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Thurtene members Jon Baldwin (center), a history and political science major, and Corey Ryan, an engineering and business major, make coloring fun at the Mathews-Dickey Boys' Club in north St. Louis. Proceeds from the April 23-24 Thurtene Carnival will benefit the girls' program at the club, where students also volunteer as tutors.

Book challenges artist's reputation as lonely genius

Just as the recent conservation of the Sistine Chapel ceiling forever changed Michelangelo's reputation as a poor colorist, a new book may change his image as an anti-social genius.

Sculptor, painter, poet and architect, the quintessential Renaissance man has a reputation as a reclusive, difficult artist who couldn't get along with others.

Not true, said William E. Wallace, Ph.D., associate professor of art history and author of a new book on Michelangelo. In fact, said Wallace, Michelangelo relied heavily on a regular group of workers to help him complete his many artistic undertakings.

"Michelangelo has this image of being a misanthrope and difficult to work with," said Wallace. "This book takes him out of myth, back into reality. He was not an isolated artist, slaving away on a Herculean task, but in fact worked collaboratively with hundreds of people. Many of these people were ones he grew up with all his life."

Wallace's book, titled *Michelangelo at San Lorenzo: The Genius as Entrepreneur*, will be published by Cambridge University Press this month. Michelangelo recently was in the news when the Vatican unveiled the newly cleaned "Last Judgment," the painting on the Sistine Chapel's altar wall on Easter Sunday. The book studies the artist's relations with nearly 300 assistants who worked for him at San Lorenzo, the Medici church in Florence, between 1516 and 1534. It examines the organization and day-to-day operation of the building site, as well as the artist's personal and professional relations with the artisans entrusted with carrying out his designs.

Reputation challenged

A household name even today, Michelangelo is one of the few artists whose individuality has withstood erosion from the sands of time, said Wallace. For hundreds of years, Michelangelo's reputation as a lonely genius has been unchallenged.

"This view prevails, not only in nearly every film and book about Michelangelo, but even in serious scholarship," said Wallace.

But Michelangelo almost was never alone, said Wallace. He had 13 people helping paint the Sistine Chapel ceiling, about 20 helping carve the marble tombs in the Medici Chapel and he employed a work crew of 200 assistants to build the Laurentian Library in Florence. He even lived with two assistants and always had a female housekeeper.

By analyzing more than 600 letters from Michelangelo and 1,600 letters to the artist; hundreds of pages of Michelangelo's personal records; archival material related to his

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Process mapping

University adapts business management technique to education

At Motorola Inc. it used to take 58 days to produce and deliver a beeper. When executives learned that a competitor was doing it in 30 days, the entire company worked to streamline its manufacturing and other processes. Today, the company delivers higher quality beepers to its customers within 48 hours from placement of an order. Surprisingly, the company was able to streamline its processes while dramatically improving quality, increasing profits and expanding its employee base.

In March, members of the Washington University Management Team met with two Motorola representatives to learn more about the company's successful philosophy, and to determine how it might apply in a university setting. Washington University is one of several colleges and universities, including Cornell University and Massachusetts Institute of Technology, that is applying business management techniques to higher education. Many believe some business techniques — like process mapping and an emphasis on the customer, quality and teamwork — can be beneficial in the education realm as well.

"Washington University is not like Motorola," said Chancellor William H. Danforth. "Educating human beings is different than producing beepers or computer chips. We can be inspired by Motorola but our challenge is to use our creativity and imagination to develop our own standards."

By emphasizing quality and cycle time reduction, Motorola has transformed itself from a consumer electronics company with \$290 million in sales and 6,000 employees into a global leader in high-technology commercial and industrial electronics with 1992 sales at \$13.3 billion and more than 100,000 employees. In 1988, Motorola became the first large industrial company to win the U.S. Government's Malcolm Baldrige National Quality Award.

One of Motorola's priorities that is of interest to the University Management Team is the company's practice of process mapping, or analyzing each step involved in a process with an eye toward eliminating redundant or inefficient steps. Each time Motorola mapped a process, it reduced the cycle time by at least 50 percent. In many cases, Motorola was able to reduce cycle

time by 97 percent without compromising quality.

"Reducing cycle time will help the University serve people better," said Charles J. Loew, senior applications consultant at Motorola University. "If you do functions faster, you reduce cost and improve customer satisfaction. If it takes one day to register a student, make it one-tenth of a day."

Reducing cycle time by mapping processes is an involved process that must be embraced by the entire University community, Loew said. To be successful, employees must work across departmental and organizational lines to identify tasks that add no value.

"We have found that 3 to 7 percent of steps in a process add value. That means that 93 to 97 percent of the steps add no value," Loew said. "I don't think your processes are any different."

One of the easiest ways to understand a process is to draw a detailed picture, or flowchart, of each step. Once the process can be seen objectively in the flowchart, improvements and unnecessary steps can be

Continued on page 8

Campus participates in 'Take Your Daughters to Work Day'

On Thursday, April 28, offices, laboratories and classrooms around campus will have a unique group of young visitors. Throughout the day, young daughters will be shadowing their working mothers and fathers, observing, learning and asking questions. All University employees with daughters ages 9 to 15 are encouraged to bring them to work, but should consult with their supervisors before making arrangements.

"Take Your Daughters To Work Day" is designed to give young girls positive messages about work and self-worth. Originally the brainchild of the Ms. Foundation for Women, based in New York City, "Take Your Daugh-

ters to Work Day" officially was brought to Washington University by an informal group that calls itself the "Women Administrators Brown Bag Lunch," or "WABBL," and meets the first Monday of every month.

"Everyone I have talked to about 'Take Your Daughters to Work Day' has been incredibly enthusiastic," said Shirley Baker, dean of University libraries and a WABBL member. "In fact, I was a bit taken aback by the strong reception."

According to the Ms. Foundation, the day was designed to show young girls, especially adolescents who are prone to low self-esteem, the importance of a fulfilling

career. The theory of "Take Your Daughters to Work Day" is that, contrary to what parents might think, children and young adults do pay attention to their elders.

"This will be a great opportunity for young women to see their parents in a different setting, in their work environment, and see our beautiful campus," Baker said.

Daughters and their parents are invited to bring picnic lunches to eat together outside Olin Library (on the Women's Building side).

"This is an exciting opportunity for young women to see the possibilities available to them in higher education," said Provost Edward Macias, Ph.D.

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Medical student launches organization to increase awareness of domestic violence

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Medical Update



Hilarie Cranmer, right, second-year medical student and organizer of Domestic Violence Awareness, listens to domestic violence lobbyist Colleen Coble during a recent symposium at the School of Medicine.

Increasing awareness

Student starts organization that brings attention to domestic violence

Second-year medical student Hilarie H. Cranmer has launched an organization for medical students and healthcare workers in St. Louis to increase domestic violence awareness.

Cranmer said the goals of the organization, called Domestic Violence Awareness or D-VA, are sixfold: To change the educational curriculum at the School of Medicine to include domestic violence in both clinical and psychiatric evaluations; to educate the healthcare community with a symposium on domestic violence that will provide continuing medical education credit; to provide opportunities for medical students to become involved through volunteer work at local shelters for battered women and various Barnes Hospital outpatient facilities;

to develop an up-to-date resource list of local shelters and hotline numbers for victims of domestic violence; and to hold letter-writing campaigns to local, state and federal politicians to increase awareness and provide incentive for the introduction of legislation to reduce domestic violence.

D-VA, along with the American Medical Women's Association and Women in Science & Medicine, recently sponsored a daylong symposium on domestic violence at the medical school. The program's purpose was to teach people how to recognize and assist victims of domestic violence.

Cranmer's interest in domestic violence was sparked after she heard experts discuss the subject at an American Medical Women's Conference last year. She fueled

that interest by serving as a research assistant for an emergency room physician at Boston City Hospital who is studying domestic violence.

Cranmer said faculty and students have been supportive of the group's efforts. Already, several faculty members have agreed to discuss some aspects of domestic violence in their lectures to first- and second-year medical students. Cranmer now is trying to get students involved in serving victims through volunteer work.

"Our goal is to provide education for students long before their first year of residency, the time typically reserved for education in rape, abuse and battering," she said.

For more information about the program, call 362-8541.

Goldberg named to Howard Hughes Medical Institute

Daniel E. Goldberg, M.D., Ph.D., assistant professor of medicine and molecular microbiology, is Washington University's newest member of the prestigious Howard Hughes Medical Institute.

The institute recently selected 44 researchers from a pool of 285 nominees in a national competition. More than 200 institutions were invited to nominate scientists. "A panel of distinguished experts then helped us select these 44 scientists as being likely to make significant advances in



Daniel Goldberg

biomedical research and to develop new approaches to overcoming diseases," said Purnell W. Choppin, M.D., president of Howard Hughes Medical Institute in Bethesda, Md.

Clarification

In the March 31 Record, a photo caption said the recent Health & Science Career Fair was sponsored by the School of Medicine and the St. Louis City/County School Partnership Program. Specifically, the Office of Minority Student Affairs at the School of Medicine was a co-sponsor.

Goldberg specializes in the molecular biology and biochemistry of parasites, *Plasmodium falciparum*, which causes malaria, and *Ascaris suum*, a large roundworm that causes ascariasis. His work on *Plasmodium falciparum* focuses on how the parasite is able to devour massive amounts of human hemoglobin in infected patients. Goldberg's research has revealed that the parasite uses a digestive protein, an aspartic protease, to destroy the hemoglobin molecule by cleaving it in a strategic location, making it easier to unravel. His group has found a compound that blocks the ability of *Plasmodium falciparum* to cleave hemoglobin and causes the parasite to starve to death. Goldberg said he is hopeful that this compound can be developed into a new antimalaria treatment.

Ascariasis is an intestinal illness that

afflicts more than one billion humans worldwide. Goldberg has found that *Ascaris suum* makes a hemoglobin that binds oxygen about 25,000 times more avidly than does human hemoglobin. His group has purified the hemoglobin and cloned the gene. Recently, Goldberg discovered that the oxygen avidity is due to a single hydroxyl group on the hemoglobin molecule. Goldberg has proposed that the hemoglobin acts as an enzyme and plays a key role in the biosynthesis of cholesterol in *Ascaris suum*.

Goldberg joins a Washington University/Howard Hughes Medical Institute team comprised of Andrew Chan, M.D., Ph.D.; David D. Chaplin, M.D., Ph.D.; Stanley J. Korsmeyer, M.D.; Dennis Y. Loh, M.D.; J. Evan Sadler, M.D., Ph.D.; and Matthew L. Thomas, Ph.D.

Volunteers needed for menopause study

School of Medicine researchers are seeking volunteers for a study about how menopause affects women's lives.

Principal investigator Donna B. Jeffe, Ph.D., a postdoctoral fellow at Washington University's Center for Health Behavior Research, is seeking postmenopausal women ages 40-60. The study will investigate social and psychological aspects of participants' menopausal experiences, especially in relation to whether they have used hormone replacement therapy.

Jeffe said little is understood about how

women experience and cope with various changes during the menopausal transition. "During this period of a woman's life, changes are taking place, not only in her body but also, very likely, in her family or work situations. Until recently, very few studies have dealt with this issue," she explained.

The study will consist of a confidential interview and questionnaire. All postmenopausal women within the age range, whether their menopause was natural or surgical, are eligible to participate in this study.

For more information, call 286-1900.

Ronald Breslow to give Oliver H. Lowry Lecture

Ronald Breslow, Ph.D., will deliver the 17th annual Oliver H. Lowry Lecture in Pharmacology on Thursday, April 21, at the School of Medicine. Breslow is the Samuel Latham Mitchell Professor of Chemistry and University Professor in the Department of Chemistry at Columbia University in New York City. The lecture, which is open to the public, will begin at 4 p.m. in the Carl V. Moore Auditorium, 660 S. Euclid Ave.

Breslow, who coined the term "biomimetic," has made numerous fundamental contributions to organic and bio-organic chemistry. He is one of seven University Professors at Columbia University and has studied with R.B. Woodward at Harvard University and Lord Todd at Cambridge University. His lecture is titled "Two is Better Than One in Binding, Catalysis and Chemotherapy."

Breslow has worked on fundamental aspects of chemical structures and mechanisms, and his recent work has focused on the synthesis and study of molecules that imitate the action of enzymes. This work has included the development of artificial enzymes and a new group of chemical agents with potential use in cancer chemotherapy.

Breslow, author of more than 300 scientific publications, is a member of the National Academy of Sciences and the American Philosophical Society. He has been chairman of the board of scientific advisers to the Alfred P. Sloan Foundation and is a member of Rockefeller University's board of trustees. He also received the U.S. National Medal of Science.

The Department of Molecular Biology and Pharmacology sponsors the lecture to honor Oliver H. Lowry, M.D., Ph.D., distinguished professor emeritus and lecturer. Lowry served as head of the department from 1947-76 and as dean of the medical school from 1955-58. He also served as acting head of the department from 1989-90.

Lowry is an internationally renowned biochemist who pioneered development of sophisticated analytic techniques that allow measurement of the activities of enzymes and the levels of their substrates and products in a single cell. The ultrasensitive methods have provided a number of insights about the regulation of metabolism in a variety of differentiating and differentiated cell types.

For more information, call 362-7053.

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Washington
WASHINGTON UNIVERSITY IN ST. LOUIS

Washington People

Levin helps students down rocky paths

Prehistoric mastodons come to life on the chalkboards of a classroom in Wilson Hall. A few miles away, outcroppings of rock along Interstate 44 tell of a time when the area was a warm inland seaway. With a piece of chalk and a metal pick, geology professor Harold Levin, Ph.D., has given countless undergraduate students a glimpse of the earth and its life millions of years ago.

"It's a typical spring day in a classroom in Wilson and Hal is drawing an early dinosaur or other reptile on the board and the whole room suddenly comes alive," remembered Michael Smith, Ph.D., a former graduate student who now teaches geology at the University of North Carolina-Wilmington. "If I could do it all over again, I would have videotaped his entire board presentation of his 'Life Through Time' course."

In the classroom, Levin gives students a glimpse into the prehistoric past. In the office of the Dean of the College of Arts and Sciences, where Levin spends the second half of his days, he gives a different group of undergraduates a glimpse into their not-too-distant futures. As associate dean, Levin helps pre-medical students pursue their dreams of becoming doctors.

When he assumed the deanship 17 years ago, the geologist worried he'd lose touch with his field and eventually "wouldn't know a rock from a rooster." Admittedly much more interested in coccolithophorids than cocks, Levin has managed to remain

on the cutting edge of geological studies by writing textbooks, which have been used by undergraduate geology students in universities throughout the country since 1969. In his free time, he sculpts in clay and sketches in pen and ink.

In July, Levin, who chaired the Department of Earth and Planetary Sciences from 1973 to 1976, plans to return to the geology classroom and teaching, his real love, full time, ending an era during which he helped thousands of pre-medical students at Washington University down the sometimes rocky path to a career in medicine.

"The administration was looking for someone with patience to help pre-med students. These students are under the gun for three or four years yet they don't know if they'll be successful in the end," Levin said. "Giving advice is one of the biggest components of what I do in the college office. I get hundreds of questions, like 'I'm from Kansas City; I have a 3.4 grade point average, where should I apply? What schools have good M.D./Ph.D. programs?'"

In anticipation of such questions, Levin meticulously researches every medical school in the country. He knows the character or "personality" of each school and its requirements for grades, Medical College Admission Test (MCAT) scores, geographic distribution of applicants, required courses and other requirements. With Levin's help, Washington University has had noteworthy success in medical school placement. In the past five years, about 72 percent of Washington's first-time applicants were accepted to medical school. The national average is about 36 percent. Levin attributes the University's placement success to its strong science curriculum.

Amy Sullivan, a senior pre-medical student, said Levin's guidance has been invaluable.

"He is so approachable and answers all my questions," Sullivan said. Sullivan was one of 21 undergraduate University students to be accepted to Washington University's School of Medicine this year.

"I enjoy just getting to know the students," Levin said. "The fun part is when they get accepted to their first choice. The hardest part is working with students who don't get accepted and feel that their hopes for the future are shattered. They ask me 'What do I do now?' It is also difficult to deal with the students who don't really have the credentials to get into medical school in the first place. I encourage them to set alternate goals, just in case."

Ethel Hochberg has been Levin's administrative secretary in the College of Arts and Sciences for 13 years. In that time, she said she has watched Levin interact with thousands of pre-med students, many of whom race to the office

to hug her and shake Levin's hand when they find out they've been accepted into medical school.

Despite current uncertainties in the field of healthcare, Levin said the medical profession always will be a natural draw for bright undergraduate students ... and their parents.

"At last count, we had 1,013 pre-meds. That has risen over the past three years, not just at Washington University but everywhere," Levin said. "Medicine is still viewed by parents and students as a profession that will be financially secure and has status in the community, even though there's a big question mark about Clinton's healthcare reform."

The science of geology hooked Levin, a St. Louis native, as an undergraduate at the University of Missouri-Columbia in the 1940s. There, he was inspired by an excellent profes-

most ancient in the state. Then, as you drive toward St. Louis, you go through progressively younger sections of sedimentary strata until you come to Washington University, which is underlain by rock that is a mere 300 million years old."

Missouri roadcuts and stream beds are a treasure trove of geologic information. Interstate 44 is Levin's favorite and he often takes his students on drives to Pacific where, unlike most motorists, their eyes are trained to the rocky outcroppings where layers of rock tell of a history that is hundreds of millions of years old.

Undergraduate students find his enthusiasm contagious. For the second time, the Council of Students of Arts and Sciences awarded "Doc" its outstanding teaching award last month, which he adds to an Alumni Associated Faculty

Award for excellence in teaching.

"Hal is a natural teacher. I know that because my wife took a class from him as an undergraduate and nearly became a geologist herself," said Ian Duncan, Ph.D., a former geology professor at Washington University, now a geologist with the Virginia Geological Survey. "He has a wonderful, infectious enthusiasm and injects a sense of humor in the classroom, which is very effective but not everyone can do it."

Ray Arvidson, Ph.D., chair of the Department of Earth and Planetary Sciences, strongly supports the professor's return to teaching full time.

"Hal is very important to our department, particularly in teaching and specifically in teaching undergraduates," Arvidson said. "In fact, he is so important to this department that I told the administration that we needed him here more, beginning as soon as possible."

Levin said he has always wanted to teach.

"Teaching is a real love for me. I was looking for a teaching job soon after I had completed a few years working as a petroleum geologist. I guess they liked me here as a Ph.D. and decided to offer me a position," Levin said. "Geology really is a very fast-moving field these days. This makes it necessary to continuously update and revise last year's lectures and laboratory studies. Last year's lecture notes are usually already out of date. Every time new research tools are developed, it increases the number of things you can look at, discover and talk about."

To keep up with a rapidly changing science, Levin has written seven undergraduate-level geology textbooks in the evenings. Some of these textbooks are in their fifth edition.

"Hal's textbooks are extraordinary; some people believe they are the best in physical and historical geology," Arvidson said. "Like his presentations, his textbooks are well-organized, up-to-date and well-illustrated. What's extraordinary is that he was able to do all this while spending half his time in the dean's office."

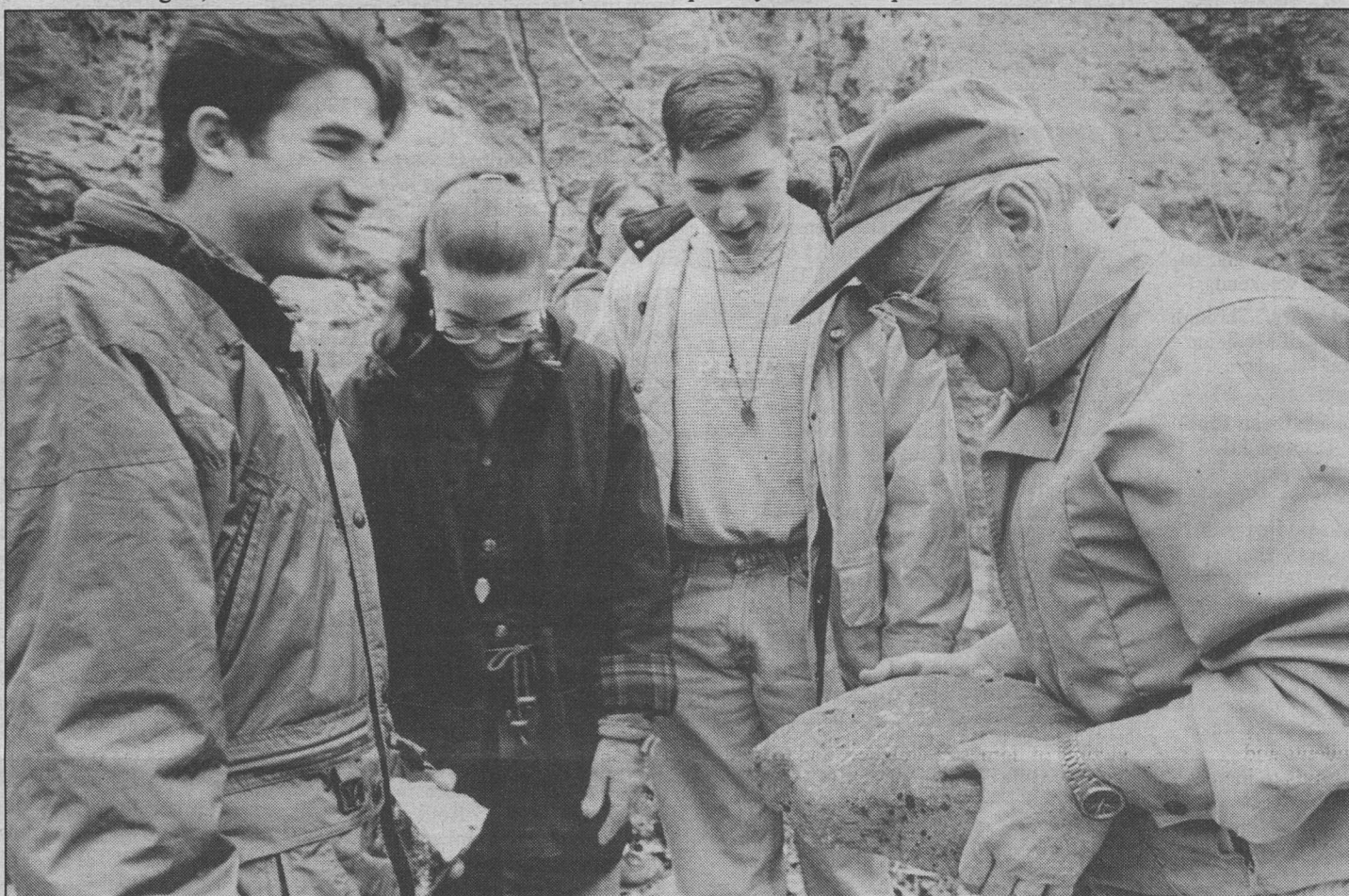
Smith wrote the instructor's manual that accompanies Levin's popular textbook "The Earth Through Time." He says some of Levin's textbooks, especially those dealing with historic geology, are among the best of their genre, remarkable for their breadth of information, clear writing and illustrations, most of which are Levin's own sketches. Smith calls them "works of art" and has decorated his office at the University of North Carolina with his favorite professor's pencil drawings.

"There are three or four people I've met in my life who stand out. Hal is one," Smith said. "He has experienced everything in geology and he still has such an interest in his subject; he never stops asking 'why?' He really has almost boyish enthusiasm. Whenever we talk, we talk about neat things."

A father of three, Levin used to take his now-grown children on "digs" and on field trips with his students, but none followed in his footsteps; two are journalists, one is an attorney. His wife, Kay, recently retired as a dental-surgical technician. Levin acknowledges his influence on countless budding geologists and physicians with a modest grin. His colleague, Duncan, is more straightforward.

"His students all call him 'Doc.' When someone on the faculty has a nickname like that from the students, it's a sign of the greatest respect."

— Susannah Webb



Geologist Harold Levin, Ph.D., leads students on a field trip. Left to right: First-year student Robert Holz, senior Elizabeth Monika, junior Jared Corsi and Levin.

"His students all call him 'Doc' ... it's a sign of the greatest respect."

— Ian Duncan

sor, interesting course material and opportunities for field study. After earning a master's degree in geology at Columbia, Levin signed on with the Army Corps of Engineers for several years, then came to Washington University, where he earned a doctorate in paleontology in 1956.

For the next six years, Levin worked as a research geologist and paleontologist with Standard Oil Co. in California. He specialized in the general area of micropaleontology, specifically the study of fossil and living calcareous oceanic phytoplankton known as coccolithophorids and protozoans called foraminifers. His research efforts were directed to increase the use of these microscopic fossils in dating and correlating rock, which contributes to a better understanding of events and conditions in the geologic past. At Standard Oil, Levin used his knowledge of sedimentology and paleontology to help locate petroleum and natural gas hidden in subsurface rock layers.

"Employment in resource geology is a boom and bust situation," Smith said. "Hal has been through several cycles, as a petroleum geologist, researcher, geology professor and chair of the department. He has experienced everything but still, when a lot of other geologists get frustrated, he stays enthusiastic."

From a geologist's point of view, California is one of the most exciting places on earth. Two great tectonic plates are coming together on the Pacific side of the state, causing a 600-mile break in the earth's crust, called the San Andreas fault. But Levin said Missouri also has much to offer in the field of geology, which is one of many reasons why Levin readily accepted an offer to teach geology at Washington University.

"California is far more complex than Missouri, but geologically, Missouri is kind of neat," Levin said. "There's a full range of rock types here. In St. Francois County, the granite and volcanic rocks are as old as 1.3 billion years, the

Calendar

April 21-30



Exhibitions

"Caje '94: America's Cultural Diversity," a print exhibit by Jeffrey Sipple. Through April 30. Sipple is an artist and director of education at Tamarind Institute, U. of Mexico, Albuquerque. Exhibit is held in collaboration with the School of Fine Arts. Center of Contemporary Arts, 524 Trinity Ave. 935-6571 or 725-6555.

"Master of Fine Arts I." Features creations by master of fine arts students. Through April 24. Gallery of Art, upper gallery, Steinberg Hall. Hours: 10 a.m.-5 p.m. weekdays; 1-5 p.m. weekends. 935-5490.

"Master of Fine Arts II." Features creations by master of fine arts students. (Opening: 5-7 p.m. April 29.) Through May 8. Gallery of Art, upper gallery, Steinberg Hall. Hours: 10 a.m.-5 p.m. weekdays; 1-5 p.m. weekends.

"Paracelsus, Five Hundred Years." Through July 15. Glaser Gallery, School of Medicine Library. Hours: 9 a.m.-9 p.m. weekdays; 1-5 p.m. weekends. 362-7080.

"The Authenticated Word: Victorian Illustrated Books, 1820-1900." Through July 1. Olin Library, Special Collections, level five. Hours: 8:30 a.m.-5 p.m. weekdays. 935-5495.

"Core Show." Features works by first-year and sophomore art students. April 29 through May 22. Bixby Gallery, Bixby Hall. Hours: 10 a.m.-4 p.m. weekdays; 1-5 p.m. weekends. 935-6597.



Films

Thursday, April 21

7 and 9 p.m. Filmboard Foreign Series. "Berlin: Symphony of a City" (1927, B&W) and "Seven Days to Remember" (1969, B&W), both in Czech with English subtitles. Room 100 Brown Hall. Cost: \$3. **For 24-hour Filmboard hotline, call 935-5983.**

Friday, April 22

7 and 9:30 p.m. Filmboard Feature Series. "The Muppet Movie" (1979). (Also April 23, same times, and April 24 at 7 p.m.) Room 100 Brown Hall. Cost: \$3.

Midnight. Filmboard Midnight Series. "The Dark Crystal" (1982). (Also April 23, same time, and April 24 at 9:30 p.m.) Room 100 Brown Hall. Cost: \$3.

Tuesday, April 26

7 p.m. Japanese Film Series. "A Taxing Woman" (1987), with English subtitles. Sponsored by the Dept. of Asian and Near Eastern Languages and Literatures. Room 219 South Ridgley Hall. 935-5156.

Calendar guidelines

Events sponsored by the University — its departments, schools, centers, organizations and its recognized student organizations — are published in the Calendar. All events are free and open to the public, unless otherwise noted.

Calendar submissions should state time, date, place, sponsor, title of event, name of speaker(s) and affiliation, and admission cost. Quality promotional photographs with descriptions are welcome. Send items to Judy Ruhland at Box 1070 (or via fax: 935-4259). Submission forms are available by calling 935-4926.

The deadline for all entries is noon Tuesday one week prior to publication. Late entries will not be printed. The Record is printed every Thursday during the school year, except holidays, and monthly during the summer. If you are uncertain about a deadline, holiday schedule, or any other information, please call 935-4926.

Wednesday, April 27

7 and 9 p.m. Filmboard Foreign Series. "Pepele Moko" (1937, B&W), in French with English subtitles. (Also April 28, same times.) Room 100 Brown Hall. Cost: \$3.

Friday, April 29

6, 8 and 10 p.m. Filmboard Feature Series. "Reality Bites." (Also April 30, same times.) Room 100 Brown Hall. Cost: \$3.



Lectures

Thursday, April 21

Noon. Cell biology seminar. "Transport Functions of the P-glycoprotein in Cancer Cells," Luis Reuss, prof. and chair, Dept. of Physiology and Biophysics, U. of Texas Medical Branch, Galveston. Room 423 McDonnell Medical Sciences Bldg.

Noon. Genetics seminar. "Systematic Analysis of the Yeast Genome," Mark Johnson, assoc. prof., Dept. of Genetics. Room 816 McDonnell Medical Sciences Bldg.

Noon. Pediatric research seminar. "Gene Transfer to the Fetal and Neonatal Lung," Paul B. McCray Jr., asst. prof. of pediatrics, Pulmonary Division, U. of Iowa, Iowa City. Third Floor Aud., St. Louis Children's Hospital. 454-6128.

1:10 p.m. Social work lecture. "Social Policy Based on Savings: The Central Provident Fund of Singapore," Michael Sherraden, Benjamin E. Youngdahl Professor of Social Development. Brown Hall Lounge. 935-4909.

4 p.m. Architecture lecture. "Environmental Issues in Architecture," Peter Raven, Engelmann Professor of Botany and director, Missouri Botanical Garden. Steinberg Hall Aud. 935-6200.

4 p.m. Chemistry seminar. "Polymers and Organic Synthesis Using Carbines Complexed to Transition Metals," Robert H. Grubbs, prof. of chemistry, California Institute of Technology, Pasadena. Room 311 McMillen Lab.

4 p.m. Earth and planetary sciences colloquium. "Patterns of Biogeography and Evolution: Examples From Dinosaurs and Mammals," Louis L. Jacobs, prof., Dept. of Geological Sciences, Southern Methodist U., Dallas, Texas. Room 362 McDonnell Hall.

4:15 p.m. Philosophy, Neuroscience and Psychology (PNP) colloquium. "Language Learning: How Might Children Do The Impossible?" Morten Christiansen, McDonnell postdoctoral fellow. Women's Bldg. Lounge.

4:15 p.m. Third Annual Thomas H. Eliot Memorial lecture. "Politics of American Discontent," Gordon S. Black, chairman and CEO, Gordon S. Black Corp., Rochester, N.Y. Room 200 Eliot Hall. 935-5810.

Friday, April 22

9:15 a.m. Seventh Ben Abelson Memorial Lecture. "The Impact of Healthcare Reform on Pediatrics: Where Are We? Who Will Decide?" Herbert T. Abelson, prof. and chair, Dept. of Pediatrics, U. of Washington, Seattle, and pediatrician-in-chief, Children's Hospital and Medical Center, Seattle. Clopton Aud., 4950 Children's Place.

10 a.m. Philosophy colloquium. "Neofregean Arguments for Senses," John Biro, prof. and chair, Dept. of Philosophy, U. of Florida, Gainesville. Room 30 January Hall.

Noon. Cell biology seminar. "Cell Biology of Listeriosis," Emil R. Unanue, Edward Mallinckrodt Professor and head, Dept. of Pathology. Room 423 McDonnell Medical Sciences Bldg. 362-6950.

3:30 p.m. Philosophy colloquium. "Oskar Morgenstern's Contributions to Economic Methodology," Longxiang Song, graduate student, Dept. of Philosophy. Women's Bldg. Lounge. 935-6670.

4 p.m. Microbial pathogenesis seminar. "The Interaction of Yersinia With Mammalian Cells," James Bliska, asst. prof., Dept. of Microbiology, State U. of New York, Stony Brook. Room 775 McDonnell Medical Sciences Bldg.

4 p.m. Music lecture. "The Musical Meaning of Schoenberg's Will," Severine Neff, prof. of music theory, U. of Cincinnati College Conservatory of Music. Room 8 Blewett Hall.

Monday, April 25

2 p.m. Fifth Annual Zaborsky Lecture Series. "Smart Materials in Active Control of Noise," H. Thomas Banks, prof. of mathematics and director, Center for Research in Scientific Computation, North Carolina State U., Raleigh. Sponsored by Dept. of Systems Science and Mathematics. (Series continues April 26 and 27. See respective calendar items.) Room 101 Lopata Hall. 935-6001.

3:15 p.m. Social work seminar. "Findings From the Ontario Child Health Study: Implications for Child Mental Health and Social Services," Dan Offord, prof., Dept. of Child Psychiatry, McMaster U., Ontario, Canada. Second Floor Conference Room, 1130 S. Hampton Ave. 935-5741.

4 p.m. Biology seminar. "Organization and Evolution of Amphidiploid Brassica Genomes," Tom Osborn, prof., Dept. of Agronomy, U. of Wisconsin, Madison. Room 322 Rebstock Hall.

Tuesday, April 26

9 a.m. Samuel B. Guze Lecture. "Child Mental Disorders: Lowering the Burden of Suffering — Problems and Prospects," David Offord, prof., Dept. of Child Psychiatry, McMaster U., Ontario, Canada. Sponsored by Dept. of Psychiatry. Clopton Aud., 4950 Children's Place. 362-7772.

2:30 p.m. Fifth Annual Zaborsky Lecture Series. "Nondestructive Evaluation in Smart Material Structures," H. Thomas Banks, prof. of mathematics and director, Center for Research in Scientific Computation, North Carolina State U., Raleigh. Sponsored by Dept. of Systems Science and Mathematics. (Series continues April 27. See calendar item.) Room 162 McDonnell Medical Sciences Bldg. 935-6001.

4 p.m. Molecular microbiology seminar. "Regulation of Gene Expression by Export of an Anti-sigma Factor," Kelly Hughes, asst. prof., Dept. of Microbiology, U. of Washington, Seattle. Erlanger Aud., McDonnell Medical Sciences Bldg. (Refreshments: 3:45 p.m.)

5:05 p.m. Central Institute for the Deaf Seminar on Progressive Sensory Loss. "Visual and Auditory Impairments of Usher's Syndrome," with Martin S. Silverman, asst. prof., depts. of Anatomy and Neurobiology and Ophthalmology and Visual Sciences, James D. Miller, research prof., Dept. of Otolaryngology, and Virginia Jenison, clinical instructor, Dept. of Otolaryngology. Second Floor Aud., Central Institute for the Deaf. 652-3200, ext. 671.

Wednesday, April 27

7:30 a.m. Obstetrics and Gynecology Grand Rounds. "Ectopic Pregnancy: New Approaches and Treatment Success," John Salinas, chief resident, Dept. of Obstetrics and Gynecology. Clopton Aud., 4950 Children's Place. 362-3122.

11 a.m. Assembly Series Omicron Delta Kappa Honors Lecture. "Public Affairs, Public Policy and American Society," George Will, political columnist, author and television news analyst for the Capitol Cities/ABC News Television Network Group. Bring University ID. Graham Chapel. 935-5285.

1 p.m. Fifth Annual Zaborsky Lecture Series. "Estimation Techniques for Size Structured Population Models," H. Thomas Banks, prof. of mathematics and director, Center for Research in Scientific Computation, North Carolina State U., Raleigh. Sponsored by Dept. of Systems Science and Mathematics. Room 101 Lopata Hall. 935-6001.

4 p.m. Biochemistry and Molecular Biophysics 28th Shaffer Lecture. "How DNA Moves Through Gels in Electrophoresis," Bruno H. Zimm, prof., Dept. of Chemistry, U. of California, San Diego. Moore Aud., 4580 Scott Ave. (Refreshments: 3:45 p.m.) 362-0261.

4 p.m. Physics colloquium. "Interfacial Pattern Formation — Successes and Challenges," Herbert Levine, prof., Dept. of Physics, U. of Southern California, San Diego. Room 204 Crow Hall.

4 p.m. Women's studies lecture. "Dyke Ideas: Process, Politics, Daily Life," Joyce Trebilcock, assoc. prof. of philosophy and women's studies and former coordinator, Women's Studies Program. Trebilcock will discuss her new book, *Dyke Ideas*. (Retirement celebration will follow.) Women's Bldg. Lounge. 935-5102.

Thursday, April 28

Noon. Chemistry seminar. "Chemical Games With Molecular Footballs, Darts and Paddlewheels," John G. Verdake, prof. of chemistry, Iowa State U., Ames. Room 311 McMillen Lab. 935-6530.

Noon. Genetics seminar. "Subcellular Localization of Myofilament and Cytoskeletal Proteins During *C. elegans* Embryogenesis," Robert Waterston, prof. and acting head, Dept. of Genetics and assoc. prof., Dept. of Anatomy and Neurobiology. Room 816 McDonnell Medical Sciences Bldg. 362-7072.

Noon. Pediatric research seminar. "Wilson's Disease," Jonathan D. Gitlin, assoc. prof., depts. of Pathology and Pediatrics. Third Floor Aud., St. Louis Children's Hospital. 454-2713.

4 p.m. Chemistry seminar. "Solid-state NMR for Measuring Structure and Dynamics in Nucleic Acids," Gary P. Drobny, prof. of chemistry, U. of Washington, Seattle. Room 311 McMillen Lab.

4 p.m. Earth and Planetary Sciences Carl Tolman Colloquium. "Regional Deep Crustal Fluid Action and Its Relation to the Exhumation of the Limpopo Granulite Terrane," Dirk van Reenen, prof., Dept. of Geology, Rand Afrikaans U., South Africa. Room 362 McDonnell Hall. 935-5610.

4:30 p.m. Math colloquium. "Harmonic Polynomials," Shelton Axler, prof. of mathematics, Michigan State U., East Lansing. Room 199 Cupples I Hall.

7 p.m. Assembly Series film and discussion. "Introduction to 'Gun Crazy,'" a film directed by Joseph Lewis, well-known film director from classical Hollywood. Part of the 1994 Saint Louis Film Festival. Shady Oak Ciné, 7630 Forsyth Blvd. Cost: \$5.50; free for undergraduates with student ID. 935-5285.

Friday, April 29

11 a.m. Assembly Series informal discussion. Hollywood film director Joseph Lewis will discuss his film "Gun Crazy." Lambert Lounge, Room 303 Mallinckrodt Center.

3 p.m. Math seminar. Title to be announced. Faruk Abi Khuzam, prof. of mathematics, American U. of Beirut, Lebanon, and Purdue U., West Lafayette, Ind. Room 199 Cupples I Hall. 935-6726.

4 p.m. Annual Erlanger-Gasser lecture. "Protein Phosphorylation Cascades and Growth Factor Signaling," Edwin G. Krebs, prof. emeritus, Dept. of Pharmacology, U. of Washington, Seattle, and senior investigator emeritus, Howard Hughes Medical Institute, Bethesda, Md. Sponsored by Dept. of Cell Biology and Physiology. Moore Aud., 4580 Scott Ave. 362-6950.

4 p.m. Microbial pathogenesis seminar. "Pilus Biogenesis in *Neisseria Gonorrhoeae* and Expression of Related Phenotypes," Michael Koomey, asst. prof., Dept. of Microbiology and Immunology, U. of Michigan, Ann Arbor. Room 775 McDonnell Medical Sciences Bldg. (Refreshments: 3:45 p.m.)



Music

Thursday April 21

8 p.m. Jazz concert. The Vocal Jazz Ensemble joins Uncle Albert, a blues ensemble, in a performance directed by Fred Binkholder, choral director, Dept. of Music. Graham Chapel. 935-5581.

Sunday, April 24

2:30 p.m. Fourth Annual Chancellor's Concert. Music by the University's Symphony Orchestra includes "Symphony in b minor, Wq 182/5" by C.P.E. Bach, conducted by Elizabeth Macdonald, visiting artist in music and director of string ensembles, and "Prélude à l'après-midi d'un faune" by C. Debussy and "Symphony No. 5 in d minor, Op. 47" by D. Shostakovich, both conducted by Dan Presgrave, instrumental coordinator and lecturer in music. Saint Louis Art Museum Theatre. 935-5581.

8 p.m. Graduate voice recital. Featured soloist is soprano Jeanette de Patie, graduate

student, Dept. of Music, accompanied by Gail Andrews, vocal coach and accompanist. Program includes the music of G. Handel, W. Mozart, A. Roussel, R. Strauss and A. Fletcher. Graham Chapel. 935-5581.

Tuesday, April 26

8 p.m. Flute recital. Featured flutist is senior Cheryl Gooden. Program includes the music of W. Mozart, S. Prokofiev, J. Ilbert, H. Dutilleux, P. Desportes and J. Françaix. Graham Chapel. 935-5581.



Performances

Friday, April 22

8 p.m. Edison Theatre "OVATIONS!" Series presentation. The David Dorfman Dance Company presents a new work called "Out of Season," featuring St. Louis athletes. (Also April 23, same time, and April 24 at 2 p.m.) Edison Theatre. Cost: \$20 for the general public; \$15 for senior citizens and WU faculty and staff; and \$10 for students. 935-6543.

Thursday, April 28

8 p.m. A.E. Hotchner Student Playwriting Competition. A premiere performance of the winning plays will be presented by the Performing Arts Dept. (Also April 29 and 30, same time.) Drama Studio, Room 208 Mallinckrodt Center. Cost: \$7 for the general public; \$5 for senior citizens and WU faculty and staff; and \$5 for students. 935-6543.



Miscellany

Saturday, April 23

8:30 a.m.-4 p.m. Office of Continuing Medical Education seminar. "Recent Advances in Infectious Diseases." Introduction by Lawrence D. Gelb, assoc. prof., depts. of Medicine and Molecular Microbiology. Ritz-Carlton Hotel, 100 Carondelet Plaza. For schedule and cost info., call 362-6893.

10:45 a.m.-8 p.m. Thurtene Carnival. Features a variety of entertainment, food, games, rides and fun for all ages. (Continues April 24, 11 a.m.-8 p.m.) Carnival

proceeds benefit the girls' program of the Mathews-Dickey Boys' Club. Campus parking lot, Millbrook and Skinker boulevards. 935-2350.

Monday, April 25

5 p.m. Adult tennis lessons. Mondays and Wednesdays through May 23. Session I, for beginning players, is from 5:15 to 6 p.m. Session II, for intermediate players, is from 6:15 to 7 p.m. Sessions limited to 20 participants. Register at beginning of sessions. Tao Tennis Center. Cost: \$50. 935-5220.

7-10 p.m. Office of Continuing Medical Education seminar. "Internal Medicine Review." The topic is dermatology, with Karen E. Forsman, instructor, Dept. of Medicine. Steinberg Amphitheatre, Jewish Hospital. For schedules and cost info., call 362-6893.

Tuesday, April 26

Reservation deadline for Woman's Club spring luncheon. The luncheon will take place at 11:30 a.m. May 2 at the Thomas Sappington House, 10155 Sappington Road, Crestwood. Cost: \$13.50. To make reservations, call 725-0941.

1-5 p.m. John M. Olin Cup competition finals. "Opportunities for American Business" is the topic of the Sixth Annual Olin Cup competition. Sponsored by John M. Olin School of Business Management Center. Judges include Charles F. Knight, chair and CEO, Emerson Electric Co., Andrew C. Taylor, president, Enterprise Leasing Co. and James E. Piereson, executive director, John M. Olin Foundation Inc. First-place team members each receive \$1,000. May Aud., Simon Hall. 935-4512.

6:30 p.m. Sixty-fifth Annual Fashion Show. "Real Fashions for Real People, Mostly," features fashions designed by 12 seniors, five juniors and alumni of the fashion program. Sponsored by the School of Fine Arts and designed by Aries Productions of St. Louis. (Cocktails at 6:30 p.m.; show at 7:30 p.m.; and reception at 8:30 p.m.) West Campus Conference Center, 7510 Forsyth Blvd. Cost: \$45. 935-6515.

Thursday, April 28

8 a.m.-5 p.m. International Affairs Program seminar. "China Trade and Investment: Strategies for Success in the 21st Century." Co-sponsored by International Affairs Program and KMPG Peat Marwick. Piper Lounge, Simon Hall. Registration by April 22 required. Cost: \$200. 935-6727.

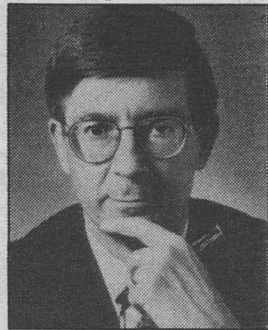
Saturday, April 30

1 p.m. Spring festival for children. Festival includes a music program and appearances by Cinnamon the bunny and The Rabbit, an egg/candy hunt and refreshments. Sponsored by Women's Society. Stix International House. 935-4787.

Pulitzer Prize-winning columnist George Will gives honors lecture

George Will, Pulitzer Prize-winning columnist, will give the Omicron Delta Kappa Honors Lecture at 11 a.m. Wednesday, April 27, in Graham Chapel. His talk, "Public Affairs, Public Policy and American Society," is part of the Assembly Series and is free and open to the public. Public seating, however, will be limited; members of the Washington University community should bring ID cards.

Will is considered by many to be the foremost political columnist of our time. His



George Will

is a television news analyst on "This Week With David Brinkley." Four collections of Will's columns have been published: *The Pursuit of Happiness*

newspaper column, syndicated worldwide by The Washington Post since 1974, appears in 500 newspapers. A contributing editor of Newsweek, he writes a biweekly column for that magazine. He also

and *Other Sobering Thoughts, The Pursuit of Virtue and Other Tory Notions, The Morning After: American Successes and Excesses and Suddenly: The American Idea Abroad and At Home.* A fifth collection is due out this fall. *Restoration: Congress, Term Limits and The Recovery of Deliberative Democracy*, his book on political theory, was published in 1992.

Will, who received his doctorate in politics from Princeton in 1967, has taught political philosophy at Michigan State University and the University of Toronto.

Omicron Delta Kappa is a national honorary that recognizes students for their leadership and contributions in the areas of scholarship, athletics, community/religious service, journalism, campus government and performing arts. The lecture also is co-sponsored by the Assembly Series; Center for the Study of American Business; College Republicans; Council of Students of Arts and Sciences; The Federalist Society, School of Law; Department of Political Science; Washington University Political Society; and WashIPAC, Washington University/Israel Public Affairs Committee.

For more information, call 935-5285.

Winning plays in student contest performed

Two winning plays from the Washington University annual A.E. Hotchner playwriting contest will be performed at 8 p.m. April 28, 29 and 30 and at 2 p.m. May 1 in the Drama Studio, Room 208 Mallinckrodt Center.

The plays are "Funny" by senior Michael Holmes and "Ghostways" by graduate student Patrick Huber. Both one-acts will be directed by senior Josh Einsohn.

A third winning play "The Sign Shop," by graduate student Ethan Bumas, will be given a staged reading at 8 p.m. Thursday, April 21, in Olin I of the Women's Building. "The Sign Shop" will be directed by graduate student Gavin Foster.

There were 18 entries in the fourth annual competition, which is endowed by alumnus and writer A.E. Hotchner. The entries were judged by Joe Pollack, theatre critic for the St. Louis Post-Dispatch; Bob Wilcox, theatre critic for the Riverfront Times; James Nicholson and Ann Marie Costa, artists-in-residence in performing arts; Robert Henke, Ph.D., assistant professor of performing arts; Richard W. Kuykendall, technical director of performing arts; Henry I. Schvey, Ph.D., professor and chair of the Performing Arts Depart-

ment; and Einsohn, student representative to the committee.

"Funny" is about a comedian, Sam, whose grandfather was a vaudevillian comedian. Sam is on the verge of making it big, but is overwhelmed at the prospect of both the possibility of major success or failure. His dead grandfather, in the guise of a clown, appears and forces him to take control of his own life. Einsohn said the play also is about letting go. In the end Sam learns to stop comparing himself to his grandfather and to take charge of his own life.

"Ghostways" is a reference to a Navajo ritual for exorcising ghosts from one's life. Huber's play is about Peter, who takes a journey to let go of his past and all the different ghosts in it. The journey helps him reconcile the fact that some important people are either dead or gone from his life and that he needs to go on without them. The play also forces Peter to let go of his high ideals and to focus, not on how the world should be, but how it is.

Tickets are \$7 for the general public and \$5 for students, senior citizens and Washington University faculty and staff.

For more information, call 935-6543.

Hollywood film artist discusses cult classic

Director Joseph H. Lewis, a film artist from the classical Hollywood cinema, will participate in an informal discussion on film at 11 a.m. April 29 in Lambert Lounge, Room 303-304 Mallinckrodt Center. The discussion, part of the Assembly Series, is free and open to the public.

A screening of his cult classic "Gun Crazy" (1949) will be shown at 7 p.m. Thursday, April 28, at the Shady Oak Ciné, 7630 Forsyth in Clayton. In the film a femme fatale leads a gun-crazy man into a life of crime. Immediately after the film, Lewis will answer audience questions, in addition to his discussion the next day. "Gun Crazy" is part of the 1994 Saint Louis Film Festival, an annual event featuring an eclectic collection of American and international films, contemporary and classic, in both narrative and documentary formats. The screening, which costs \$5.50, is free to all Washington University undergraduates with valid IDs.

Festival organizers are starting a tradition of honoring a distinguished film artist from the classical Hollywood cinema and have chosen Lewis, whose gritty, subversive B films artfully challenged the basic assumptions of the classical Hollywood cinema. Lewis devised a complex and unique visual style upon which his reputation and signature rest. His films emphasize images, employing low-key lighting, high contrast, location shooting, long takes, camera movement, great depth of focus with dominating foreground objects, choreographed violence and sexuality, montage, off-screen action, sound manipulation and minimal dialogue.

Lewis directed 41 features from 1937-

1958, including his two masterpieces, "Gun Crazy" and "The Big Combo" (1954). The critical favor awarded these films and their eventual cult status pushed Lewis into an intimate association with *film noir*, even though he directed many more Westerns. From the late 1950s through the early 1960s he also directed for television, including more than 50 episodes of "The Rifleman."

The informal discussion is co-sponsored by the University's American Culture Studies Institute, Assembly Series, Comparative Literature program, Performing Arts Department and Student Union. The Assembly Series is co-sponsoring the showing of "Gun Crazy" in the 1994 Saint Louis Film Festival with Cinema/Saint Louis, the membership society of Saint Louis Film Festival Inc. For more information, call 935-5285; for information on the Third Annual Saint Louis Film Festival, call 726-6779.

Athletic Department offers tennis lessons

Lynn Imergoot, women's tennis coach, will offer group adult tennis lessons for beginning and intermediate players. Classes meet on Monday and Wednesday evenings from April 25-May 23 at the Tao Tennis Center.

Session I (for beginners) meets from 5:15-6 p.m. Session II (for intermediates) meets from 6:15-7 p.m. Class size is limited to 20 participants. Cost for the eight-session clinic is \$50.

For more information, visit the Athletic Department Office or call 935-5220.

Sports

Baseball

Last Week: Missouri Baptist 9, Washington 3

This Week: 1 p.m. Saturday, April 23, at Rose-Hulman Institute, Terre Haute, Ind.

Season Record: 16-13-1

In baseball action last week, the Bears lost to Missouri Baptist College. Sophomore catcher Andrew Denlow, Evanston, Ill., hit a three-run homer and junior outfielder Bob Wallace, Cary, Ill., delivered a pair of hits.

Men's Tennis

Last Week: St. Louis University 4, Washington 3; University Athletic Association (UAA) Tournament — Washington 8, New York 1; Washington 7, Chicago 2; Emory 6, Washington 3 (championship)

This Week: Regular season complete

Season Record: 7-7

The Bears, still seeking their first UAA men's tennis championship, placed second for the third time in the last four years in last weekend's conference tournament, hosted by Washington University. Coach Rick Flach's netters advanced to the championship round with wins over New York University and Chicago. In the title match, Emory University captured its sixth UAA title in seven years with a 6-3 victory over

the Bears. Senior All-American Rich Berens, Chesterfield, the top player in the UAA, maintained his perfect record (12-0) this spring with three singles victories.

Women's Tennis

Last Week: Washington 8, New York 0; Brandeis 6, Washington 3; Washington 7, Rochester 2

This Week: Regular season complete

Season Record: 13-3

After finishing second in the last five UAA championships, the host Bears slipped to third place in last weekend's conference tourney. Coach Lynn Imergoot's squad, seeded second, advanced to the semifinals with a win over New York University, but was upset by Brandeis. The Bears went on to defeat Rochester for the third-place crown. Highlighting the weekend play was the effort of first-year student Lori Brewer, Ann Arbor, Mich., who posted a perfect 6-0 slate.

Men and Women's Track/Field

Last Week: at Western Illinois April Classic — Men's Finish: 4th of 7; Women's Finish: 4th of 5

This Week: Saturday-Sunday, April 23-24, at UAA Championships, Chicago

Liberal arts education can lead to challenging career, course shows

Sophomore Johanna Milstein used to worry whether a French major would offer her enough career opportunities.

But after taking the course "An Internship for Liberal Arts Students," she learned that studying liberal arts and majoring in a foreign language can lead to a variety of challenging careers.

"I worried about what I was going to do (after graduation)," said Milstein, a Denver native. "It gave me a chance to see the importance of knowing a foreign language in communications, business and in other careers."

The course "shows students that they can do anything as liberal arts majors and that majoring in liberal arts is valuable preparation for the working world," said Nancy Getter, assistant director for experiential education in the Career Center and coordinator of the course. James E. McLeod, dean of the College of Arts and Sciences and adjunct associate professor of German, created the three-credit course approximately 10 years ago.

The 200-level course is designed for students who have taken at least one foreign language class. For the internships, students spend approximately 10 to 12 hours a week working for public and private institutions. The students' duties range from performing clerical tasks to writing grant proposals.

Through reading materials and guest speakers, the students explore the meaning and value of a liberal arts education and learn how to approach career choices. Seminar topics highlight the practical aspects of career exploration, such as applying to graduate and professional schools, pondering the difference between a job and a career, determining what components lead to job satisfaction and learning how to conduct a job search, complete with resume

writing tips, strategies and practice interviews. Mock interviews are conducted by administrators in the Office of Student Affairs.

But the primary focus is the internships where the students "gain pre-professional experience and the supervisor has a commitment to training and teaching," Getter said. Interns can work in a setting for three months and "see how it fits," which helps them focus and further clarify career interests, she added.

Additionally, the internships "give the students confidence that they do have the type of skills that are valuable in the working world," said Getter.

As a teaching assistant at the Dewey school during the fall 1993 semester, Milstein helped plan French lessons for fourth and fifth graders. "I went into the project not thinking that I wanted to teach at all. I wanted to be Indiana Jones — an anthropologist," she joked. "But the internship ended up teaching me a lot about myself. Teaching will definitely be in my future."

First-year student Catherine E. Fisher, a linguistics major, is an intern at the local United Nations Association, where she has performed a variety of duties, including writing a grant proposal. Fisher, who speaks Spanish, French and Italian, said she believes nearly every field must be seen in an international context. Speaking a foreign language is essential to conducting business with a variety of clients, said the Portland native. "If you don't speak a foreign language, you are closing out potential clients. If you can't communicate with your clients, they are not going to be your clients for very long."

For a few students, taking the course has resulted in yet another benefit: the offer of part-time work or even a job after graduation.

— Carolyn Sanford

Volunteers sought for festival torch run

U.S. Olympic Festival organizers are seeking physically fit non-smokers to volunteer as crew members for this summer's torch relay. The relay will begin on May 25 in Kansas City and conclude 38 days later on July 1 during the festival's opening ceremonies at the Gateway Arch. Washington University is serving as the official Olympic Village, housing festival athletes, and will host several athletic events.

Each crew member will spend eight days on the relay (Saturday through Sunday) in various parts of Missouri and southern Illinois. Duties include running alongside the registered participants, driving caravan vehicles, providing runner support services in participating cities, assisting with cer-

emonies and other events and working with various government and law enforcement officials and sponsors.

Each crew member will be trained in the proper fueling and handling of the torches, as well as CPR (cardiopulmonary resuscitation) and first-aid. All volunteers must provide a copy of a valid driver's license, current medical insurance and sign a waiver of liability.

This is a non-paid position but each volunteer will receive eight road uniforms, including crew T-shirts, shorts and caps. All food and housing on the road will be paid for by the U.S. Olympic Festival. For more information or to volunteer, call Margaret Stroup at 935-6113.



Many sampled food from area restaurants at the Savor St. Louis food festival held April 13 in Mallinckrodt Center. CHIMES, the junior honorary, organizes the annual event. Proceeds benefited the St. Louis Literacy Council.

Michelangelo created his own myth — from page 1

family, friends and associates; as well as miscellaneous documents such as tax records and city maps, Wallace has determined that Michelangelo had a close working relationship with several hundred artisans, many of whom worked for him for more than 10 years.

"There is an enormous amount of primary documentation for this project. The problem has been that many see it as boring because it doesn't deal with the great genius side of Michelangelo, but the nitty gritty of his business enterprise."

Not only was the sheer amount of primary material daunting, said Wallace, but much of it had not been translated. Wallace worked in the original Italian.

Wallace found that Michelangelo was closely involved in every aspect of the business. He personally hired every worker and kept track of what days they worked and what wages they earned. He then reported this to the paymaster.

"Michelangelo was their time clock, they punched in with him," said Wallace. "By today's standards his method was not very efficient — he was on site every single day, he had everyone reporting directly to him and he was involved in unbelievably mundane details, supervising stone cutting, selecting material and drawing every single picture."

Michelangelo wrote out daily attendance records himself and more than half the workers were noted by their nicknames, indicating a close familiarity between the artist and his assistants. Some of the most colorful include "the Godfather," "the Thief," "the Oddball," "the Carrot," "the Priest," "Antichrist" and "Nero."

Although Michelangelo worked almost every Saturday and most holidays, he provided flexible leave policy, good pay and job security to his workers. Wallace said workers earned the equivalent of what a good carpenter or plumber would earn today.

Getting past the myth

Wallace contends that his book does not so much knock the master off his pedestal as much as it acknowledges that history is more complicated than myth.

"I am the first to admit we all need myth," said Wallace. "Myths tend to simplify history and make it more accessible, but once you get past the myth, the true history becomes even more astonishing."

Another myth that Wallace dismantles is that Michelangelo was a poor, starving artist. In fact, said Wallace, Michelangelo was well born, socially prominent and wealthy. Michelangelo's father initially resisted his wishes to become an artist because manual labor was anathema to the family's aristocratic position, said Wallace.

In Renaissance Italy, social position, as determined by birth, was extremely important and, in fact, essential to a person's status. Michelangelo was better born than most other artists, notes Wallace. Michelangelo's social position will be the topic of Wallace's next book.

If Michelangelo was neither a solitary genius, nor a poor, suffering one, where did this image come from?

Partly from the artist himself, said Wallace. Working with his friend and first biographer, Giorgio Vasari, Michelangelo helped create his own myth. Michelangelo lived more than twice as long as the average Renaissance person — he was nearly 90 when he died — and as he got older he became more self-conscious about his place in history, said Wallace. The myth hardened into reality with such works as *The Agony and Ecstasy* by Irving Stone and the 1965 movie with the same title starring Charlton Heston.

Wallace said his study should not diminish our appreciation of Michelangelo, whose own peers called him "Il Divino." In fact, it should make us appreciate him even more.

"Knowing that he not only created such unparalleled works as the Sistine Chapel, but also managed the most mundane details involving a group of up to 200 workers, only increases my admiration for him," said Wallace.

— Debby Aronson

April Welcome

About 275 prospective admitted high school seniors will be on campus this week as part of April Welcome. Last week, the University welcomed about 260 young visitors and their parents. At presstime, employees of the Office of Undergraduate Admission had taken reservations for a total of 800 prospective students. Take a moment to greet the new faces!

Campus Watch

The following incidents were reported to the Hilltop Campus Police Department April 11-18. Readers with information that could assist the investigation of these incidents are urged to call 935-5555. This list is provided as a public service to promote campus safety.

April 11

1:44 p.m. — Unknown person(s) cut a section of wall covering in the Simon Hall basement sometime between 8 and 9:30 a.m. 3:12 p.m. — A student's book bag was reported stolen from the Lee Residence Hall lobby sometime between 1:45 and 2:30 p.m. 6:45 p.m. — A staff member's vehicle was reported stolen from the parking lot next to Throop Drive sometime between 11 a.m. and 6:30 p.m. The vehicle was recovered by the St. Louis Police Department in the 5300 block of Wabada. The tires were missing and the steering column was damaged. 11:05 p.m. — A radar detector was reported stolen from a student's vehicle parked in the lot south of McDonnell Hall sometime between 5 and 11 p.m.

April 12

Midnight — Two female students reported that a male exposed himself to them in two separate incidents at 10 p.m. and between 10:30 and 11 p.m. in Simon Hall Library. The man is described as 6 feet tall, thin, in his late 40s, with dark hair and wearing a black suit.

April 13

2:51 p.m. — A pager belonging to the Department of Facilities Planning and Management was reported stolen from the maintenance building sometime between March 29 and

April 7. 6:59 p.m. — A student's motorcycle was reported stolen from the parking lot north of Givens Hall sometime between 1:30 and 6 p.m.

April 14

12:45 p.m. — A student's purse was reported stolen from the patio area at Simon Hall sometime between 3:30 and 4:30 p.m. Feb. 21.

April 15

8:52 p.m. — Graffiti was reported on an elevator in Eliot Residence Hall at 8:45 p.m.

April 16

1:59 p.m. — A compact disc player, amplifier, cassette player and bicycle were reported stolen from the Sigma Alpha Mu fraternity house sometime between 4:45 a.m. and 1 p.m.

April 17

4:38 p.m. — Graffiti was discovered painted on Eliot Hall's east wall. 5:10 p.m. — Two small trees were discovered pulled from a box along the south wall of Lopata Hall.

April 18

6:59 a.m. — Food was reported stolen from the McMillan Hall cafeteria sometime between 11 p.m. April 17 and 6:55 a.m. April 18. Follow up: A St. Louis man pled guilty on March 11 to stealing a fax machine from McDonnell Hall last year.

News Analysis

News Analysis contains excerpts from the For Expert Comment service. The service, which provides timely faculty comments to media across the country, is distributed by the Office of University Communications.

Touvier case shows need for international war crimes tribunal

Leila Sadat Wexler, J.D., associate professor of law, is an expert on the laws of



Leila Sadat Wexler

France and the European Economic Community. She has written two soon-to-be-published legal articles that provide detailed information on Vichy militia leader Paul Touvier,

who is now on trial in France for "crimes against humanity" charges related to the execution of seven Jews during World War II. Wexler was a law clerk at the French Supreme Court, where many of the decisions on the Touvier case have been rendered. She comments here on the case.

"There's a lot of friction developing in this trial between factions that want this case to be a trial of the Vichy government's role in the Holocaust, and those who really want to nail Touvier," said Wexler. "The case has come to stand for a lot more than it is all about in a legal sense. The trial is about Touvier's participation in the murder of seven Jews, but the public wants the case to settle much larger issues.

"People want to use this case to make the Vichy government admit its role in the Holocaust, but the prosecution can't get a conviction unless it proves that Touvier was an accomplice of the Gestapo," she continued. "Because the law being applied in the case is actually a French implementation of the Nuremberg Charter, the French Supreme Court has ruled that 'crimes against humanity' charges can be brought only against individuals working with the Axis powers, a ruling that precludes making the Vichy government's role a major issue in this case."

Wexler contends that the Touvier case has become so highly politicized that it is impossible to separate the "crimes against humanity" charges from their emotional historical context.

"It's hard to try a government and be very fair," she said. "Courts are good at finding facts in specific cases, but they're not good at analyzing history or clarifying political debate. The Touvier case is a fine example of how difficult it is to try an international war crimes case in the courts of a single nation. The case took more than 20 years to come to trial, largely due to government inaction. French courts, American courts, the courts of any nation are simply too limited and often too biased to deal with these complex international issues."

Wexler said that the United States could make great strides toward solving the dilemma by enacting Senate Resolution 32, which calls for the United States to support the United Nation's effort to establish an international criminal court. "The French experience in the Touvier case clearly demonstrates the need for an international war crimes tribunal," she said.

Obituaries

Orval B. Craig, a former adjunct instructor in University College, died March 29 at Westchester House in Chesterfield after a brief illness. He was 86. Craig, of Ballwin, taught engineering graphics in University College from 1949 to 1973.

For The Record

For The Record contains news about a wide variety of faculty, student and staff scholarly and professional activities.

Of note

Samuel L. Stanley Jr., M.D., associate professor of medicine and associate professor of molecular microbiology, received a \$71,700 three-year grant from the Fogarty International Center for a project on "Human T-cell Recognition of E Histolytica Antigens."

Speaking of

David A. Balota, Ph.D., associate professor of psychology, and **Kit Brady**, a graduate student in clinical psychology, delivered a presentation on "Inhibitory Processes on Episodic and Semantic Tasks: Evidence of an Age-related Dissociation" at the Cognitive Aging Conference held in Atlanta. ...

Steven Fazzari, Ph.D., associate professor of economics, delivered the Howard Perez Lecture at the National Association of Business Economists' meeting held at the Radisson Hotel in Clayton. He spoke on "Investment, Finance and Macroeconomics." ...

Ira J. Hirsh, Ph.D., professor and chair of the Department of Speech and Hearing at the Central Institute for the Deaf and professor emeritus in the Department of Psychology, presented a paper on "Psychological Aspects of Disability" at the Biennale International Handi-insertion: Les Entretiens Europeens de l'Insertion des Handicapés (International Meeting on "Handi-insertion," Employment of the Handicapped) held in Lyon, France. ...

Stephen H. Legomsky, J.D., D.Phil., Walter D. Coles Professor of Law, spoke on "The Role of Ethnic Criteria In Selecting Immigrants" at the Center for Migration Studies' annual conference held in Washington, D.C. He also presented a general overview of immigration law at the Federal Judicial Center's annual conference held in Nashville, Tenn. ...

Laurence H. Meyer, Ph.D., professor of economics, spoke on "Inflation, Fed Policy and Long-term Interest Rates" before the Washington, D.C., chapter of the National Association of Business Economists. ...

John C. Morris, M.D., associate professor of neurology and director of the Memory and Aging Project, was an invited speaker at a symposium titled "Normal Aging Vs. Very Mild Dementia: Defining the Boundaries for Older Persons" presented during the International Neuropsychological Society's 22nd annual meeting held in Cincinnati. His talk was titled "Clinical, Psychometric and Pathological Distinctions Between Very Mild Alzheimer's Disease and Normal Aging." ...

Carter Revard, Ph.D., professor of English, will chair a session on Old and Middle English Literature in England at the Leeds (England) University International Medieval Conference to be held at the university on July 5. His poem "When We Get Manhattan Back" appears in the current issue of Callaloo, a journal published by the University of Virginia in Charlottesville.

On assignment

Ronald M. Levin, J.D., professor of law, will participate in a May 9 program in

Washington, D.C., for House and Senate staff members who are involved in drafting healthcare reform bills. The program will highlight administrative law issues that would be implicated in healthcare reform. It will be conducted under the auspices of the Administrative Conference of the United States, an independent agency whose members study problems involving administrative procedures and the regulatory process. ...

Henry I. Schvey, Ph.D., professor of drama and comparative literature and chair of performing arts, delivered lectures at institutions in Portugal and Ukraine on behalf of the U.S. Information Service. During his two-week trip, he lectured on a variety of subjects concerning American drama. Following his final lecture at the Kiev-Mohyla Academy in Ukraine, he was honored at a special reception and offered membership as a fellow of the academy.

Etc.

Harold Blumenfeld, professor emeritus of music, had his opera titled "Breakfast Waltzes" performed by the Washington University Opera at the Sheldon Hall ballroom in St. Louis. The performance was the world premiere of his work.

Guidelines for submitting copy:

Send your full name, complete title, department, phone number and highest-earned degree, along with a typed description of your noteworthy activity to For The Record, c/o Carolyn Sanford, Campus Box 1070, or p72245cs@wuvmd.wustl.edu. Items must not exceed 75 words. For information, call Sanford at 935-5293.

Photographic director Herb Weitman announces plan to retire

Herb Weitman, director of photographic services at Washington University for nearly five decades, has announced that he will retire at the end of August 1994, following a career as one of the most honored photographers among American universities and colleges. He also has served for many years as the associate editor of the award-winning Washington University Magazine and founded the School of Fine Arts photography program in 1967.

Weitman has been affiliated with Washington University since 1947, when he enrolled as a student at the John M. Olin School of Business. That same year he began continuously chronicling the life of Washington University on film for more than 47 years. He received a bachelor's degree in business administration from the University in 1950. Twice during his career he has been named "Photographer of the Decade" by the Council for the Advancement and Support of Education (CASE) for his outstanding photographic work. He first won the award for the 1960s, and then repeated the award for the 1980s.

On Aug. 15 a monthlong retrospective exhibit of his work will open at the Washington University Gallery of Art.

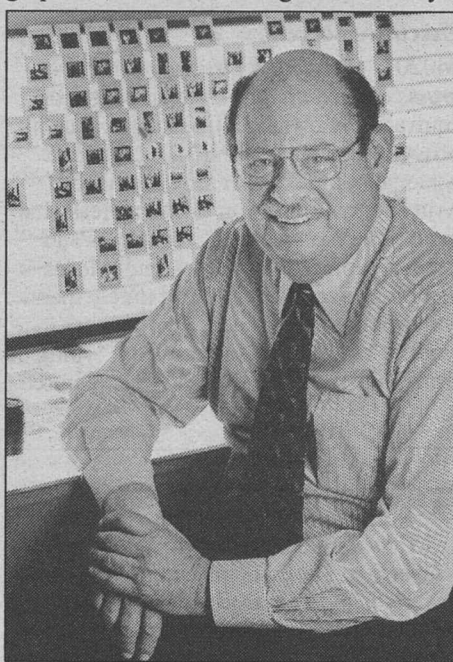
"Herb has had a profound impact on Washington University. His photographs have structured the way we think about our institution. We see the campus through his eyes. Even when I think of friends, I visualize them as they appear in Herb's photographs. He has deepened our insights and enlarged our vision," said Chancellor William H. Danforth.

"Herb Weitman is the dean of university photographers in America. Better than anyone else, he has come to epitomize the importance of capturing the myriad aspects of campus life on film and slides. His imprint on photography at hundreds of campuses is unmatched and has set the standard for excellence in collegiate photography across the nation," said M. Fredric Volkmann, vice chancellor for public affairs and a past national chair of the CASE board of trustees. "I was a fan of Herb Weitman's work for nearly two decades before I came to Washington University in 1980, and I am still a great fan."

Weitman has won recognition from numerous regional and national organizations, including medals and awards from the St. Louis, New York, and Washington, D.C., Art Directors' Clubs. He has served as a

featured speaker for Newsweek magazine's programs for university publications editors, as well as a frequent lecturer for CASE. He also has served as a judge of numerous CASE competitions, as well as serving as a judge in the Pro Football Hall of Fame's national photographic competitions in Canton, Ohio, on numerous occasions between 1980 and the present.

In addition to his thousands of photographs used in the Washington University



Herb Weitman

Magazine over the past several decades, he has contributed to the magazine of the St. Louis Post-Dispatch, the former St. Louis Globe-Democrat, and numerous national publications, including Newsweek, Time, Life, Sports Illustrated, Picture Magazine (a prestigious photographic art periodical), and Currents, a CASE publication.

Weitman's photographs of St. Louis and regional landmarks appear in two popular guides to the area — *Seeing St. Louis* and *Seeing Beyond St. Louis*. Both were published by Washington University as a public service.

He has participated in many exhibitions of his work, including a major show at the CASE Annual Assembly in Anaheim, Calif., for his receipt of the gold medal as Photographer of the Decade in 1988. His other shows include a one-person exhibition, "Reflections 1968-1983," at the Martin

Schweig Gallery in St. Louis, and an April 1980 exhibition, "Alexander Calder/Herb Weitman" at Laumeier Sculpture Park Gallery in St. Louis.

The two largest art museums in St. Louis have acquired his photographic work, including four prints by the Saint Louis Art Museum, and five by the Washington University Gallery of Art. His photographs also are represented in a number of museums and private collections across the country.

George McCue, former art editor of the St. Louis Post-Dispatch, said a number of years ago: "The significant fact about Weitman's photographs is that they constantly reflect not just a collegiate environment, but the quality of life on a campus of a big university. They search beneath the surface of casually dressed students and tweedy faculty members in a neogothic setting for the concerns and revelations that they share."

Weitman founded the photography program at the School of Fine Arts and then taught in the program as an adjunct professor until June 1991.

During the tenure of the Football Cardinals in St. Louis, Weitman served as their official photographer, covering games around the United States and the world for more than two decades. He has served as an official photographer for the National Football League, including annual coverage of Super Bowls V to XXVIII.

Introducing new faculty members

The Record is running a series profiling new faculty on the Hilltop and Medical campuses.

Bulent Zaim, M.D., assistant professor of medicine, comes from Harvard Medical School, where he had been an instructor of medicine since 1992. His research focuses on cardiac electrophysiology, which is the study of patterns and mechanisms of abnormal electrical activity in the heart. He received a bachelor's degree in bioelectrical engineering in 1977 from Cornell University in Ithaca, N.Y., and a medical degree in 1983 from the University of Lausanne (Switzerland) School of Medicine.

Opportunities & personnel news

Hilltop Campus

The following is a list of positions available on the Hilltop Campus. Information regarding these and other positions may be obtained in the Office of Human Resources, Room 126 North Brookings Hall, or by calling 935-5990. Note: All positions require three letters of recommendation.

Programmer/Analyst III

940107. *Computing and Communications*. Requirements: Bachelor's degree; good language and people skills; ability to work with minimal supervision; ability to learn quickly and adapt to new circumstances; experience with use and management of desktop computers; knowledge of desktop data base technology in a client/server environment highly desired; familiarity with DOS, Macintosh systems; knowledge of Novell, Appletalk, Windows and TCP/IP networking highly desired. Resume required.

Counselor

940142. *Student Educational Service*. Requirements: Master's degree; experience in secondary, post-secondary or higher education preferred; knowledge of physiological testing; familiarity/experience with the problems of academically high-risk and disadvantaged students; familiarity with the problems of disabled students. Resume required.

Secretary/Receptionist

940157. *Computer and Communications Research Center*. Requirements: Some college; typing 50 wpm with accuracy. Duties: Maintain calendars, schedules and files; make travel arrangements; type routine correspondence, classwork; assist in fiscal activities of center; assist in annual report preparation; assist in coordination of research progress reviews; coordinate center technical report distribution; coordinate mailings of networking and communications program; assist in departmental accounting procedures; maintain office supplies. Clerical tests required.

Administrative Assistant

940198. *Medical Alumni and Development Program*. Requirements: Some college; maturity, judgment and diplomacy; excellent communication skills, both oral and written; ability to communicate cordially and effectively with public constituencies, including deans, department heads, division chiefs, and senior faculty and administrators; ability to deal with confidential information in a responsible and professional manner; ability to balance and prioritize diverse assignments; three years of general office experience preferred; excellent writing and proofreading skills; proficiency with personal computer software, such as Microsoft Word for the

Macintosh, Filemaker Pro, Lotus 1-2-3 or Microsoft Excel; typing 45 wpm with accuracy. Clerical tests required.

Department Secretary

940201. *Department of Philosophy*. Requirements: High school graduate; typing 50 wpm with accuracy. Duties: Type occasional correspondence for faculty members; receive telephone calls and personal callers for the department; answer routine inquiries; type the semester course listings for philosophy department and do preliminary schedule for the days, times and rooms for each course; maintain and operate copying equipment and postage meter; mail graduate school applications and maintain files of students applying for admission; requisition supplies from central stores; copy and mail placement applications; establish, maintain and revise departmental files. Clerical tests required.

Communications Technician I

940202. *Communications Services*. Requirements: High school graduate, some college preferred; training and/or experience in concepts of operation and maintenance of communications equipment; strenuous work and heavy lifting; flexible hours and overtime required; use of personal vehicle required with mileage reimbursement. Resume required.

Administrative Assistant III

940206. *Performing Arts*. Requirements: Bachelor's degree, master's degree preferred. Duties: Administer departmental budget, responsible for all accounting functions, purchasing and allocations; serve as producer for all performing arts department productions; appoint, hire and write job descriptions for work/study students; responsible for on-campus recruiting for prospective first-year students; administer summer theatre in London program; process payroll and maintain payroll records; serve as undergraduate adviser for drama majors (as needed); administer arts management internships; administer external rentals of facilities (studios, classrooms); schedule and supervise musical accompanists. Clerical tests required.

Executive Secretary

940207. *Alumni and Development Programs*. Requirements: College degree or equivalent knowledge; three years general office experience; strong background in personal computing; excellent oral and written communication skills; professional manner with co-workers, volunteers and vendors; ability to deal with multiple tasks in an organized, accurate and timely manner with minimal supervision; willingness to work extra hours when necessary; typing 60 wpm with accuracy. Clerical tests required.

Departmental Secretary

940210. *Major Gifts*. Requirements: Some college or other research-related experience; strong capacity to use online data bases and library-related sources of information; excellent typing 50 wpm with accuracy and proofreading skills; capacity to conduct and keep track of several jobs at once with a flair for detail; good oral and written communication skills; professional telephone skills. Clerical tests required.

Administrative Assistant

940212. *Board of Trustees*. Requirements: Some college; typing 50 wpm with accuracy; efficient in word processing and data processing; creative in using and improving existing lists and forms, as well as devising new ones; enjoy bookkeeping, both keeping track of budgets and expenses and preparing reports for the Board of Trustees account; skilled in proofing minutes and reports; appreciation for accuracy, even in routine things; interested in maintaining an organized filing system for efficient retrieval; pleasant with fellow workers and external constituencies on the phone; willingness to work occasionally outside of office hours for setting up meetings. Clerical tests required.

PC Systems Manager

940216. *Engineering Computer Lab*. Requirements: Certificate or associate's degree, bachelor's degree preferred. Duties: File server management; personal computer system management; software evaluation and installation; personal computer system troubleshooting, hardware and software problems; ability to provide user training and support on system and application software; programming; print server management. Resume required.

Lab Technician

940219. *Biology*. Requirements: Bachelor's degree; responsible, independent; willingness to be trained in plant genetics, bacteriology and molecular biology. Resume required.

Reference Assistant

940220. *Olin Library*. Requirements: Four years of college, degree preferred; library public service experience with courses in librarianship desirable; ability to respond to the public in a helpful and courteous manner; ability to work independently with minimal supervision; ability to organize work and handle detailed work with accuracy; typing 35 wpm with accuracy; ability to work under pressure; some experience with microcomputers, especially word processing; ability to adjust to a fluctuating academic year schedule, which includes evening and weekend hours. Clerical tests required.

Seismic Data Entry Assistant

940221. *Earth and Planetary Sciences*. Requirements: Some college, bachelor's degree preferred; experience with handling seismic data preferred; experience with data entry and automatic data processing desirable; accuracy in transcribing numerical information; ability to learn computerized data entry and analysis procedures required. Resume required.

Department Secretary

940227. *Major Gifts*. Requirements: Associate's degree or equivalent knowledge; specialized secretarial and business training; attentiveness to detail; three years general office experience; good command of English; alert and well-spoken; ability to deal with multiple priorities; maturity; well groomed; pleasant personality; ability to relate easily to people; typing 50 wpm with accuracy. Clerical tests required.

PC Systems Manager

940228. *Engineering Accounting*. Requirements: Bachelor's degree; should demonstrate a high level of skill in debugging and troubleshooting system setup and software installation problems; experience with Macintosh, DOS, Windows and UNIX; familiarity with networks and network operating systems and some programming

experience in a structured language highly preferred; good personal communication skills. Resume required.

Interlibrary Loan Borrowing Assistant

940229. *Olin Library*. Requirements: Four years of college or equivalent experience, degree preferred; library experience desirable; ability to communicate orally and in writing with the public in a pleasant business-like manner; ability to perform clerical tasks quickly and accurately; bibliographic skills and familiarity with foreign languages desirable; experience with the OCLC terminal helpful; physical stamina; typing 35 wpm with accuracy. Clerical tests required.

Medical Campus

The following is a partial list of positions available at the School of Medicine. Employees who are interested in submitting a transfer request should contact the Human Resources Department of the medical school at 362-4920 to request an application. External candidates may call 362-7195 for information regarding application procedures or may submit a resume to the Human Resources office located at 4480 Clayton Ave., Campus Box 8002, St. Louis, Mo., 63110. Please note that the medical school does not disclose salary information for vacancies, and the office strongly discourages inquiries to departments other than Human Resources.

Statistical Data Analyst

940663-R. *Biostatistics*. Requirements: Bachelor's degree, master's degree preferred; SAS experience with data analysis or data management; aptitude for numbers; strong communication skills.

Contract Administrative Assistant

940692-R. *Special Projects*. Requirements: Associate's degree from two-year paralegal or legal assistant program; knowledge of business law, especially contracts and warranties; knowledge of patent and licensing law preferred; strong written and verbal communication skills.

Clerk Typist II

940723-R. *Ophthalmology*. Schedule: Part-time, 15 hours per week (three hours per day) Mondays through Fridays. Requirements: High school graduate or equivalent, some college preferred; experience using personal computer with Microsoft Word or Windows; work-related experience; good attention to detail. Responsibilities include assisting in daily data collection and entry, providing general clerical support.

Secretary I

940740-R. *Student Affairs*. Requirements: High school graduate or equivalent, some college course work preferred; good verbal and numerical aptitude; precise attention to details and deadlines; typing 45 wpm with knowledge of Microsoft Word and WordPerfect. Responsibilities include efficient and timely application processing for financial aid, preparation of loan applications and associated loan documents, and disbursement of financial aid funds.

Medical Research Technician

940741-R. *Pediatrics*. Requirements: Bachelor's degree with background in cell biology and/or biochemistry; ability to work independently under guidelines from supervisor; knowledge of tissue culture, protein purification and DNA analysis.

Administrative Coordinator

940744-R. *Internal Medicine*. Requirements: Bachelor's degree with three to five years related experience preferred; ability to organize and administer business affairs; supervisory experience preferred; familiarity with university systems highly preferred; accounting and computer literacy. Responsibilities: Assist in day-to-day operations of a division, providing necessary support in coordinating a variety of administrative functions, including financial accounting and program planning activities.

Team to map student registration process — from page 1

identified easily. Several University departments — Undergraduate Admission, Facilities Planning and Management, Human Resources and Publications — volunteered to map their processes over the past year.

A 12-member team headed by Brian Bannister, assistant director of information systems, and Margaret Caldwell, director of financial planning and management at the John M. Olin School of Business, is continuing the process mapping exercise. Team members recently completed a training program and are beginning to map the University's grant and contract administration process.

"We are learning from Motorola and will combine the best of their methods with the best of our own to continue process mapping after they have gone," Bannister said.

A clear benefit of process mapping was the fact that Motorola's quality improved dramatically with reductions in cycle time. By reducing mistakes and defects, productivity — and customer satisfaction — skyrocketed. The company's goal is a 10 percent improvement in quality every five years.

"How would this apply to Washington University? The principles transcend. Quality is the best way of managing an institution and I presume it would be the best way of managing an educational institution," said Robert Galvin, chair of the executive committee of the board at Motorola and son of the company's founder, Paul Galvin. "We rally everyone around quality. It is the first item on everyone's agenda."

Several management team members suggested possible tools for measuring quality, including student evaluations of classes and student willingness to recommend Washington University to others.

"Process mapping is a tool we can use to provide better services to our students," said Provost Edward Macias, Ph.D. "Registration is one key process in a student's experience. Bringing this technique to that process is one way to improve the lives of our students."

In June, Loew will conduct two three-day process mapping exercises with those involved in the process of student registration June 6-8 and June 27-29 at West Campus.

— Susannah Webb