students to transfer data between computers using the audio spectrum. The software helps students learn a wide variety of concepts, such as how e-mail and images can be transmitted wirelessly. The tools in Pony Express are the same ones that professionals use in analyzing and building cellular phone systems.

"These software programs have allowed us to teach significantly more advanced ideas to younger students," says Geoffrey Orsak, associate professor of electrical engineering.

Westerman and Williams presented their software to the IEEE's first signal processing education workshop in October 2000, which was attended by university engineering professors from throughout the world. Both programs can be downloaded for free off the Internet, and several other universities have incorporated them into their engineering curricula as well.

For more information: Geoffrey Orsak gorsak@enr.smu.edu

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Something is going on deep within the Earth that hasn't been suspected before.

Engineering students Joe Williams ('01) and Mark Westerman ('00)
When is Sunday no longer Sunday? When modern culture redefines it as a day of leisure, an SMU historian says.

In her recently published book, Holy Day, Holiday: The American Sunday, Alexis McCrossen, assistant professor of history in the Dedman College, explores the significance of Sunday to American life. She traces the beliefs and practices Americans have had about the day, and how these have shaped attitudes toward leisure.

"What's changed between 100 years ago and today is that we are a lot less dogmatic about what people can do on Sunday," McCrossen says, noting that "blue laws" restricting commerce on Sunday are no longer on the books. In addition, McCrossen says, technology has changed Sunday's distinct feel by making both time and space elastic. She sees these changes as a threat to shared daily rhythms of American life.

"It is no accident that the sale of daybooks, personal organizers, and calendars are booming; that on-line management consultants are working overtime; and that a state of self-help books concerning the shelves of drugstores, report newstands, and public libraries," McCrossen says. "Americans have fewer and fewer parameters around which to organize their lives, and thus are turning to their own devices, not always successfully or happily. Sunday is one of the few institutions that has provided Americans with a shared and common space for rest."

The Wall Street Journal described McCrossen's book as a fascinating cultural history.

Thinking Small

SMU researchers have added a small piece to the emerging field of nanotechnology, which seeks to create machines at the molecular level.

Chemistry professors John St. John and Patty Wisian-Nielson have developed a new process to stabilize gold nanoparticles in an inorganic polymer. The technique could have numerous applications in electronics and medicine.

Scientists have been developing ways to stabilize gold nanoparticles because gold is a key component of the electronic circuit and also may be used in certain biomedical applications.

"If we could stabilize gold nanoparticles in an inorganic polymer, we have the potential to organize nanoscale metals, much like semiconductor components are organized on a computer chip," St. John says. A nanometer is one billionth of a meter - just above the size of the atom.

Although others have stabilized gold nanoparticles in organic polymers, which have a carbon backbone, the SMU team is believed to be the first to stabilize them in inorganic polymers that have a phosphorus-nitrogen backbone. This polymer system is easy to modify and could enable scientists to easily change the way the nanoparticles behave.

"This should result in a much more versatile polymer," Wisian-Nielson says.

Wisian-Nielson and St. John presented their research to the 220th national meeting of the American Chemical Society in Washington, D.C., in August 2000.

Solving a Mayan Mystery

By carefully analyzing some 30-year-old photos, an SMU archaeology professor has given new meaning to a priceless piece of Mayan artwork.

In 1968, looters took a magnificent painted stucco facade from the top of a building buried in the jungle near the Mexico-Guatemala border. The facade, which probably was built in the Early Classic Maya period between A.D. 400 and 500, was eventually returned to Mexico and put on display at the National Museum of Anthropology in Mexico City.

Maya scholars have struggled to interpret the facade, which seemed to represent a king surrounded by two smaller gods.

But using photos taken by the looters, SMU Archaeology Professor David Freidel realized that a key piece of the facade had been left crumbling in the jungle. The photos revealed that the facade actually incorporated images of two important kings from different regions. Freidel hypothesizes that the facade commemorates an important political meeting between the two kings.

Freidel published his detailed interpretation of the facade in the September/October 2000 issue of Archaeology magazine. "The facade is certain to be a key to understanding the politics of Early Classic Mesoamerica," he says.

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SITTING AROUND ON SUNDAY

American Sundays
were once a time for
shared leisure.

Archaeological
illustrator Dave Morgan
used a collection of
photographs taken more
than 30 years ago by
looters to create this
photo reconstruction of
the Maya facade.
Help for Hearts

A group of SMU engineering students has designed a wireless heart monitor that will better ensure a signal free of interference from wireless technology transmissions.

The students designed their prototype, named “Casper,” to transmit in a new frequency range set last year by the Federal Communication Commission (FCC). The FCC established the new range after hospitals across the nation experienced interference and even temporary failures in their medical telemetry systems. The systems shared a frequency range with TV broadcasting stations, many of which are beginning to send digital signals, also known as High Definition Digital Television (HDTV).

Medical telemetry systems that can use the new frequency range include heart, blood pressure, and respiration monitors. Wireless systems allow patients to move around early in their recovery while still being monitored for adverse symptoms. With such systems, one health care worker can monitor several patients remotely.

Peter Bastawros (’00) came up with the idea of the wireless monitor using the new FCC frequency after taking a biomedical engineering class and learning about the problem and the FCC’s response. He joined students Brent Smith, Bo Fishback, and Paige Lockett to research, design, and build “Casper” for their senior design class taught by Mechanical Engineering Professor Paul Packman.

The students demonstrated their prototype before a panel of health care professionals assembled by the Kent Waldrep National Paralysis Foundation last May. Each year the Waldrep Foundation and the United Service Association for Health Care Foundation give $15,000 to the senior design class to work on devices for the physically disabled. Bastawros hopes to pursue work on “Casper” in the future.

for more information: Peter Bastawros petehurnseysco.com

An Apology is Worth...

Not every wrong deserves a lawsuit. Sometimes an apology will do.

Common sense perhaps, but not to the American legal system, according to Daniel W. Shuman, professor of law at SMU’s Dedman School of Law. Writing last year in the legal reform magazine Judicature, Shuman argues that people who say they’re sorry should be protected by the law instead of having their acts of contrition serve as evidence against them. Apologies would reduce the number of civil liability claims, he says, benefiting an overburdened court system.

As evidence for the value of apologies, Shuman cites the number of medical malpractice claims. Only one out of eight patients sue their doctors. He suspects apologies explain why most people do not sue when things go wrong despite the magnitude of the doctor’s mistake.

“Nobody benefits from exacerbating the stakes in these wrongs. People go to the next level – lawsuits – because they are not satisfied with what they get out of the first level of interaction,” he says.

Others share Shuman’s call for reforming the role of apologies in tort law. Massachusetts and Texas have enacted new laws that allow for “acts of benevolence” when considering liability in personal injury cases. Last spring California lawmakers – some influenced in part by Shuman’s article in Judicature – followed suit with a similar statute.

For more information: Daniel Shuman dshuman@smu.edu
After a year in Abidjan on the West African coast, Bakari took a boat to Bordeaux, arriving 13 days later. With the aid of a French friend whom he had met in Mali, he found a job as a factory worker in Le Havre in 1965.

In the 1970s, following an economic downturn, the French government increased its surveillance of foreign workers by requiring a residence permit, which Bakari obtained in 1975. Three years later he returned home to Mali to get married. His troubles began when a taxi in which he was riding was in an accident and caught fire; his permit was destroyed. He appealed without success to authorities at the French embassy to replace his documents. In subsequent years he tried several times to return to France legally. By 1986, however, France had further tightened entry requirements by requiring a visa and Bakari's request for a visa was denied. In desperate need of money and perceiving no future in Mali, he decided to return to France clandestinely in 1989.

This time he headed through northern Mali, Algeria, across the desert, and into Morocco. He followed what has become a regular route for illegal immigrants into the European Union, crossing from Africa at Gibraltar. Using his driver's license from 1970 and his health certificate of 1973, he entered Spain and then walked across the border into France.

But the France of the 1990s did not extend even the ambivalent welcome of the 1960s. Bakari had to work au noir, literally "in the black," meaning illegally. He continued to file appeals asking that his status be "regularized," and sought a lawyer to take his case.

In 1997, a new government order relaxed some restrictions but the order was not destined for "bachelors without dependents," which is how the Ministry of the Interior classified Bakari.

Around this time, immigrants launched an organized attack on French immigration policies that began with an occupation of St. Bernard Church. In the summer of 1999, when government offices were normally closed, Bakari and 350 other migrants occupied the Maison des Ensembles, a large building that housed social services at 3-5 rue d'Aligre in the 12th district of Paris. They have remained there ever since, supported by the Green Party. A delegation from the Maison des Ensembles demonstrated in front of the National Assembly in March 2000 in support of migrant rights. In response, the Minister of the Interior agreed to review all the permit requests. But again, no decision was rendered.

Given the sometimes unsympathetic French media, Bakari Diaby, his fellow leader Mahmadou Traore, Tounkara Makan, and Sylla Moussa, and the other sans papiers (without papers) of the Maison des Ensembles have refused to give interviews but they agreed to meet with Sargent and Gary to make their plight known in America.

These conversations with the squatters of the Maison des Ensembles are part of Sargent and Cordell's larger research project exploring changing representations of the family, reproduction, and gender relations among the almost 40,000 Malian immigrants in Paris, and how these changes may or may not be keyed to fluctuations in French immigration policy.

SMU professors Dennis Cordell and Carolyn Sargent have been studying the group of Malian men who are occupying the Maison des Ensembles in Paris.

The undocumented workers have held several demonstrations for migrant rights, including one at the French National Assembly.
The question is whether there is a moral difference between killing patients who are terminally ill and letting them die, Norcross says. In his book, "Killing and Letting Die," Norcross discusses the difference between active euthanasia, also known as assisted suicide and mercy killing, and passive euthanasia, the forgoing of life-sustaining treatment including artificial life-support measures and artificial nutrition and hydration.

Norcross also is part of a group of philosophers, psychologists, doctors, and economists studying ethical issues surrounding the allocation of scarce medical resources when disability issues are involved, such as with organ donations.

Norcross cited a recent case in which a British teenager with Down syndrome was refused a heart and lung transplant. Doctors claimed that Down syndrome diminishes the chances of the operation's success. However, the patient's family claimed that the decision was unjust because she is disabled.

"There is a fine line saying other patients have a greater chance of benefiting from the operation because they have a 'normal' life and judging that the life of a disabled individual is no less valuable," Norcross says.

Norcross joined the SMU faculty in 1992 after teaching at Hobart and William Smith Colleges in Geneva, New York. He earned his Bachelor's degree in the classics (literature and philosophy) at Oxford University, and his Master's degree and his Ph.D. in philosophy from Syracuse University. He was named the William Edward Easterwood Associate Professor of Philosophy in 1995, then served as a visiting associate professor of philosophy at the University of Arizona in Tucson for a year.

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Ensuring Seismic Safety

Hundreds of buildings and other structures worldwide may be safer thanks to the work of Bijan Mohraz, a professor of mechanical engineering in the School of Engineering and expert in earthquake engineering. Mohraz' early work focused on how to safely design nuclear power plants to withstand earthquakes.

His mentor at the University of Illinois at Urbana-Champaign, Nathan M. Newmark, was one of the pioneers in this specialty. Research that they conducted with colleague William J. Halls was implemented by the Nuclear Regulatory Commission and used for many years to design nuclear power plants.

With the decline in construction of nuclear power plants, Mohraz turned his attention to improving design of other buildings for seismic safety. A landmark paper that he published in 1976 was one of the first that led engineers to consider the geology of a site when designing buildings for seismic loads. The paper is still referenced today.

His latest research focuses on...
Seeking Clues About Ancient Climate

By analyzing fossil leaves no more than an inch long, Bonnie Jacobs can tell what the climate may have been like millions of years ago.

Jacobs is a paleobotanist whose research focuses on studying ancient fossil plants from Africa. She is trying to determine what the climate may have been like in that part of the world 46 million years ago in the Eocene epoch. The Eocene is of particular interest to Jacobs and paleoclimatologists because the Earth was much warmer than it is today.

Last summer, Jacobs led a group of scientists from the United States and Tanzania on a month-long expedition to a largely unexplored region in the East African country of Tanzania. The team searched for ancient plants and animals that became fossilized in the fine-grained mudstone of an ancient lake in the area around Mahenge in Tanzania's Singida District.

The team collected nearly 370 fossils on the trip, providing one of the first glimpses of life as it existed in sub-equatorial Africa during the Eocene. One of the most exciting finds on the expedition was that of a fossil bat, the first Eocene mammal ever found from sub-Saharan Africa and the most complete fossil bat known from the continent.

Jacobs herself focused on collecting fossil plants, many of which are in the legume family, known for its food plants such as beans as well as common trees, such as the redwood and mesquite.

"The diversity and abundance of legumes at Mahenge may be even greater than we first thought," she says.

Jacobs collected enough fossil plants on the expedition to provide a good indication of the paleoclimate of the area. For example, leaf size and shape can be used to estimate rainfall. Studying the number of stomata — the cells that plants use for breathing — on the fossil leaves can help determine the concentration of carbon dioxide in the atmosphere during the Eocene. This information will be made available to researchers who do climate modeling.

"Good independent estimates of past climates are needed to evaluate the accuracy of climate models," Jacobs says.

An assistant professor in the Department of Geological Sciences, Jacobs also serves as chair of the Environmental Science Program in Dedman College. She earned a Bachelor's degree in geology and anthropology from the State University of New York at Buffalo and earned her Master's degree and Ph.D. in geosciences from the University of Arizona. Her work has been published in journals such as the American Journal of Botany and the Review of Paleobotany and Palynology.

Jacobs received a two-year grant from the National Science Foundation for her studies of ancient Tanzania.

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As globalization increases, frequent merger and acquisition activities cross national boundaries, threatening established national systems with new ideas and methods. Bosch, Bertelsmann, and BMW, to be owned by one of the country's three large banks – Dresdner Bank – and by members of the founders' families. Through their cross-holdings, banks serve as conduits to other firms. In many cases, more than one corporation holds significant shares in a firm. Both Commerzbank and Dresdner Bank control significant shareholdings in Buderus, a large manufacturer of industrial components.

Because of this system of ownership, many German corporations are linked by common owners throughout a substantial portion of the national economy. Closely knit clusters of firms are highly connected through these ownership chains, but there are few intermediaries linking them, Walker says. The overall system of connected clusters constitutes what he calls the "small world."

The small world seems fragile in the face of international mergers and acquisitions in which inevitable ownership changes will displace established intermediaries, Walker says. If the small world, which characterizes the German corporate system, cannot survive, then the country's corporate heritage and business methodology would be threatened, he adds.

But based on Walker's research, conditionally accepted for publication by American Sociological Review, the small world networks are quite robust, despite their sparseness, and are enduring the changes brought about by globalization.

This finding also can be applied to other nations, which are likely to have corporate control networks with structural characteristics similar to Germany, Walker says. "Globalization is a force that impinges on all countries, but its effects are mediated by the small worlds of local economies that have surprising capabilities to endure and persevere."

As an extension of Walker's research on small worlds, he is analyzing the small world of co-financing agreements among venture capital firms in the United States since the 1970s. "What we're looking for is the increasing connectedness, the increasing integration of the venture capital industry over the past 25 years, even in a very sparse network. That's the 'small world' in venture capital," he says.

Walker, who joined the SMU faculty in 1993, is professor and chair of the Department of Strategy and Entrepreneurship. He received his M.B.A. and Ph.D. from The Wharton School at the University of Pennsylvania.

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Incorporating Women's Voices into Christian Worship

A s the first Protestant woman in the United States to receive a Ph.D. in liturgical studies, Marjorie Procter-Smith has spent nearly 30 years discerning women's voices in Christian worship. Now, she is using a Scholarly Outreach Grant from Perkins School of Theology to write a workbook on incorporating Christian feminist worship into traditional Christianity.

"Feminist worship is more physical, with more emphasis on the senses, unlike much traditional worship, which often focuses on the mind," says Procter-Smith, the LeVan Professor of Preaching and Worship and associate dean for academic affairs at Perkins School of Theology.

Typical feminist worship is collaborative, communal, and usually organized around a theme, Procter-Smith says. Often it takes place in open, flexible spaces like office buildings, meeting rooms, or sometimes even outdoors. Seating is normally circular, so everyone sees each other. "There is emphasis on sharing," Procter-Smith says. "Leadership is shared among planners and participants. There is often corporate music, such as singing or chanting, rather than a performance. Recorded music may accompany meditation. Sometimes it includes simple circle dancing. It is very unifying."

The word "liturgy" literally means "work of the people." Procter-Smith says, but, historically, the people have always been men.

Procter-Smith began develop-
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A feminist approach to liturgical studies during the feminist movement of the 1970s. "In feminist theology, we were critiquing existing practices," she says. "Women began to say, 'Why can't the doctors and lawyers?' and in churches said, 'Why can't we be ministers, lead services, and preach?"'

Procter-Smith earned her Ph.D. from Notre Dame with a dissertation on the American Sagers, a religious movement founded by a woman, which developed female language for Christ and Christ. She began thinking about how religious identity could be constructed in terms of worship in a way that did not marginalize women. The result was her book, In Her Own Rite (1990, 2000), which addresses fundamental liturgical issues from a feminist perspective. Her other two books, Women at Worship (1993) and Praying with Open Eyes Open (1995), look closely at what has evolved into the feminist liturgical movement.

"The main thing that Christian feminist worship does is give women a voice," Procter-Smith says. "Certainly it's clear that the earliest New Testament Christian worship was not like traditional worship now. They shared the language. Much like these feminist groups, they were small communities. They shared the language, ate together." Bringing Christian feminist worship and traditional worship together will not be easy, Procter-Smith says.

"We really have to broaden what is happening in feminist worship and what is happening in traditional worship," Procter-Smith says. "We have to rethink what we are doing when we gather for worship. There needs to be freedom for expression. While unity is very important, somehow we have to make room for diversity of voices."

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**Discrimination by Proxy**

In recent years, propositions that might appear to discriminate against Latinos have been placed on ballots across the country. While some people try to stop such initiatives at the ballot box, SMU Law Professor George Martinez believes there is another way to stop them: in the courts.

Martinez is advancing a novel legal theory under which language bias can substitute for racial discrimination under the Equal Protection Clause of the 14th Amendment of the U.S. Constitution.

Because civil rights law developed historically to protect African Americans, Martinez and other legal scholars believe most case law relies too heavily on race. They favor a broader interpretation of the Equal Protection Clause, recognizing language as a proxy for national origin or race, they argue, would extend constitutional protections to other minorities such as Latinos, Asians, and Native Americans.

In an article published in the summer 2000 issue of The University of California at Davis Law Review, Martinez and co-author Kevin Johnson, UC Davis law professor, argue that recent ballot initiative campaigns in California and Arizona to restrict bilingual education for non-English speakers use language as a proxy for national origin, therefore, discriminating against Latinos. Their article looks particularly at the successful 1998 antibilingual initiative in California known as Proposition 227.

"During the campaign for 227, the focus was almost exclusively on the Spanish language. The Spanish language, we contend, is central to the identity of Latinos. In targeting the language, these voters were, in effect, really targeting Latinos by proxy," Martinez says.

To prove a constitutional violation, the law requires proof of intentional discrimination. Martinez and Johnson cite as evidence historical segregation and funding inequality of Mexican-American schools; the racial tone of the Proposition 227 campaign, which almost exclusively focused on Spanish speakers; and previous California ballot initiatives, Proposition 187, which barred undocumented immigrants from a variety of public benefits, and Proposition 209, which dismantled affirmative action programs in the state. Taken together, Martinez says they can prove discrimination on the part of voters.

"If you can show that race was a motivating factor behind the passage of the measure, then it is sufficient to establish a constitutional violation," Martinez says.

Already Martinez has been contacted by an Arizona law professor interested in using the UC Davis Law Review article to lay the groundwork for a federal court challenge in that state. Martinez expects other attorneys to use his article's legal arguments in court fights against languag bias laws.

Martinez, who has taught at SMU since 1991, received a B.A. in philosophy from Arizona State University, his M.A. from the University of Michigan, and his J.D. cum laude from Harvard Law School. He has published 17 law review articles and five book chapters on such subjects as race, civil rights, legal theory, and federal court procedures.

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Somehow we have to make room for diversity of voices.

**Somehow we have to make room for diversity of voices.**

![Artist Nancy Banas's "Human Race Machine" allows people to see themselves as another racial identity.](image-url)
Can abusive men change their behavior? If so, how and when do these changes occur?

**Studying Male Batterers**

Three to four million women in the United States are battered by husbands or male partners every year, according to the National Council on Child Abuse and Family Violence. Christopher Eckhardt, assistant professor of psychology in Dedman College, is studying male batterers with misdemeanor domestic abuse convictions as part of a grant from the National Institute of Justice, the research branch of the U.S. Department of Justice.

"I study characteristics of men who have assaulted their female partners," Eckhardt says. "We look for cognitive, emotional, and behavioral indicators that can help us predict what causes a man to batter, whether a man will complete a court-ordered treatment program, and if he will be successful in changing his aggressive and violent behavior over time."

For his current study, Eckhardt is recruiting 200 men convicted in Dallas County Judge David Finn's family court who are sentenced to complete a court-mandated domestic violence program. He interviews them every two months and tracks whether they attend their weekly court-appointed programs.

"Even if they don't attend the programs, we continue to interview them because one of the primary goals of the study is to understand why there is roughly a 50 percent drop-out rate in court-ordered counseling programs," Eckhardt says.

What makes men batter women? Feminist theorists blame the male socialization process and a historical impunity from consequences, a theory that directs treatment toward the re-education of men's roles and increased gender sensitivity. Other researchers blame psychological problems such as poor interpersonal and communication skills, as well as other disturbances to personality and psychopathology. Although Eckhardt's research is not designed to investigate one single cause of battering, the study focuses on some pressing and difficult questions facing researchers and practitioners in this area: Can abusive men change their behavior? If so, how and when do these changes occur?

Behavioral change progresses through a series of stages, Eckhardt says. The first, or "pre-contemplative" stage, is one in which men do not even believe that they have done anything wrong. The next, a "contemplative" stage, is when men become aware of the effects of their behavior on others. In the "action" stage men take direct steps to change their abusiveness. Finally comes the "maintenance" stage, in which men attempt to remain nonviolent for the long term. Exit interviews with the men and their partners and criminal record checks conducted six months after treatment ends determine which men have been successful in changing their abusive behavior.

"We want to know if they have learned the skills necessary to respect others' rights and whether we can track those changes over time," Eckhardt says.

Eckhardt believes his research will be completed with definitive results by the end of 2001. "This is such a critical and important social problem," he says. "But I've always been struck by the lack of research on the causes of partner assault and the effectiveness of treatments for abusive men, despite the fact that probably everyone is aware of at least one friend or loved one who has been affected by domestic violence in some way."

Eckhardt earned a Bachelor's degree in psychology from the University of Michigan and received his Ph.D. in Clinical and school psychology from Hofstra University in Hempstead, N.Y. He joined the SMU faculty in 1997 and teaches undergraduate and graduate courses in abnormal psychology, and conducts other funded research projects on alcohol, anger arousal, and aggression.

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**Finding a Voice in Her Roots**

When Barbara Hill-Moore, professor of voice in Meadows School of the Arts, decided to take up a career in singing, she never imagined that it would connect her to her ancestral history.

In 1969 Moore entered the University of Illinois to pursue a Master's degree in teaching. She always expected that she would become a public school teacher, but that all changed when her favorite voice professor and mentor, Bruce Foote, urged her to sing professionally.

"He had a special interest in Negro spirituals, and as one of the few black voice students with similar interests, he urged me to explore this beautiful music that my ancestors grew up singing," Moore says.

Moore began studying English spirituals, but her curiosity took her to South Africa, where she would research and learn the African religious chants and spirituals. "Africa, and particularly South Africa, is a part of the world I didn't know," Moore says. "It's a part of the world rich with
Understanding Consumer Behavior

Consumers often define new products based on prior knowledge of related products. For example, in the early days of word processors, consumers sometimes compared them to typewriters as a starting point for understanding the new concept.

Page Moreau, assistant professor of marketing in Edwin L. Cox School of Business, focuses her research on understanding how consumers' "old" knowledge should affect the marketing of new products.

For her dissertation, which was published in the February 2001 issue of the Journal of Marketing Research, Moreau studied the responses of computer experts and seasoned photographers to the digital camera. "We found that the more camera knowledge people have, the less they liked the digital camera because it displaced their entrenched knowledge," Moreau says. "People with high computer knowledge and low camera knowledge loved it because their computer knowledge helped them understand its benefits."

Moreau built on this research for a second paper, which was published in the March 2001 issue of the Journal of Consumer Research, focusing on the advertising and positioning of new products. She showed separate sets of digital camera advertisements to two groups—one set of ads compared the digital camera to a film-based camera, and the other set likened it to a scanner.

"The people who saw the product advertised to be "like a camera" were much more willing to use it in a variety of situations, they had higher preferences for it, and they were willing to pay more for it," Moreau says.

In her current research, Moreau continues to apply the theoretical framework of analogies. "Now I'm examining how old knowledge can help you create new things," she says.

Moreau placed senior engineering students in groups and asked them to develop a product that would make it easier for commuters to eat while driving. She gave each group different instructions for thinking about the development of this product, encouraging one group to make multiple analogies to other products and another group to consider only one analogy. Directions to the other two groups were divided similarly, except they also were shown examples of existing products, such as a tray, a lunch box, and a cup holder.

"The students who came up with a lot of analogies and had not been shown existing products produced the most creative designs," Moreau says. "The research is showing that if people are encouraged to think about wildly disparate things while considering a new idea, they have a high chance of achieving a creative outcome."

Moreau joined the SMU faculty in 1998 after completing her Ph.D. in marketing at Columbia University. She earned her Bachelor's degree in economics at Davidson College and her M.B.A. at Tulane University.

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Pamela Patton, assistant professor of art history, uses the Meadows Museum collection to teach undergraduates and support thesis development for graduate students. The rare 14th-century Eucharist cabinet shown on these two pages served as the basis for one of her own scholarly articles.
oral art history graduate student Billie Jo Daniels-Breault, selecting a thesis topic was as simple as looking in SMU's own backyard—the Meadows Museum. She was attracted over and over again to a painting in the Meadows collection—Diego Velázquez's "Mył with Tabula Rasa" (1648). To Daniels-Breault, the portrait of the young woman pointing to her tablet conveyed such restrained elegance and delicate, translucent brushwork, she was compelled to investigate when Velázquez painted it, possibly even redating it.

Scholars have written little about the "Mył," painted at the height of the Spanish artist's career. Upon first glance, an observer does not realize her creator labored mainly in the salon realm of Spanish kings. Diego Velázquez is considered one of the greatest painters of the 17th century. One of his portraits (1623-24) of young King Philip IV, who ruled Spain from 1621 to 1665, can be found in the Meadows Museum, as well as his "Portrait of Queen Mariana" (1656), the king's young second wife.

The Velázquez paintings are included in one of the largest and most comprehensive collections of Spanish art outside of Spain. Other major artists in the Meadows collection include Ribera, El Greco, Murillo, Goya, Picasso, and Miró. The collection, originally donated by the late oilman Algur H. Meadows beginning in 1965, now includes 670 paintings, sculpture, and works on paper. They represent the art of Spain from the 10th to the 20th centuries, with particular emphasis on paintings from the country's Renaissance and Baroque periods (1500 to 1800).

Since it opened, the Meadows Museum collection has inspired and enlightened members of the SMU community and thousands of visitors from throughout the world. It also has served as a vast resource for students, not only in art and art history but also in history, psychology, English, and religion, among others. And for scholars of Spanish art, the specialized nature of the collection, appropriate for a southwestern population immersed in Spanish culture and history, has been its greatest attraction and strength.

"Researchers can do great work with reproductions (from slides)," says John Lunsford, director of the Meadows Museum, "but a serious scholar wants to view the original work of art. And they have to come to SMU if they are interested in a certain kind of work," particularly in devotional or religious art, he adds.

One such work is "Acacius and the 10,000 Martyrs on Mount Ararat" (1490), a wood panel from an altarpiece typically produced in central and western Spain at the end of the 15th century, attributed to Francisco or Fernando Gallego. The painting recently traveled with 26 other works on a goodwill mission to Spain to hang in museums in Madrid and Barcelona. Although the Barcelona museum also owns a similar Gallego, that museum's staff declared the Meadows' work to be the superior piece, Lunsford says.

Another rare piece in the Meadows' collection is a 14th-century Catalan Eucharist cabinet, used in connection with the sacrament of communion. It served as the basis for a scholarly article by Pamela Patton, assistant professor of art history and former Meadows Museum curator who uses the collection to teach undergraduates a well as to support thesis development for graduate students. The Catalan cabinet, like many of the works in the Meadows collection, reflects intense religious feelings and the influence of a heavily dominant Catholic Church in Spain. Numerous works are rich in symbolism that tells the story of the church, because few among the general population could then read. The cabinet's function is clear from its lively figurative paintings—to link the theology surrounding the Eucharist with the events of Christian history, such as the Annunciation and the Crucifixion. "It's a very rare object," Patton says. "This is the only one in the country, probably in the Western Hemisphere."
1995 addition to the collection, Luis de Morales’ “Pieta,” provided a thesis topic for an art history graduate student Kelly Chamblee (’96). Morales, also known as “el Divino” (“The Divine One”), was known for his devotional panels. Chamblee found that the lack of documentation on these panels, however, had resulted in confusion over attribution and chronology. She used this version of the “Pieta” (ca. 1560) to explore the relationship of the Meadows panel to the 42 other known versions, mostly scattered throughout Spain and Madrid. This oil on panel features the half-length figure of the Virgin Mary, who tenderly embraces the dead body of her son; the proximity of their faces intensifies the sorrow of the moment. What made the panel especially noteworthy is the elaborate preliminary drawing found beneath the layers of paint. The drawing was revealed under infrared reflectography in the conservation studio of the Kimbell Art Museum in Fort Worth. The underdrawing suggests that the artist may have first worked out this version of his “Pieta” composition on this panel. “It is to be hoped that the arguments presented in this study of the Meadows ‘Pieta’ will stimulate further research and technical study of this artist and his paintings, bringing them the scholarly attention that they so justly deserve,” Chamblee wrote.

Another graduate student, Cindiee Patrick (’00), who received her M.A. in art history in December, used the collection’s “Portrait of the Dwarf Michel” by Juan Carreño de Miranda to focus on the relationship between dwarves and the Habsburg kings in 17th-century Spanish paintings. Although the tradition of dwarf painting had existed for some time at the Spanish court, Velázquez revolutionized dwarf portraiture in the court of Philip IV. Patrick found that Carreño, who served as the court painter to Charles II, Philip’s son, continued that tradition in a similar sympathetic cast.

For her research on the “Sibyl,” Daniels-Breault, visited museums in Madrid and London’s Tate Gallery, which owns Velázquez’s “Venus and Cupid,” painted between 1648 and 1651 during his second trip to Italy. The painterly techniques and brushstrokes are similar to those found in the Meadows’ “Sibyl,” she says. Daniels-Breault believes the artist also painted the “Sibyl” during that period, although the dress on the female figure is found in the classic sibyl types of the Italian High Renaissance, including those depicted by Michelangelo in the Sistine Chapel frescoes that Velázquez had seen during his first trip to Rome in 1629-30.

To support their research, the Art History Department awarded Haakon travel grants to enable Chamblee, Patrick, and Daniels-Breault to travel to Spain and London. “We are proud to be able to award these grants to so many of our graduate students; it is an honor for them,” Patton says. The Meadows Museum has incorporated the students’ research into a handbook of its paintings and sculptures published last year.

The collection provides support to more than art historians, however; artists and art students use the paintings to study physical aspects such as textures, layers, shadings, and tones. “If they are interested in the hand of the artist,” Lunsford says, “they need to see the original work.”

Meadows Professor of Art Laurence Scholder uses the museum’s series of Goya etchings to show his printmaking students how the artist developed his techniques in the late 18th and early 19th centuries. Through his etchings Goya made social and political commentaries on the ills of society in “Los Caprichos” (“The Caprices”), on war in “Los Desastres de la Guerra” (“The Disasters of War”), on bullfighting in “La Tauromaquia,” and on fear and superstition in “Los Disparates” (“The Follies”). Because the prints are sensitive to light, they are seldom displayed in the Meadows galleries. But each...
the museum takes the etchings out of storage and allows Scholder's students to view them up close.

"My classes learn technically how to do anything Goya did," Scholder says. "If his drawing ability rubs off on them, that's pretty cool, too." Scholder also uses other artists' works to help students understand how they developed their approaches to painting. "I want students to put themselves into Velázquez's shoes. To see that the middle tones were painted first, then the darks laid in transparently, all finally, the lights applied opaquely," he says. "You don't get that from a reproduction."

The strength of the Meadows' collection is not only its quality, Lunsford says, but also its ability to interact with other disciplines on campus. Ed Sylvest, associate professor in Perkins School of Theology, relies heavily on the collection when teaching the history of Christianity as it developed in 16th-century Spain, particularly for Protestant students familiar with Hispanic Catholicism. Sylvest incorporates paintings by artists such as El Greco, Murillo, Palomino, Ribera, and Zurbarán in discussions about devotion to the Virgin Mary and the saints in Spain. "I use the collection as a way of opening up students to the spirituality found in the art, what the theological message is," he says. "I conduct devotional exercises with students in the galleries, encouraging them to use the paintings as an occasion for meditation."

In teaching the history of Spanish biblical scholarship, Sylvest often refers to a tempera and oil on wood panel, "The Investiture of Saint Ildefonsus" (1508-14), by Juan de Borja, which also relates to a holding in Perkins School's Bridwell Library — the Complutensian Polyglot Bible. The painting depicts a popular Spanish subject: Saint Ildefonsus, a seventh-century bishop of Toledo, receiving a chap- utable, or bishop's robe, from the Virgin Mary. The kneeling Ildefonsus bears a strong resemblance to the powerful Archbishop Francisco Ximénez de Cisneros, Borja's patron. Ximénez is credited with ordering the scholarly translation of the Complutensian Polyglot Bible, to reconcile the Vulgate text attributed to Saint Jerome with its Hebrew, Greek, and Aramaic sources. In 1999 Meadows Museum and Bridwell Library combined resources to present "Faith in Conflict: Devotional Images and Forbidden Books from Spain's Counter Reformation," featuring holdings from each collection to reveal the complex and powerful forces that helped shape Spanish culture at the dawn of the modern era.

Since Algor Meadows donated the first Spanish paintings to SMU to create the Meadows Museum, the collection has grown in depth and size. The small exhibition and gallery space in its former location at Meadows School of the Arts limited the number of paintings that could be displayed at any one time.

A new Meadows Museum, which opened in March 2001 at Bishop Boulevard and Mockingbird Lane, increases the old museum's size from 11,000 square feet to 26,000 square feet. The expanded exhibition space and special galleries will enable the Meadows Museum to develop "focus exhibits" that will engage scholarly participation from guest curators, Lunsford says. They also will provide additional opportunities to feature more of the Meadows' print collection (in a climatically controlled gallery) and a greater context for works that are seldom displayed. In addition, labels for the works will be printed in English and Spanish to broaden the outreach to the Hispanic and international communities, he adds.

"The new Meadows Museum will allow us to become the university museum we've wanted to be all along," Lunsford says.

Meadows Museum hours are: Mon, Tue, Fri, Sat 10am-5pm; Thu 10am-8pm; Sun 1pm-5pm; Wed closed.

For more information call: 214-768-3166.
America's Most Famous Catholic Moral Theologian Finds a Home at SMU

By Meredith Dickenson

When The New York Times or the ABC News program "Nightline" needs an expert to discuss the latest news coming out of the Vatican in Rome, they often turn to SMU, home of America's best-known dissenting Catholic theologian, Charles Curran.

If the presence of a Roman Catholic priest at a historically Protestant university seems odd, the SMU community has not noticed. The University recruited Curran to campus in 1990 with the offer of a prestigious endowed chair, the Elizabeth Scurlock University Professor of Human Values, which allows Curran to teach across disciplines and gives him wide latitude to travel, lecture, and write. The 66-year-old moral theologian and ethicist, revered on campus for his scholarly reputation, is considered by fellow theologians to be one of the greatest moral theologians of the 20th century.

"Curran is certainly one of the leading teachers and scholars in Christian ethics in North America," says Robin Lovin, dean of SMU's Perkins School of Theology. "Through his many books and his work as a teacher, he has made a whole generation of Protestants more aware of Catholic moral traditions, and he has introduced Catholic scholars to a more ecumenical approach." Curran divides his time between teaching theology students at Perkins and undergraduate students in SMU's Dedman College of Humanities and Sciences.

In the same way that psychiatrists study human emotions, moral theologians like Curran study morality and ethics. "There's a distinction between morality and ethics. Morality is what people do, how they live their lives. Ethics is what I call a second order discipline. You stand back to study morality systematically, reflexively, and analytically," he says.

Historically, the role of moral theologians in the Catholic Church since the 16th century was to train priests to hear confessions, to judge the gravity of sins confessed, and to decide whether to give absolution. This role began to change after the Second Vatican Council, a gathering of Catholic bishops that
Catholic theologian Charles Curran has found a home at SMU since 1996.

more significant for morality than the individual particular act," Curran says.

As Curran sees it, the fault lies with the Catholic church hierarchy, which he says has failed to come to terms with the new moral climate.

"Many Catholics have made their own decisions on these issues and I think that is in many ways good, but it still creates this situation where you have an official teaching here and a dissenting practice there, and a growing gap between them," Curran says. "I think it is an important Catholic issue that obviously has to be dealt with sometime."

Curran's latest book, *The Catholic Moral Tradition: A Synthesis* (Georgetown University Press), is a distillation of his life's work and, as one reviewer wrote, shows that Curran is still "deeply loyal" to a church that has often misunderstood him. *The Catholic Moral Tradition* explores the agreements, disagreements, and major changes in the faith tradition and contrasts these ideas with other approaches by well-known theologians and philosophers, both Catholic and Protestant.

Curran's book is the lens through which he views the Catholic moral tradition. He starts with what he calls "stance," or the way in which an individual views all moral reality. To Curran, stance begins from the Christian perspective, or the belief in the mysteries of creation, sin, incarnation, redemption, and resurrection. Next is his "relationship-responsibility" model for morality, which sees the person "in multiple relationships with God, neighbor, world, and self." Finally, Curran discusses the norms and principles universal to morality, and gives special attention to the virtues that characterize Christians.

"I don't pretend I'm giving a complete catalog or explanation of these things, but I touch on the more fundamental and primary virtues that guide these different relationships," he says.

In addition to teaching and writing, Curran has served as president of three national professional societies: the American Theological Society, the Catholic Theological Society of America, and the Society of Christian Ethics. He also has taught at Cornell University, the University of Southern California, and Auburn University. Among his many honors and awards, Curran is the first recipient of the John Courtney Murray Award for Distinguished Achievement in Theology from the Catholic Theological Society of America, honorary doctorate degrees from the University of Charleston and Concordia University, and was the ABC News "Person of the Week" in August 1986.

Ethics professor William F. May, who served on the search committee that recruited Curran to SMU, says Curran is a "model University citizen," who always is willing to serve on committees and complete his work on time. Most impressive to May, however, is how unaffected Curran is by his fame.

"Charlie has an off-hand, matter-of-fact manner to him. He does not trail his impressive resume behind him or push it in a wheelchair before him," says May, who also is an ethicist of national repute and the Cary M. Maguire Professor of Ethics, the other universitywide distinguished position at SMU.

In the classroom, Curran dresses in lay clothes and is addressed as "Professor Curran" by his students, not "Father Curran." Last year a University committee recognized Curran's contributions to SMU when it awarded him the annual Phi Beta Kappa Perrine Prize for Teaching and Scholarship.

"He embodies the ideal of the excellent teacher and the excellent scholar," says Bonnie Wheeler, associate professor of English and director of SMU's Medieval Studies Program.
By Ellen Mayou

Popular Paleontologist Uses Clues from the Fossil Record to Further Our Understanding of Earth's History
Louis Jacobs is proudly showing visitors through the “Texas Dinosaurs” exhibit at the Dallas Museum of Natural History. “That’s an SMU fossil,” he says, pointing to the skeleton of a small, still-unnamed dinosaur found near Proctor Lake, about 90 miles southwest of Fort Worth. “That’s an SMU fossil,” he says, pointing to a bathtub-sized dinosaur footprint from Glen Rose, Texas.

And on he continues. Perhaps no one has contributed as much to our knowledge of Texas dinosaurs as Lou Jacobs, professor of geological sciences in SMU’s Dedman College and an internationally known vertebrate paleontologist.

But Jacobs’ research goes far beyond dinosaurs. For him, fossils of dinosaurs and other mammals are a means to help us learn more about Earth and life on it. “It’s not only the fossils that are interesting, it is the questions they can answer,” he says.

Jacobs joined the SMU faculty in 1983 after earning his Ph.D. at the University of Arizona and working for world-renowned anthropologist Richard Leakey as head of paleontology for the National Museums of Kenya.

His earliest research, which Jacobs believes may be his most significant, documented changes in fossil mammals in Pakistan and helped relate the history of that country to the history of the rest of the world. The research enabled scholars to document when animals moved from Africa to Asia and to correlate climatic changes with evolutionary changes seen in animals.

“This was a widely recognized study,” says Richard Cifelli, professor of geology at the University of Oklahoma and curator of vertebrate paleontology at the Oklahoma Museum of Natural History. His 1993 book, *Quest for the African Dinosaurs: Ancient Roots of the Modern World*, recounts Jacobs’ search for dinosaur fossils in Kenya, Malawi, and Cameroon. His diaries of the digs introduce nonscientists to the world of paleontology and describe Africa today and as it existed 100 million years ago. The book was reviewed favorably in several publications, including the *Wall Street Journal*.

“Lou broke a lot of new ground in Africa, particularly with his dinosaur work,” says Kay Behrensmeyer, an eminent scientist from the Smithsonian Museum who worked with Jacobs in Africa.

Jacobs is particularly known for his discovery of what is now called Malawisaurus—a plant-eating dinosaur that lived in Malawi 100 million years ago. The elephant-sized Malawisaurus belonged to a family of long-necked sauropod dinosaurs known as titanosaurs that made their way from East Africa to Texas via South America, reaching Big Bend about 70 million years ago. His study of Malawisaurus and its counterparts in Texas have helped trace the roots of some of Texas’ largest dinosaurs.


*Cretaceous Airport* led to Jacobs’ 1998 book, *Lone Star Dinosaurs*, which details some major dinosaur finds by Texas residents. *Lone Star Dinosaurs* was the basis for a museum exhibit that toured the state in 1996. To this day, a week never goes by that Jacobs doesn’t get several calls from people who have found dinosaur fossils in Texas. He remains involved with several digs described in the book, including the biggest dinosaur project ever undertaken in Central Texas—an excavation on a ranch in Hood County that produced the bones of several brontosaur known as Plesurocoelus. These fossils will be included in a new exhibit at the Fort Worth Museum of Science and History.

Texas is a great place to study dinosaurs, Jacobs explains, because dinosaurs from three time periods have been found in three separate areas: the Panhandle, Central Texas, and Big Bend. “Texas was sort of a free-trade zone for the Age of Reptiles,” he says.

Most recently, Jacobs has turned his attention to a limestone quarry north of Jerusalem that has yielded fossils of sharks, turtles, primitive mosasasurs, and plants. In
March 2000 he and several international co-authors published details of an intriguing new species of fossil snake with legs found in the quarry. Fossil snake skeletons are rare finds because their bones usually scatter after the snakes die. This snake is only the third known find of a fossil snake with legs.

Analysis of the fossil snake, which Jacobs estimates lived 95 million years ago, has added to the debate over whether snakes originated on land or in the sea. His snake lived in the sea, and Jacobs believes it may represent the first invasion of the sea by snakes.

His work in Israel will add to developmental and genetic models of how limbs are formed, Jacobs says. His current work – combined with his earlier research in Africa and Texas – also is providing geologic models of how the continents have moved over time. The site north of Jerusalem is similar to areas in Italy, Slovenia, and Croatia, as well as the area around Dallas-Fort Worth International Airport. Jacobs plans to expand his research in Israel to other areas of the Middle East, as well as Bosnia and Slovenia.

Jacobs' contributions to paleontology extend far beyond his own published research. From 1987 through 1999, he served as director of the Shuler Museum of Paleontology, a research collection of fossils located in the basement of Herro Hall. The collection houses from 20,000 to 30,000 specimens, of which about 15,000 are catalogued. Jacobs secured grant money to help organize and update the collection. His research and international profile have brought considerable attention to the collection, visited by dozens of scholars each year. Specimens from the collection are on loan to the Dallas Museum of Natural History and other museums around the world.

Jacobs also is known for the quality of graduate students he trains.

“Lee's students become distinguished scientists almost immediately,” says Lee McAuley, chair of the Department of Geological Sciences at SMU.

His current graduate students include top paleontologists from Africa, Japan, Mexico, and Israel. “What makes us unique is our international perspective and our international network,” Jacobs says. “By the time they finish they have a global network of colleagues and professionals that allows them to continue with international work.”

Elizabeth Gomani ('99) from Malawi had an experience typical of Jacobs' students. While working on her Ph.D. at SMU, Gomani shared an office with students from Japan, Korea, and China. She is now senior paleontologist for the Department of Antiquities in Malawi and is raising funds for science exhibits at a new national cultural center. Gomani is believed to be the only black African woman paleontologist.

Fellow paleontologists also praise Jacobs for his leadership in their profession. Jacobs served as president of the Society of Vertebrate Paleontology from 1996 to 1998 when the organization became embroiled in controversies over the commercialization and sale of fossils.

Jacobs also served as director ad interim of the Dallas Museum of Natural History in 1999 when he helped organize its current "Texas Dinosaurs" exhibit. A copy of the Malavisaurus skeleton that Jacobs found greets visitors as they enter the museum. In January 2000, Jacobs added another responsibility to his already-extensive résumé: president of the Institute for the Study of Earth and Man (see story above).

Jacobs' knowledge of the fossil record makes him a popular speaker on the subject of evolution and creationism. To help put the issue in context, Jacobs teaches a class on "Evolution vs. Creationism as a Public School Issue." The class is full every time he teaches it.

For Jacobs, the issue isn't one of religion versus science. "Science is guided by peers," he says. "Religion is personal. It is wrong to judge the religion of others. It is not wrong to test science."

Jacobs' next project is "Galopping Through Time," a children's book about horses that he is working on with his longtime illustrator, Karen Carr. Like he did with dinosaurs in "Cretaceous Airport," Jacobs plans to use horses as a way to teach children lessons about concepts such as evolution, climate change, genetics, and how bodies function.

"There definitely is a need for books like this," Carr says. "It is so hard to keep up with modern science. Loi is able to put difficult concepts into language anyone can understand. His books appeal to children and adults alike. He's a real Renaissance man."
Assia Bax, Piano, won the top prize in the Leeds International Piano Competition for her performance of Brahms’ No. 1 Piano Concerto in D Minor.

David Binford, Anthropology, received an honorary degree from the University of Lieden in the Netherlands.

Donald Butler, Jerome K. Butler, Amy Evans, and Alireza Khoratzad, Electrical Engineering, were each awarded the 3rd Millennium Medal of the Institute of Electrical and Electronic Engineers (IEEE) in recognition of their outstanding service to the international engineering society.

Jian Chen, Mathematics, was awarded an honorary guest professorship at Central China Normal University and Xi’an Jiaotong University in China.

Pam Coley, Religious Studies, Luigi Manzetti, Political Science, and Marc Simonberg, Law, received the 200 Dedman College Odell Lecture Series Authors’ Awards for outstanding scholarly research. Coley received an award for his book “An Editor’s Mission to the Ills of the King Philip’s War,” Manzetti was honored for his book “ Localization: South American Style,” and Simonberg was recognized for his book “Point of View: A Comparative Analysis.”

Colin E. Curran, the Elizabeth Garlock University Professor of Human Values, won a first place award from the Catholic Press Association for the best book from a small publisher for “The Catholic Moral Tradition Today: A Synthesis” (Georgetown University Press).

David Freidel, Anthropology, received the Premio Gambrinus ‘Giuseppe Mazzotti’ Literary Prize for books on Mountaineering, Exploration, Ecology, and Traditional Arts and Crafts for his book “A Forest of Kings: The Untold Story of the Ancient Maya.”

Robert Hamlson, Psychology, received the Outstanding Research Publication Award from the Board of Directors of the American Association for Marriage and Family Therapy for “Marital Therapy: Qualities in Couples Who Fare Better or Worse in Treatment,” co-authored with Catherine C. Prince and Robert Beavers.

Alice Kendrick, Advertising, received the Carl Rosenfeld Education Prize honoring an educator, writer, or business professional for exceptional contribution to the advancement of the promotional products industry. The award, given by the Advertising Specialty Institute, included a $10,000 prize.

Radoslav Kovacevic, Mechanical Engineering, received the Frederick W. Taylor Research Medal from the Society of Manufacturing Engineers “for significant published research leading to a better understanding of materials, facilities, principles, and their application to improve manufacturing processes.”

William May, Cary M. Maguire Professor of Ethics, has been recognized by the Alumni Board of Yale University with one of the school’s highest honors, the Award for Distinction in Scholarship and Theological Education.

Daniel L. Millimet, Economics, received the Sir Austin Robinson Memorial Prize for best paper presented by a young economist at the Royal Economic Society’s 1999 Annual Conference.

Bijan Mohraz, Mechanical Engineering, was elected to the Board of Governors of the Architectural Engineering Institute of the American Society of Civil Engineers for a three-year term. For the past five years, Mohraz has served as editor of the Journal of Architectural Engineering, a multidisciplinary publication concerned with all aspects of building design.

John Slocum, Organizational Behavior and Business Policy, was appointed editor of the Organizational Dynamics.

Catherine Elizabeth Smith, Theatre, was appointed national coordinator of the Jane Chambers Playwriting Award, a national competition sponsored by the Association for Theatre in Higher Education and Women in Theatre. The award recognizes dramatic writing by women at the student and professional levels with a monetary award and production at the national ATHE conference each August.

Ryszard Stroynowski, Physics, has been named to the leadership of the ATLAS program, one of several components of a large particle accelerator known as the Large Hadron Collider (LHC) being built beneath the ground in Geneva, Switzerland.

Trudy Travis, English, was awarded the South Central Modern Language Association’s Newberry Library Short-Term Research Fellowship for research on Malcolm Cowley and the Viking Portable Library.
In 1999-2000, SMRI received $161,488 for direct and indirect costs of research and sponsored projects, a significant increase over the $106,180,765 received in 1998-1999 and the $9,662,788 received in 1997-1998. A total of 112 awards were made to 81 principal investigators and co-principal investigators.

of the 81 project directors/investigators, 37 received $500,00 or more in aggregate funding as lead researchers. The following list presents these investigators according to the size of the grant received (highest to lowest).


**Pramukh Naik**, Electrical Engineering: $185,977, "Empirical Seismo-Acoustic Studies for Calibration and Identification Capabilities at IMS Array Sites," Defense Threat Reduction Agency (DTRA); $80,000, "Selection and Operation of a Temporary Seismo-Acoustic Array and Analysis of Sources in South Korea – Monitoring the CTBT," DTRA; $82,383, "Installation and Operation of a Temporary Seismograph Array and Analysis of Sources in South Korea – Monitoring the CTBT," DTRA.

**Acoustic Array and Analysis of Sources in South Korea – Monitoring the CTBT," DTRA.**


**Christopher Eckhardt**, Psychology: $225,064, "Stages and Processes of Change and Associated Treatment Outcomes in Partner Assaultive Men," National Institute of Justice; $38,000, "Articulated Cognitive Distortions of Intimidated Individuals During Anger Arousal," Alcoholic Beverage Medical Research Foundation.


**Robin Lovin**, Theology: $207,830, "Program to Enhance Theological Schools Capacities to Prepare Candidates for Congregational Ministry," Lilly Endowment Inc.


John Buynak, Chemistry: $102,564, "Bifunctional Beta-Lactamase Inhibitors to Simultaneously Target Serine and Metallo-beta-Lactamases," Texas Higher Education Coordinating Board; $45,000, "Rational and Combinatorial Approaches to Protease Inhibition," Welch Foundation.

Fred Wendorf, Anthropology: $147,541, "Archaeological Techniques in Pre-Historic Saharan Excavation Program," American Research Center in Egypt Inc.


**FUNDING SOURCES IN 2000 (millions)**

| Corporate | $11,439,507 total |
| Foundations | $1,735,823 |
| State/Local | $1,354,010 |
| Federal | $4,498,580 |

**DISTRIBUTION OF AWARDS**

| Theology | $201,630 |
| Other | $171,808 |
| Meadows | $47,901 |
| Engineering | $3,112,057 |
| Humanities | $3,120,565 |
| Natural Sciences | $6,770,125 |
| Social Sciences | $132,862 |

SMU Researchers Helping Dallas Start-Up Company Develop New Technology

SMU has signed an agreement with a Dallas-based company to make several of its faculty members and facilities available to it in exchange for an equity position in the company and annual research funding.

Photodigm, Inc. is developing a new technology that would enable semiconductor lasers to be manufactured much less expensively. Semiconductor lasers are about the size of a grain of salt and are used in long-haul data transmission. They are also used in consumer electronics such as CD and DVD players.

Currently, the high-end lasers used for telecommunications are difficult and expensive to manufacture. Photodigm believes that its technology can significantly reduce the cost of semiconductor lasers.

The idea for the technology Photodigm is developing came from Gary Evans, a professor of electrical engineering at SMU. Other SMU faculty members involved with the project include electrical engineering professor Jerome Butler and mechanical engineering professor Gerson Hapappana. Several graduate students also have been hired to help conduct research for the company.

"There are tremendous resources at SMU that are enabling us to put together this company much more quickly and cost effectively," says Photodigm President and CEO John Spencer.

Stephen Szyzenda, dean of the SMU School of Engineering, says the Photodigm partnership provides an opportunity for faculty members to be entrepreneurial and still remain in an academic environment.

"The ultimate winners are the students who benefit from world-class faculty who also have contacts in industry," Szyzenda says.

For more information: Gary Evans
gea@smu.edu
www.ensy.smu.edu/~gae/


Margaret Dunham, Computer Science, co-author, "Indexing Valid Time co databases Via B+-Trees," IEEE Transactions on Knowledge and Data Engineering, November/December 1999: 929-947.


Peter Beasecker strives to create a balance between beauty and use in his pottery. The associate professor of art, who teaches ceramics in Meadows School of the Arts, thinks that someone who uses one of his ceramic pieces is paying the highest form of compliment to his work. He creates ewers (vase-shaped pitchers), teapots, plates, and carriers with the idea that their ultimate places are within a domestic setting—on a kitchen counter or dining table. "All my work is functional," Beasecker says. "It’s very important that people use the work, and that it’s accessible for them to use. Something that stimulates the retina and has a role in the tactile world reveals exciting possibilities. Most art is only meant to be looked at." Beasecker, who has taught at SMU since 1992, has received numerous awards, including the Golden Mustang Outstanding Faculty Award in 1997 and a National Endowment for the Arts grant in 1995. His work is included in such collections as the Smithsonian Institution’s Renwick Gallery. Beasecker earned his B.S. at Miami University in Ohio and his M.F.A. at Alfred University in New York.