NOTES FROM THE CENTURIES
Craig Monson on the Roles of Music
No Poem as Lovely

Its branches touching the earth in a 70-foot circle, this 90-year-old Scotch elm near Brookings Hall is a source of both wonder and calm. For three seasons, it resembles an inverted bowl, green and then gold. Newcomers stop, astonished. Staff on a recent botanical tour entered its perfect hemisphere and lingered, amazed. Students climb into it. When the weather is warm, says Hilltop Campus horticulturist Paul Norman, he has seen as many as 30 at a time, studying and relaxing on its sturdy crooks. As a matter of fact, Norman says, "The first time I ever saw that elm, I thought to myself, 'I wish I'd had a tree like that when I was a boy.'"
2 Frontrunners
Short takes about WU’s community of great minds and ideas.

8 Lasting Lessons
In a regular feature, three alumni describe their favorite teachers.

10 Professional Magnetism
Say “Jacob Schaefer” to scientists and they think of nuclear magnetic resonance. His chemistry students think of his dedication to teaching and research.

14 A Scholar’s Tale
Musicologist Craig Monson’s discovery in a Florentine museum culminates in an acclaimed book.

17 Key Player
Finance and banking expert Philip Dybvig is instrumental in both investment theory and practice.

20 Making Sense of the Sensory System
Today, most spinal cord injuries mean lifelong paralysis. Tomorrow, if researcher Mark Jacquin has his way, the prognosis may change.

22 What’s in a Flame?
In engineering professor Richard Axelbaum’s lab, combustion produces supersubstances.

25 A New Era for Hong Kong
Chia-Wei Woo, M.S. ’61, Ph.D. ’66, says Hong Kong is central to a resurgent Pacific Basin.

28 A Marriage of Form and Function
Marianne Lau, A.B. ’84, M.Arch. ‘86, and Marc Diamond, M.Arch. ’86, balance multimillion-dollar projects and their priceless family life.

30 The Streetside Album
For the founders of a midwestern chain of record stores, the early ‘70s on Delmar were the days of vinyl and Sun Ra.

34 My Washington
George Pake’s Genius

36 Alumni Activities
Alumni Board of Governors chair David Shores, B.S.B.A. ’67; ABG Executive Committee; 1997 Reunion Kickoff.

38 ClassMates

48 Viewpoint
No Blues in Dear St. Louis: The Midwest is a source of joy.
Concrete Conversation

Chancellor Mark S. Wrighton and Washington University graduate student Hubert Chuang enjoyed a concrete frozen dessert in August at Ted Drewes Frozen Custard, in St. Louis. In connection with Wrighton's installation last year as the University's 14th chancellor, an all-campus raffle was conducted for trips to Ted Drewes with the chancellor in his 1984 bronze Corvette. The raffle winners were Chuang, who is a student in the Medical Scientist Training Program, and Allyson F. Jacobson, who graduated in May. Drewes is a 1950 Arts and Sciences graduate of the University.

Researchers Find Pushy Parasites

Some burglars walk through the front door. Others make a forced entry. Scientists now have discovered that some disease-causing microorganisms can push their way into cells, in contrast to the usual passive mode of entry.

"Now that we've found out how these parasites get into cells, we have a possible target for future drug development," said L. David Sibley, assistant professor of molecular microbiology.

Sibley's group studies *Toxoplasma*, a protozoan that infects animals and humans—killing AIDS patients and disabling unborn babies. "But this way of getting into host cells probably is a general mechanism for a group of related parasites that cause disease in humans and animals," said Sibley, a Burroughs Wellcome Fund New Investigator in Molecular Parasitology. "They include *Plasmodium*, the protozoan that causes malaria, and *Cryptosporidium*, the waterborne microbe that can trigger deadly outbreaks of diarrhea."

Sibley and graduate student Janice M. Dobrowolski discovered that *Toxoplasma* forces its way into host cells with a motor made of actin. This rod-shaped protein also is involved in muscle contraction. The work was reported in a recent issue of *Cell* and was supported by a grant from the National Institute of Allergy and Infectious Diseases at the National Institutes of Health.

Bequest Enhances Library Collection

The late Philip Mills Arnold, B.S.Ch.E. '32, M.S.Ch.E. '41, has bequeathed $4 million to the Washington University Libraries. For nearly 40 years, Arnold gave generously to the Libraries' Special Collections department. He began collecting rare books as an undergraduate, and his collection grew during his worldwide travels as vice president for research and development for Phillips Petroleum Company. Established in 1996, the Philip Mills Arnold Semeiology Collection at Washington University relates to the study of signs and symbols. It has since been supplemented by gifts from Arnold; the Libraries received the final bequest upon Arnold's death in 1995.

The Special Collections department is planning an exhibition of books and manuscripts drawn from the Semeiology Collection. The resulting exhibition catalog is being made available to students and scholars through the World Wide Web (http://library.wustl.edu/~spec/rarebooks/semeiology.html).

New Chairs in Pediatrics and in Neurological Surgery

The Department of Pediatrics in the School of Medicine has established the Donald Strominger Chair in Pediatrics, which will be held by David H. Perlmutter, professor of pediatrics. The chair honors the memory of Donald B. Strominger, M.D. '53, who was a professor of clinical pediatrics when he died in 1983 at the age of 54. He was known for his work with cystic fibrosis patients and the National Cystic Fibrosis Association.

In addition, 60 former neurosurgery residents at the School of Medicine have endowed the Henry G. and Edith R. Schwartz Chair in Neurological Surgery to honor the Schwartzes, a couple who the residents say touched the lives of many physicians and members of the St. Louis community. Henry G. Schwartz, the August A. Busch, Jr., Professor Emeritus and Lecturer in Neurological Surgery, was head of neurological surgery from 1946 to 1974.

"The affection the former residents have demonstrated to me and my late wife is heartwarming," says Schwartz. Edith R. Schwartz died in December 1994.
WU Builds Healthy Future for Medicine

A long-term plan designed to change the way health-care services are organized and delivered at Barnes-Jewish Hospital and Washington University Medical Center will include an extensive makeover of the Barnes-Jewish physical plant.

When the plan is fully implemented, all outpatient diagnostics, testing, and education, as well as short-stay inpatient services, will be located on the north side of the Medical Center. All high-intensity, complex medical and surgical cases and related care will be delivered on the south end. The plan calls for the construction of four medical buildings, two parking garages, and an addition to an existing building. Seven older, inefficient buildings that cannot be updated will be removed.

The major projects in the next three years include:

- An ambulatory-care center that will provide a single location for outpatient surgical and diagnostic testing services and physician consultations.
- A cancer-care center to provide clinical services, educational resources, and leading-edge clinical research for the prevention, diagnosis, and treatment of cancer.
- An emergency, urgent care, and trauma area to consolidate the services now provided into one well-marked, accessible facility.

Elements of the plan include relocated and redesigned operating rooms, new neurosurgical suites, cardiac and vascular diagnostic and testing suites, an inpatient radiology facility, a consolidated medical laboratory, and dining and parking facilities.

Architecture Students Go International

While nearly a dozen School of Architecture graduate students conversed with a rain queen in South Africa this past summer, their peers in Spain sought the counsel of internationally renowned architects. Elsewhere in Europe, undergraduate students viewed some of the great buildings of all time.

Experiences abroad help students understand the international practice of architecture, says John Hoal, visiting assistant professor and director of the Master of Architecture and Urban Design Program.

Perhaps the most significant aspect of the studio in South Africa involved the 10 graduate students working with tribal leaders and residents to design two much-needed community centers. The finished designs were turned over to the non-profit PEACE Foundation, which will seek funding for the centers to be built.

First Woman Law School Grad Honored

The late Phoebe Wilson Couzins graduated in 1871 from the School of Law—the school's and Washington University's first female graduate.

To celebrate the 125th anniversary of Couzins' trailblazing, the University's Women's Law Caucus (WLC) is selling commemorative T-shirts. Featuring an etched portrait of Couzins, the T-shirts were designed by Joe Erker. Proceeds will go to a WLC fund for summer stipends for students working on public-interest law projects relating to women.

Couzins' admission to the Missouri Bar soon after graduation gave her the distinction of being only the third or fourth woman licensed to practice in the United States. She later helped found the National Woman Suffrage Association. For information about the T-shirts, call 314-727-5816.

Pictured from left are WLC secretary Kathy Laurent, professor Susan Appleton, WLC president Vicky Shusterman, professor Karen Tokarz, and associate professor Karen Porter.

Blewett Down: Music Annex Leveled for New Building

The 30-year-old Blewett annex used by the Department of Music in Arts and Sciences was demolished in August in preparation for a new building being erected in its place. Plans for the new $625,000 building, designed by the St. Louis firm Johnannes/Cohen Collaborative, call for a 4,450-square-foot structure designed to complement the music department's Tietjens Hall.

The new structure (left, foreground), which attaches to Tietjens, contains about 850 more square feet than Blewett B. Like its predecessor, which was originally constructed to last only a few years, the new building has three classrooms and four studios/offices.

The new building has improved restrooms and meets all Americans with Disabilities Act requirements. As part of these requirements, the design includes an elevator with access to the second floor of Tietjens.
Campus, Community Join in DebateWatch

From learning about the candidates' personalities to selecting the most important issues discussed—and those that should have been—hundreds of DebateWatch participants at Washington University made their thoughts about the first of the 1996 presidential debates known both nationally and locally.

Though the University lost the chance to host a nationally televised presidential debate, enthusiastic crowds gathered at the John M. Olin School of Business and at the School of Medicine on October 6 to watch the debate between President Bill Clinton and former U.S. Senator Bob Dole. Afterward, the University contingent joined thousands of people nationwide in DebateWatch '96 groups of about a dozen members each.

William P. Darby, chair of the Department of Engineering and Policy who coordinated the greater St. Louis-area DebateWatch efforts, said the groups allowed people throughout the St. Louis area to participate in a broader dialogue on the debates and assume a larger role in influencing public policy and political agendas.

Rankings Boost WU, Business School

In September, U.S. News and World Report's 10th edition of "America's Best Colleges" placed Washington University 17th among 229 national universities. The John M. Olin School of Business is 17th among the nation's undergraduate business programs.

The ranking is the University's highest since the survey began in 1987. Positioned 20th each of the past two years, the University ranking has fluctuated between 18th and 24th since the inception of the rankings. Among the institutions ranked with Washington U. in the top 15 are Yale, Princeton, Harvard, Duke, MIT, Stanford, Dartmouth, Brown, Northwestern, and Columbia.

The University also ranked 22nd among top national universities in U.S. News' "Head of the Class" listing of institutions where faculty have an unusually strong commitment to undergraduate teaching.

In October, the John M. Olin School of Business was ranked 16th among Business Week's top 25 master's of business administration (M.B.A.) programs in the United States. This is the school's strongest showing in the history of the magazine's M.B.A. rankings.

The school placed third in overall improvement, third in terms of best placement office, fifth in showing greatest improvement in student satisfaction, and 12th in overall M.B.A. student satisfaction.

Junior Engineering Faculty Receive CAREER Grants

Two junior faculty members in the School of Engineering and Applied Science have been awarded Faculty Early Career Development (CAREER) grants from the National Science Foundation (NSF).

Philip V. Bayly, assistant professor of mechanical engineering, and Liyi Dai, assistant professor of systems science and mathematics, received awards based on proposals they wrote to the NSF. The
Elizabeth "Ibby" Gray Danforth (center) unveiled a commemorative plaque during the October 10 dedication of a butterfly garden in her honor. The bronze plaque reads: "Ibby's Garden. With Thanks and Appreciation to Elizabeth Gray Danforth. From the Woman's Club of Washington University. Dedicated October 10, 1996." The garden is just west of Stix International House.

Jan Kardos chaired the project, and Woman's Club President Lorraine Gnecco made the official presentation to Executive Vice Chancellor Richard A. Roloff.

"Ibby's Garden," which was designed by June Hutson, outdoor project coordinator at the Kemper Center for Home Gardening at the Missouri Botanical Garden, is stocked with a mixture of woody plants, perennials, and annuals.

Washington People

Theodore J. Cicero, associate vice chancellor for animal affairs and associate dean at the School of Medicine, has been appointed vice chancellor for research at Washington University. In his new role he serves on the University Council and leads the formulation and development of new research initiatives.

Richard L. Axelbaum, associate professor of mechanical engineering, is one of 20 U.S. researchers to benefit from $7 million in NASA grants for microgravity combustion research, sponsored by NASA's Office of Life and Microgravity Science and Applications.

Ercy E. Back, professor of finance in the John M. Olin School of Business, has been named the Vernon W. and Marion K. Piper Professor in Financial Economics at the business school.

Joel D. Cooper, the Joseph C. Bancroft Professor of Surgery at the School of Medicine, has received the American College of Surgeons' Jacobson Innovation Award in recognition of his work in lung transplantation and lung-volume-reduction surgery.

James L. Cox, the Evarts A. Graham Professor of Surgery and head of the Division of Cardiothoracic Surgery at the School of Medicine, received the 1996 Distinguished Scientist Award from the North American Society of Pacing and Electrophysiology. He was honored for devising and perfecting surgical treatments for cardiac arrhythmias.

Phillip E. Cryer, the Irene E. and Michael M. Karl Professor of Endocrinology and Metabolism and director of the Division of Endocrinology, Diabetes, and Metabolism at the School of Medicine, has been elected president of the American Diabetes Association.

Carol S. North, assistant professor of psychiatry, has received the American Psychiatric Association's Francis Bracecland Public Service Award for her work with the seriously mentally ill through public-sector service at three inner-city clinics.

James A. Waddle, research associate in genetics at the School of Medicine, has received a Burroughs Wellcome Career Award in the Biomedical Sciences. The $470,800 award supports his remaining postdoctoral work and the first three years of a subsequent faculty position.

Burton M. Wheeler, professor emeritus of English and of religious studies in Arts and Sciences, has been recognized for his 40 years of service by two awards named in his honor. The Burton M. Wheeler Fund for Improvement of Teaching will provide $20,000 annually to assist in improving introductory courses, and the University's Phi Beta Kappa chapter has renamed its Freshman Book Award the Burton M. Wheeler Freshman Book Award of Phi Beta Kappa.

CAREER program supports junior faculty within their overall career development. It combines the support of quality research with education. The program reflects the NSF's emphasis on the development of full, balanced academic careers that include both research and education.

Bayly will receive about $200,000 over four years to research the behavior of non-linear systems. Dai also will receive about $200,000 over four years to research ordinal comparison, a process of comparing relative performance orders of different designs.

Monster Cookies

Tony Edwards (L) and Joseph Westbrook pack giant-size cookies at the D.B. Cookie Factory, in downtown St. Louis. They and four others formed the cookie company in 1991 after Edwards, Westbrook, and co-founder Kenneth King participated in the Minority Youth Entrepreneurship Program (MYEP) at the John M. Olin School of Business. The program brings juniors from St. Louis-area high schools to the business school to learn about entrepreneurship. This year, the D.B. Cookie Factory provided cookies to 41 students in the 1996 MYEP class who sold them as a way to learn about sales. The University also bought the company's cookies for Orientation 1996.
Goldfarb Pledge Launches GWB Building

St. Louis businessman and philanthropist Alvin Goldfarb, B.S.B.A. '37, has pledged $3 million to Washington University toward the construction of a much-needed building for the George Warren Brown School of Social Work. The new multipurpose structure, to be named Alvin Goldfarb Hall, will double the space currently available to the social work school.

"I believe that social workers perform an increasingly important function in society," says Goldfarb, retired president of Worth Stores, Inc., a St. Louis-based retailer of women's apparel, and of the Alvin Goldfarb Foundation. "I hope that this gift will get the new building off to a great start." Goldfarb and his late wife, Jeanette Rudman Goldfarb, M.S.W. '36, have been long-time, generous supporters of the University and St. Louis community.

The construction project has been designed by Kallman, McKinnell & Wood Architects, Inc. The four-floor building, which will stretch along the south side of Brown Hall on Forsyth Boulevard, will be made of red granite and limestone that will closely match the stone in Brown Hall. The estimated construction time is 16 months; completion is expected in December 1997. The entire project will cost an estimated $13 million.

Clinical Depression "Footprints" the Human Brain

Depression affects about 15 percent of all people in the United States at some point in their lives. Now, School of Medicine researchers have identified an anatomical difference in depressed patients' brains. The difference—believed to result from high concentrations of stress hormones—may help explain why some patients tend to get depressed many times during their lives.

In a recent issue of the Proceedings of the National Academy of Sciences, principal investigator Yvette J. Sheline, assistant professor of psychiatry, of neurology, and of radiology, reports that the size of the brain's hippocampus, a structure involved in learning and memory, was smaller in women who had been clinically depressed compared with women who never have suffered a depressive episode, and that the more times a woman had been depressed, the smaller her hippocampus was likely to be.

Sheline said the data could mean that depressive episodes relate to one another. A depressive episode may leave "footprints" in the form of damaged neurons. Such damage may make a patient vulnerable to future depression, which would explain why depression recurs in some people months or years after treatment.
North Named First Olin Professor in Arts and Sciences

Economist Douglass C. North, co-recipient of the 1993 Nobel Memorial Prize in Economic Science, was installed October 3 as Washington University's first Spencer T. Olin Professor in Arts and Sciences.

"I am delighted that Washington University has chosen to recognize my work in economics with an appointment as the first Spencer T. Olin Professor," North said. "For me, this appointment is just another sign that the University continues to provide strong support for Arts and Sciences, both in the classroom and for scholarship in the field."

The chair was created with a gift from the estate of the late Spencer T. Olin, a St. Louis businessman and philanthropist who served for many years on the University's Board of Trustees.

North received the Nobel Prize for his research on the economic history of the United States and Europe, as well as for his contributions to the understanding of how economic and political institutions change over time.

North spent 33 years on the economics faculty at the University of Washington in Seattle before joining Washington University in 1983 as the Henry R. Luce Professor of Law and Liberty in Arts and Sciences. From 1984 until 1990, North served as director of the University’s Center in Political Economy.

Research Notes

Tendon injuries and healing
Richard H. Gelberman, the Fred C. Reynolds Professor and head of the Department of Orthopaedic Surgery at the School of Medicine, has received a four-year, $1 million grant from the National Institute of Arthritis and Musculoskeletal and Skin Diseases (National Institutes of Health) to study flexor tendon healing. According to the National Safety Council, approximately 30 percent of workplace injuries are to hands and fingers. Of those, more than 350,000 require extensive tendon surgery.

Molecular biology and digestive tract proteins
David H. Alpers, professor of medicine at the School of Medicine, has received two grants, totaling $7.8 million, from the National Institute of Diabetes and Digestive and Kidney Diseases (National Institutes of Health) to conduct research on the molecular biology of proteins in the digestive tract. The research areas range from regulating production of different cell types lining the stomach to fatty-acid metabolism and how genetic mutations cause disease.

Menière's disease and the inner ear
Alec N. Salt, associate professor of otolaryngology at the School of Medicine, has received a four-year, $1.6 million grant from the National Institute on Deafness and Other Communication Disorders (National Institutes of Health) to continue research into inner-ear fluid interactions. The project's co-investigator is Barbara A. Bohne, professor of otolaryngology. Much of the research focuses on Menière's disease, which disturbs regulation of inner ear fluids and causes vertigo, low-frequency hearing loss, and a ringing or full feeling in the ears.

Angiotensin interaction and reception
Garland R. Marshall, professor of molecular biology and pharmacology and of biochemistry and molecular biophysics at the School of Medicine, has received a four-year, $1.2 million grant from the National Heart, Lung, and Blood Institute (National Institutes of Health) to study the way the hormone angiotensin interacts with its receptor on cell surfaces. Angiotensin makes blood vessels contract when it interacts with receptors on blood vessel walls, so studying this interaction could form the basis for new high blood pressure medication.

Treating killer tuberculosis
David G. Russell, associate professor of molecular microbiology, has received a $1.3 million grant from the National Heart, Lung, and Blood Institute to study the life cycle of the bacterium Mycobacterium tuberculosis, which kills 3 million people worldwide each year—more than any other infectious organism. Research will focus on how the bacterium survives inside normally defensive white blood cells and how the bacterium's proteins change when it reproduces.

Procter & Gamble aids Total Quality Schools
The John M. Olin School of Business has received a $120,000 grant from Cincinnati-based Procter & Gamble through the company's Curriculum Development Grant program competition. The three-year grant will support the school's Total Quality Schools program, a curriculum-based consulting program aimed at improving public elementary and secondary education in the St. Louis area.
Washington University's superb teachers have changed the lives of the many students who have learned from them. Here, three alumni describe faculty whose lessons will last a lifetime.

**Richard Stang, Professor of English**

Ken Lauter:

"Dick Stang is, quite simply, the finest teacher I've ever known. His reading is vast, his ear for language exquisite, his passion for literature boundless—and his heart is large. Once a student of the eminent literary critic Lionel Trilling, Dick's sheer intensity of engagement is a beautiful and sometimes awesome thing to behold. His classes were often so rich and vibrant it seemed that Dick was the medium in a seance: Great writers were in the room with us—speaking through him.

"Years later, I dropped in on his classes on Shakespeare and Pirandello. The Stangian fire and precision were as strong as ever, and the X-Generation students as spellbound as I had been some two decades earlier.

"Dick has not been fazed by the deconstructionist mania. He doesn't worry about whether the Self is a text, etc. He's too busy understanding texts (and he would prefer the term *books*). This is a rare attitude these days, but Dick's scholarship has always been directed at only one thing: serving the author.

"A modest man, Dick may be chagrined by such words. He shouldn't be, though—the light he produces is real, the minds it touches greatly illuminated, and the University's singular mission in society confirmed by its brilliance."

**Roland W. Bockhorst (1905–1995)**

*Professor Emeritus of Architecture*

Jamie Cannon:

"Roland Bockhorst was one of my heroes. I met him in my first class on my first day at Washington University. The class was descriptive geometry. It is the nature of descriptive geometry not to be the greatest subject you can learn at a university, but Bock made the subject both special and very, very interesting.

"He was the greatest natural teacher I've ever known. He commanded the attention of a class because you wanted to hear what he had to say. He was quick to support and slow to praise. But when that praise came, you felt better for a week. You wanted him to believe that you had promise. You also wanted him to know how much he meant to you. But he simply was disinclined to accept praise.

"After graduation, Dan Gale [B.Arch. '57] and I started a small firm that lasted about two years in the early 1960s. When we ran into problems, we would go see Bock and show him what we were trying to do. Then he would make this oohing sound and comment that both of us must have been absent the day he covered that issue in class. But then he'd chuckle and show us how the detail could be made to work.

"When the St. Louis chapter of the American Institute of Architects gave him one of the five or six gold medals awarded by the chapter in a century, he spent his portion of the awards ceremony explaining why Professor Lawrence Hill should have received the award. Today, Bock might well be on God's staff in charge of their building program; if that is the case, there will be no exposed concrete foundations in heaven!"

**Franz A. "Pop" Berger (1878–1964)**

*Professor Emeritus of Mechanical Engineering*

Elmer Lueckather:

"I truly felt so honored to go to Washington University. I was absolutely flabbergasted at the place. After I graduated I always managed to get the cream of the technical work, because I could figure out the problems a little better than anyone else. That was because of my terrific education.

"Everything at Washington U. impressed me: the students, the professors, the campus. I had a lot of excellent teachers, and Professor Berger was probably the nicest guy out there.

"I had him for machine design in my third year. I was shy when I was in school—I studied so hard—and Professor Berger was like an old shoe. All the students loved him. He was everybody's friend—very personable, and not at all aloof. He acted as if he were one of us. He was such a compassionate person that I believe he would have been sincerely disappointed if any of us failed to make a good grade. He was like a father to us—that's probably why he was nicknamed Pop.

"He was so enthusiastic about machine design and presented it so well that he was an inspiration to all of us—which was why it was easy to receive a good grade. Inspiring students to learn is the mark of a great teacher."

**Ken Lauter** is a poet, environmental activist, and former assistant dean at the University of Arizona. A doctoral student in the English department in the 1970s, he lives near Oklahoma City with his wife, Judy, Ph.D. '79.

**Jamie Cannon**, B.Arch. '60, is senior associate at Jamie Cannon Associates, Inc. He and his wife, Mary Jo Cable Cannon, A.B. (journalism) '53, live in Town and Country, Missouri, in the middle of an acre of big woods.

**Elmer Lueckather, B.S.M.E. '36**, is a retired aerospace engineer whose many projects included tracking the reliability of the Apache helicopter used in Desert Storm. He lives in St. Louis.
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To help secure the future of Washington University, here is sample bequest wording that you may wish to share with your attorney:

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(Cash Bequest) the sum of ______________dollars ($______________)

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(Percentage of Estate) ______percent (___%) of the residue of my estate.

I request this bequest be used by the University (or the School of ________________)
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- Benefit your family
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- Help secure the future of Washington University
Say “Jacob Schaefer” to scientists, and they think of nuclear magnetic resonance. Say the name to his chemistry students, and they speak of his commitment to teaching and research.

Sue Holl, a former graduate student of chemist Jacob Schaefer, once had the job of measuring the distance between a carbon atom and a fluorine atom in a compound of amino acids called emerimicin. She put a thumbnail-sized sample inside a giant magnet resembling a 50-gallon drum and spun it with a machine at 200,000 revolutions per minute—faster than a dentist’s drill bit—for 24 hours.

Schaefer told Holl to call him as soon as she came up with a measurement of the atomic gap. “It may be pretty late in the day,” she replied. “Never mind that,” said the 6-foot-5-inch Charles Allen Thomas Professor of Chemistry, in Arts and Sciences.

Finally, at 1:30 a.m., Holl rang Schaefer with her results. Schaefer had been waiting for the call. “That’s typical for Jake,” says Hall, now a materials engineer with Intel Corporation, the California-based microprocessor manufacturer. And his enthusiasm is typical of someone with a mission.

Schaefer’s intention is to perfect and popularize the research tool used in the emerimicin experiment—solid-state nuclear magnetic resonance (NMR). Schaefer didn’t invent it, but he is associated with it in the way Anton von Leeuwenhoek’s name is virtually married to the microscope.

For more than two decades, Schaefer has been showing an often skeptical scientific world how solid-state NMR can reveal the chemical structures of substances as diverse as coal and ivory—materials previously written off as indecipherable. And after two decades, the prospect of discovery still keeps him up at night.

“Jake has a great thirst for knowledge—that’s just one reason he’s a role model for students,” says Edward S. Macias, executive vice chancellor, dean of Arts and Sciences, and a former chair of the chemistry department.

Schaefer’s scientific specialty is a niche of a broader technology that has equipped hospitals with magnetic resonance imaging (MRI) machines,
which outperform X-rays in studying human tissues. Whatever the application, NMR hinges on the fact that the nuclei of one third of all atoms spin like tops and consequently create magnetism—a "magnetic moment," in scientific parlance.

In NMR, developed in the late 1940s, these nuclear tops are inserted in a separate magnetic field, which makes them tilt. So far, this manipulation amounts to high-tech child's play. But when you irradiate these spinning, tilted nuclei with radio waves, the play becomes provocative. The nuclei tilt at a new angle and generate an electrical signal in a coil. Each kind of atom emits these signals at a characteristic frequency and therefore creates a distinct electromagnetic spectrum. By studying spectra, scientists can diagram a material's molecular structure—a carbon atom connected to a nitrogen atom here, an oxygen connected to a hydrogen there. As Schaefer often says, "Spectra don't lie."

Solids were the first materials investigated with NMR, but then chemists found they could gather more detailed information if the solids were dissolved—so-called solution-state NMR. However, many biological solids—such as wood—are insoluble, so solution-state NMR is of no avail. Many are noncrystalline, which excludes them from X-ray crystallography. Until recently, chemists assumed they wouldn't figure out the chemical structure of many such substances. "It was pretty frustrating," says Schaefer.

Meanwhile, NMR involving undissolved solids remained a sideshow in chemistry, despite a breakthrough in the late 1950s. Researchers working independently at both Washington University and the University of Nottingham, in England, discovered that they could increase the technology's resolution by spinning a solid at high speed inside the NMR magnet at a 54.7-degree angle to the machine's magnetic field. The technique was dubbed "magic angle" NMR, but nobody exploited the magic until Schaefer's pioneering work as a Monsanto chemist in the 1970s. Combining the "magic angle" technique with other refinements, Schaefer turned out a prodigious amount of solid-state NMR research, studying coal, soybeans, soil, and—most notably—polymers in plastics.

OPTING FOR TEACHING AND BASIC RESEARCH

By the time he joined Washington University in 1986, Schaefer had built an international reputation as Mr. Solid-State NMR. "One of the main reasons I came here is to pass on to students what I know about NMR," he says. "Coming here also allowed my doing basic-science NMR—there aren't many opportunities like that."

Schaefer's lab occupies a suite in Louderman Hall. Here, he and four post-doctoral fellows, two graduate students, research professors Tomasz Kowalewski and Lynda McDowell, and electrical engineer Robert McKay tend six NMR units, which range in price from $250,000 to $1 million. While most of the NMR components are commercially available, others are not. McKay, for example, builds the probes that are loaded with sample materials and fitted inside the magnets.

The magnets are the main attraction. The largest, part of a federally funded NMR unit that McKay is assembling, is a shiny, seamless steel hulk that stands 10 feet tall. It exudes so much invisible power that visitors are
advised to shed their wallets before they enter the room lest data on magnetized credit cards become scrambled.

For laypeople, the big magnet represents one of the few easily accessible concepts in a technology that assumes you understand phase coherence, free precession, and the Larmor relationship. "Hold this pair of scissors about five feet away from the magnet," says Schaefer. Your hand feels a strong tug. The scissors would crash into the magnet if you let them. Schaefer grins. It's an elementary magnetic moment.

Schaefer and his research team have spun a bewildering variety of biological solids inside the magnets. With the shrewdness of a former industrial chemist, Schaefer invariably chooses materials that, if better understood, might solve a practical problem. The lab team, for example, has figured out the chemical structure of a protein glue that mussels and barnacles make to attach themselves to ship hulls and pipes. The Office of Naval Research helped fund this project because it wants to develop new, nontoxic hull coatings that will repel barnacles.

Similarly, Schaefer's NMR studies have suggested a way to eradicate cockroaches. "The shell of a cockroach is built with chains of proteins, carbohydrates, and other components," says Schaefer. "These chains connect to each other at different spots. This cross-linking that toughens the shell. With NMR, we've discovered where the connections are. If you could prevent the chains from cross-linking, you might be able to keep cockroaches from maturing."

Such short-term successes, he says, sustain him as he pursues his long-term goal of developing solid-state NMR to maturation and acceptance. "I think we'll get there in 10 more years," he says. "That motivates all the work I do. Only about 20 labs are engaged in the kind of intense solid-state NMR research that we do at WU. Some researchers balk at using NMR because they have to make some equipment from scratch. But when they're convinced that this technology is important, the manufacturers will give them whatever they want. Biologists and biochemists, I believe, will jump on the bandwagon once they understand how solid-state NMR can map proteins and enzymes, which will have great implications for the pharmaceutical industry."

Schaefer's tenacious advocacy of solid-state NMR doesn't surprise friends who know him as an intensely competitive tennis and softball player. There's a lot of the gamester in Schaefer, whose father was a professional billiards player, preoccupied with his own set of spins and angles. As a scientist, Schaefer puts great stock in the determination to succeed. That's what he looks for in his students.

"All advanced students have the technical skills," he says. "But you want a student who is turned on and dedicated. When you have that combination, you know the obstacles you encounter in a project will be overcome."

Like other students, Susan Holl says Schaefer's determination rubbed off on her.

"I took on experiments with him that I thought wouldn't pan out, and I might have given up earlier if it weren't for him," says Holl. "Instead, I worked harder, and the projects were a success. So now, I'm less likely to give up on my long-shot projects at Intel."

Schaefer is his own magnetic field, a quiet, reorienting influence on the students who enter it, whether they're working by side with him in the lab or eating brown-bag lunches together on campus.

"I always tried to learn from him," says Chris Klug, a former post-doc under Schaefer and now assistant professor of chemical engineering at Stanford University. Klug recalls how the otherwise intense researcher became a calming, soothing consensus-builder during sometimes heated debates. "I was impressed with how he could deal with a wide range of people."

Research assistant professor Lynda McDowell, who earned her Ph.D. in chemistry at Washington University in 1991, appreciates his concern with the big scientific picture. "He sat on my thesis committee. He asked tough questions, but they weren't nit-picking, like 'How did you set the knob on this machine?' They were fundamental questions: 'What's the basic idea? Why is it important?''"

Schaefer extends himself beyond the role of researcher to make a difference in students' lives. He teaches basic chemistry to freshmen and mentors graduate and postdoctoral students who want to operate their own labs. "He's always helped me and others position ourselves for our careers," says Klug.

One of Schaefer's greatest contributions to students, however, is the example he unfailingly sets. Susan Holl is still amazed by the time she left Schaefer's lab one night at 10 and returned the next morning only to find a note from him commenting on her latest data. Turns out Schaefer had been walking his dog, Daisy, around midnight, and he just couldn't resist the urge to stop by the lab and see what solid-state NMR had been doing lately.

For Jacob Schaefer, the pull is a natural property of his mission. [W]

Robert Lowes, A.B. '75, is a free-lance writer in St. Louis.
Wherein musicologist Craig Monson
Discover a 16th-century manuscript in a Florentine museum
Becomes a Renaissance scholar in scope as well as subject
And publishes an acclaimed book on the surprising role of music in the lives of nuns in early modern Europe.

BY CANDACE O'CONNOR

Craig Monson at his "desk"—an old Karapapak camel bag from the Caucasus.
en years ago, Craig A. Monson had just finished a busy summer in Venice gathering information on early Italian opera, when he decided to take a long-overdue vacation. On a whim, he chose Florence; on another whim, he stopped by the city’s Museo Bardini to have a look at their musical instrument collection.

“Quite unexpectedly, I came upon a 16th-century music manuscript on display,” says Monson, professor of music and chair of the Department of Music, in Arts and Sciences. “I naturally assumed that someone must have worked on it; surely anything in Florence has been discovered and picked over. But, just in case, I checked—and it turned out that no one had.”

The manuscript bore an obscure coat of arms, which Monson eventually traced to the prioress of the Bolognese convent of Sant’Agnese. He returned the following summer and delved more widely into Bologna’s convent archives. There he found tantalizing references to Santa Cristina della Fondazza, another convent even more renowned for its music, and to an extraordinary but nearly forgotten nun, Lucrezia Orsina Vizzana, who had managed to acquire a musical education and then compose a collection of 20 sacred motets, which she published in 1623.

And this whole series of “happy accidents,” as Monson calls them, led eight years later to publication of his 1995 book, *Disembodied Voices: Music and Culture in an Early Modern Italian Convent* (Berkeley: University of California Press). It focuses on the nuns of Santa Cristina, whose internal rivalries—rooted in disputes over music—erupted into fierce struggles with church officials and even with the pope himself. And it features the talented, sensitive Lucrezia Vizzana, who was so troubled by this turmoil that she never published again—and finally descended into madness.

This theme—religious women in the Renaissance and the role that music played in their lives—has figured prominently in Monson’s recent work. It was also the subject of a 1992 collection of essays he edited, *The Crammed Wall: Women, Religion, and the Arts in Early Modern Europe* (Ann Arbor: University of Michigan Press), a book praised by reviewers as “extraordinary” and “inspiring.” Both books reveal that the cloister offered a place for literally thousands of 16th- and 17th-century women singers, instrumentalists, and composers to find respectable careers. Monson suggests how nuns used music and other arts to forge affective—and in a broad sense, political—links with networks in the world beyond the convent wall. The arts thus offered them indirect, somewhat ambiguous, but often effective means of influence, to work toward their goals.

Exploring this theme has meant that Monson has had to move beyond musicology to other areas: politics, religion, gender studies, and social history. His range has impressed his colleagues. “Craig Monson is one of the most gifted musicologists I know,” says Jane A. Bernstein, Austin Fletcher Professor of Music at Tufts University. “I am truly amazed by the breadth of his knowledge and his interests both inside and outside the field.”

Former Washington University graduate student Antonia Banducci, Ph.D. ’90, now assistant professor of music history at the University of Denver’s Lamont School of Music, wrote her dissertation under Monson’s direction. “His expertise was not in my immediate area,” she says, “but he was so bright and perceptive that he could ask exactly the right questions to help me grapple with the content.”

In Monson’s own writing, he tries to produce work that is stimulating for scholars and yet enjoyable for nonspecialists. “The tricky thing is that many people have no background in music,” says Monson. “All you have to do is write C# and they’ll say, ‘oh, you’re being so technical.’ Since I’ve often taught non-music majors here, I’ve become sensitive to the need to explain clearly the impact of a musical piece.”

Monson, born in Texas and raised in northern California, originally intended to be an archaeologist. At Yale, Oxford, and the University of California, Berkeley, where he received his Ph.D., his career changed focus. But the painstaking research for *Disembodied Voices*—most of it in Bolognese and Vatican archives—was a lot like archaeology after all.

“There are things mentioned in early inventories that you can spend days trying to track down—only to discover that they have disappeared,” he says. “Or you can check the lawyers’ records of Bologna; in the 18th century, huge indices of these records were compiled by name. But they were only alphabetized by first letter,
Hundreds of pages of archival documents are stored in Monson's portable computer.

so you'll go through hundreds of pages of Vs looking for the occasional Vizzani, and then hope to find the right first name. It's like needles in haystacks."

From these scattered shreds he stitched together the history of Santa Cristina, one of two dozen Bolognese convents in the 16th and 17th centuries. During this period, a seventh of all Bolognese women lived within the cloister; the percentage was still higher among the upper classes. Patrician families often married off one or two daughters and then sent the rest to a convent, in order to save money on dowries and safeguard the family patrimony.

Before the Council of Trent (1545–63), nuns from wealthy families enjoyed a degree of freedom: bringing servants with them and going home to visit their families. But after Trent, all that changed, as enclosure rules were strictly enforced. "They had to find ways around these restrictions," says Monson, "and music was one way of bridging the wall." Nuns—carefully concealed behind barred windows and walls—would sing and play before largely upper-class audiences, who apparently flocked to hear the invisible singers.

Lucrezia Vizzana grew up in that world. She was sent to Santa Cristina after her mother's death in 1598, when she was only eight years old. Three aunts were already in residence; Lucrezia was probably trained by one of them and even, in defiance of diocesan prohibitions, by an outside music master.

Publishing a collection of motets made Lucrezia unique among the nuns of Bologna. And her pieces, inspired by her piety, "are distinctive and compelling enough today that they stand up to repeated hearings," says Monson. "Some are very fine. But they are not all equally good. In some places there are rough bumps and you think, 'Yikes, that didn't work too well, did it?'"

After reading Monson's book, Deborah Roberts of Musica Secreta, a small group of women singers from the internationally known mixed choral ensemble called the Tallis Scholars, contacted him and has arranged to record all 20 motets. A few of the works recently appeared as part of a collection called Canti nel Chiostro (Songs Within the Cloister), recorded by a group in Bologna that specializes in nuns' music.

Sadly, Lucrezia never published again. For decades, she and the other nuns were embroiled in a bitter power struggle with church officials, who tried to curb their musical expression and bring Santa Cristina under their control. The convent finally closed in 1799 and was later used as an army barracks. After decades of abandonment and neglect, the city of Bologna has just begun to restore it, pulling off false ceilings to rediscover the glorious frescoes that Lucrezia once knew.

Monson, whose research interests center on Renaissance and early Baroque music and have resulted in three books to date, as well as editions of five volumes of 16th- and 17th-century music and numerous articles, now uses some of Lucrezia's pieces and other nuns' music in his classes to illustrate early 17th-century style. He looks forward to more time in the classroom when he steps down in January after three and a half years as music department chair.

"As chair, Craig has weathered the inevitable storms with Apollonian calm," says Hugh J. Macdonald, Avis Blewett Professor of Music and incoming chair. "One example is our new music department building, finally under way after 18 months of planning; he has borne this stress like a hero. Stepping down will also allow him to do more teaching, which is good news for our students, since he is a highly accomplished scholar and brilliant teacher."

At the moment, Monson—who is already fluent in French, German, and Italian, with a good reading knowledge of Latin—is learning Navajo for a renewed interest: music and ceremony among Native Americans of the western United States. Next spring, he'll teach an undergraduate course on this topic—a new venture, he says, which has him "alternately excited and panicky."

Over the years he has built two harpsichords and restored two 19th-century houses, filled with early American antiques, oriental rugs, and tribal weaving. He also greatly enjoys singing in the Gateway Men's Chorus.

In March Monson will perform the title role—a speaking role, as he is quick to point out—in Mozart's The Impresario, featured in the music department's annual Opera Double Bill.

There's never enough time for everything. Yet, like any good scholar with more territory to cover, "there's always the fascination with the search," he says.

Candace O'Connor is a writer who lives in St. Louis.
Like the keyboard musician he is, Philip Dybvig, the Boatmen's Bancshares Professor of Banking and Finance in the John M. Olin School of Business, knows the importance of theory. But Dybvig is not content with analyzing models, extrapolating data, and developing elegant theories. He wants his research not only to inform students and scholars but also to influence and facilitate the work of practitioners in the field of finance. "I have a direct obligation to my students to expose them to the best ideas, and I publish my contribution to knowledge for my peers," he explains. "But when practitioners read academic papers, the mathematics is a barrier." So Dybvig "translates from jargon to jargon," recasting the academic research in the idiom of investment directors and chief financial officers. "Practice and abstract theory are very close in my area of finance," he explains. "That is why I like this field."

The practical value of Dybvig's scholarship was underscored in October when The Common Fund, which manages $17.5 billion in investments for some 1,500 educational institutions, awarded him its first Common Fund Prize. Created to encourage research useful to managers of educational endowments, the $50,000 grant rewards Dybvig's proposal to develop and translate his work on the optimal link between a school's investments and expenditures.
“Managing university endowments involves two broad tasks,” Dybvig explains. “One is asset allocation—choosing what proportion of the endowment goes to different asset classes like common stocks, government bonds, foreign stocks, and real estate. The other task, the spending rule, specifies how much of the endowment can be spent as part of the annual budget.”

Traditionally, the spending rule has been some moving average of the portfolio value, and asset allocation has not been based on spending. “I am proposing that the spending rule and the portfolio strategy be closely coordinated to protect essential expenditures,” Dybvig says. “This implies that the investment policy should become more conservative after bad results, but spending should decline by a smaller proportion than the decline in value of the endowment. Also, when the endowment value increases beyond the previous maximum, spending should increase more than it would in response to the same increases if they were below the previous maximum.”

Dybvig has been awarded The Common Fund Prize, created to encourage research useful to university investment managers.

Dybvig’s previous studies have explored this relationship between asset allocation and spending policy, and have shown that the key is to cover relatively fixed expenses through a mix of less risky assets, particularly in hard times. Conversely, schools should be able to invest in a more aggressive asset mix and increase the expenditure level during periods of strong investment results or when additions are made to the endowment. Once the new level is established, Dybvig says, investment policy should ensure its stability while still taking prudent advantage of the rewards to risk-taking in the stock market.

Noting that the mission of The Common Fund is “to provide incisive investment research on endowment and cash management,” Robert L. Bovinette, president and chief executive officer, called Dybvig’s model “an important contribution to the critical relationship of investing and budgeting.”

“What a deal!” says Dybvig. “Not only are they paying me to communicate to practitioners in the way I like to do, but they are helping me develop the new piece, and will help me publicize the final product.”

Among Dybvig’s recent articles published in a format for practitioners is “Pricing Long Bonds: Pitfalls and Opportunities.” Written with adjunct professor of finance William J. Marshall, B.S.B.A. ’70, M.B.A. ’73, Ph.D. ’77 (now chief operating officer at NISA Investment Advisors LLC, in St. Louis), the 1996 article in Financial Analysts Journal is an example of esoteric theory applied to the nitty-gritty of investment management. The authors grapple with the need to accurately assess the value of long-maturity bonds, which “immunize” portfolios that fund long-term obligations such as defined-benefit pension payments. Through formal analysis, Dybvig and Marshall identify, for example, “large errors that can arise from the usual intuitive arguments.”

Another paper that managers can immediately use to optimize return and minimize risk is Dybvig and Marshall’s “The New Risk Management: the Good, the Bad, and the Ugly,” to be published by the Review of the Federal Reserve Bank of St. Louis, where Dybvig has served as an Academic Visitor. The “old” risk management primarily covered buying insurance and avoiding lawsuits, Dybvig explains. The “new” risk management adds tools from option pricing that permit the use of financial securities to hedge a variety of different risks within the firm. “Although not a completely new concept, companies are using financial markets much more extensively than before for hedging risks,” he says. “Corporations hedge interest rates, commodity prices, and foreign exchange risks, in some cases using very sophisticated strategies.”
Expanded corporate involvement in financial markets has not been without danger, of course, as banner headlines over the past five years have confirmed. But Dybvig points out that “companies that blew up did not hedge; they speculated.” Their article, he says, “talks about what management should think about when hedging in derivatives markets. The article tries to explain the ideas and what you can do—the amount to hedge, the problem with hedging, and the necessary controls and oversights.”

“Like chainsaws to logs” is Dybvig’s take on the tools he and Marshall describe. “It’s possible to misuse these financial tools,” Dybvig says, “but if you’re logging you’ve got to use a chainsaw. It’s a powerful, industrial-strength tool that you have to use—with care—to stay competitive.”

Bill Marshall is one of many people in financial markets Dybvig keeps in touch with in order to stay current. In fact, he probably speaks more about finance with practitioners than with other academics. Still, he bemoans the loss of finance professors to Wall Street: “I don’t see my buddies anymore—or when I do, we can’t talk about finance because their work is proprietary.”

Among Dybvig’s many sources are former vice chancellor and director of investments Richard Anderson, now at Kennedy Capital Management, Inc., in St. Louis; Roger Weston, M.B.A. ’67, who owns Greatbanc, Inc., in Chicago; William Drobny, of Barclays Global Investors, in San Francisco; and Paul Jacobson, of the investment bank Deutsche Morgan Grenfell, in New York City. And whenever he is preparing a new course, he sends the materials for comment to his former student Anita Escott, M.B.A. ’89, now with A.G. Edwards, in St. Louis.

He would be comfortable on a trading floor, Dybvig says, but he wants to be a scholar, not a practitioner, at least for now. “Learning about the area and helping students take enough of my time,” he says. “I’m a teacher or a practitioner—not both.” He’s been in front of a classroom ever since he was an undergraduate teaching assistant in the physics labs at Indiana University. “I always found the best way to learn something is to teach it,” he says.

Dybvig received his Ph.D. in economics from Yale in 1979 at the age of 24, and was on the faculties of Princeton and then Yale before coming to Washington University in 1988. He is still struck by the radical change required to shift from doctoral student to professor. The qualities of a good doctoral candidate—“a stubborn, rigid, competitive loner with very high standards and no time for compassion”—oppose the very qualities of a good teacher,” he says.

Dybvig has had to overcome his own description; to some extent, but for him an even higher hurdle has been “conceptualizing a student’s having trouble with basic algebra.” He’s had to learn by trial and error what is easy and what is hard for students. “That requires the desire to understand, and it requires time so a teacher can actually learn what a student is up to, to find out what persuades a student.”

Finance and economics major Jim Kragenbring needed no convincing; Dybvig’s international research reputation prompted the senior to sign up for his new course in computational finance. “Phil put the technical side of his research on our level so we could understand it,” Kragenbring says. “He taught us to use our finance knowledge to come up with approximations of very complex problems. It was challenging.”

Dybvig is a leader on many fronts, says Olin School dean Stuart I. Greenbaum—especially in developing new and innovative courses, which Dybvig then hands over to colleagues. Dybvig has helped make the finance group one of the school’s strong suits, Greenbaum says, and is influential and constructive in other departments across the University. “It would be an understatement to think Phil’s influence is only in finance,” Greenbaum says. “His interests are eclectic.”

Phil Dybvig’s spheres of influence continue to expand. “One of the things I’m especially interested in is how taxes figure in investments,” he says. “That’s an area where I’d like to help practitioners.”

Martha Baker is a freelance writer in St. Louis.
Making Sense
of the SENSORY SYSTEM
By Kathryn S. Brown

TODAY, MOST SPINAL-CORD INJURIES MEAN LIFELONG PARALYSIS. BUT TOMORROW, IF NEUROLOGY RESEARCHER MARK JACQUIN HAS HIS WAY, THE PROGNOSIS MAY CHANGE.

T
he equestrian competition was under way. Actor Christopher Reeve, a well-trained and cautious horseman, was enjoying his ride on the lovely spring day. The crowd was cheering. Then tragedy struck.

Reeve's horse abruptly stopped, a split-second before a jump, and the Superman star was thrown to the ground, crushing bones in his neck. Reeve injured his upper spinal cord, cutting off vital nerve messages between his brain and most of the rest of his body. Instantly, he was paralyzed.

Some 13,000 spinal-cord injuries occur in the United States each year. Researchers hope that ongoing nervous system studies will one day allow them to heal spinal-cord injuries, resuming communication between devastated nerve cells.

In order to do that, however, scientists have a lot to learn about basic sensory systems. How are sensory circuits organized in the brain? How do sensory-related patterns in the brain develop? How do those patterns change when the nervous system is injured? And how do you fix that system when it's broken?
Such questions fuel research in the laboratory of Mark Jacquin, a research professor of neurology at Washington University's School of Medicine. Armed with a new $1 million grant from the National Institutes of Health (NIH), Jacquin is performing a series of experiments on rats, whose whiskers—like the human eye—send sensory messages to the brain as the animals navigate their environment.

"It's an elegantly simple and easy-to-use system," Jacquin explains. In a carefully controlled lab environment, Jacquin and colleagues wiggle a rat's whiskers, studying the resulting electrical stimulation in the brain. The researchers compare the brain activity to that occurring when a rat—exploring the environment—actively wiggles its own whiskers.

By studying how brain cells develop and respond to sensation in rats, Jacquin hopes to understand similar goings-on in the human brain. "All mammals have similar brain mapping [patterns]," he says. As Jacquin learns about normal sensory communication, he can better study communication gone awry.

Last year, for example, Jacquin reported that losing a whisker—again, equivalent to losing a human eye—hinders the development of brain cells that deliver information about an animal’s surroundings. In that experiment, Jacquin and colleagues trimmed the whiskers on one side of a rat's face daily from birth. The neurons on the trimmed side of the face overreacted to stimulation, indicating that the rat was unable to determine just where the stimulus was occurring.

Whether wiggling whiskers, trimming whiskers, or administering drugs to whisker-related brain pathways, Jacquin has been exploring mammalian sensory systems since his arrival at Washington University in 1994. Even before that, he was collaborating with Thomas Woolsey, professor of experimental neurological surgery and the George H. and Ethel R. Bishop Scholar in Neuroscience. Twenty-five years ago, Woolsey discovered that the pattern of whiskers on a rat's face is mimicked in the brain by clusters of neurons called barrels. Together, Jacquin and Woolsey explore the impact of sensations and injury on the development on circuits of cells in the brain.

"Synergy is the critical word in describing our relationship," Woolsey says. "The whole is greater than the sum of its parts. Mark has broadened our thinking. For example, he got us thinking about the role of trophic [essential nerve cell] factors in the development of the brain."

Indeed, Jacquin has broadened his own thinking over the years. He started out as an undergraduate interested in clinical psychology. But in the 1970s, the field of neuroscience—emphasizing the bridge between biology and behavior—began to grow popular. Jacquin shifted with the tide.

TOGETHER, NEUROLOGY RESEARCHERS AND STUDENTS SHARE IDEAS AND SPAN THE RANGE OF QUESTIONS.

Mark Jacquin's ongoing research is a resource for colleagues like research associate Hong-Xin Dong.

"I got fascinated with the ability of scientists to explain behavior in animals," Jacquin recalls. "I started making lesions in the [rat] brain to study feeding behavior. Lesions in the trigeminal system (a series of nerve cell pathways) seemed to be the most profound. I wanted to know why."

Jacquin's curiosity eventually led him to the neurology department. Here, in a crowd of medically trained researchers, his versatility has paid off. Students and researchers in various neurology labs share ideas and equipment. "Together, we can span the range of questions," Jacquin says, noting that researchers approach sensory communication from molecular to system analysis.

The atmosphere, too, is versatile. In order to spend time with his two sons, aged 10 and 12, Jacquin creates his own schedule. Up by 5 a.m., he typically works until 3, when he goes home to see the kids. He then returns to the lab in the evening. Put simply, Jacquin says, "My kids come first."

During the new experiments on active and passive touch sensation, Jacquin and colleagues hope to learn about developmental windows of time in a young animal's life. Sensory circuits in the brain operate on a bit of a "use it or lose it" mentality: If a young rat often twitches its whiskers, the corresponding network of brain cells literally grows bigger and stronger. But this reaction occurs only early in life. As mammals develop, brain cells mature and simply stop growing. Jacquin, Woolsey, and colleagues hope to learn the time frame in which brain cells benefit from sensory experiences.

In all the experiments, Jacquin comes away with appreciation for the brain's intricate sensory system. "I'm surprised at how much creativity the brain has to code the incredible picture of the world that an animal gets by scanning the environment," Jacquin says. When all is done, Jacquin hopes to have shared a glimpse of that creativity with the rest of the world.

Seated at the confocal microscope is Abner Ward, a senior in biology/pre-medicine who participated in last summer's undergraduate residency program in developmental biology at the School of Medicine. With Ward is his professor, Thomas A. Woolsey (center), director, James O'Leary Division of Experimental Neurology and Neurological Surgery, and Mark Jacquin.

Kathryn S. Brown is a writer based in Columbia, Missouri.
What's in a
Peer over Richard Axelbaum’s shoulder in the lab, and you’re likely to see a small cloud resembling diesel exhaust streaming from a three-inch flame on his lab bench. It doesn’t look like much. In fact, you’d probably keep on walking. But looks can deceive. The clouds produced in Axelbaum’s lab are special indeed. These plumes contain tiny particles of metal or ceramic compounds that may one day yield airplane wings and automobile-engine valves 1,000 percent stronger than current varieties.

For years, engineers have crafted metal and ceramic substances—everyday materials—that have grains (crystals) up to hundreds of microns wide—almost visible to the human eye. The final product made from these materials can be weak or brittle. When such parts, now used in planes and cars, are challenged with extreme stress or heat, they can fracture or become deformed.

“Our approach, then, is to produce extremely fine particles and consolidate them into a solid mass that would have much smaller grains and, thus, stronger properties than normal materials,” explains Axelbaum, associate professor of mechanical engineering in the School of Engineering and Applied Science. These so-called nanoparticles [nano: one billionth (10⁻⁹)] are 10,000 times smaller than the grains in normal materials, being just barely larger than a cluster of atoms. This means that 1 trillion nanoparticles could fit into the size of a normal grain. “When the nanoparticles are consolidated into solid parts by heating, the parts have nano-sized grains that can yield unique magnetic, electronic, and mechanical properties,” Axelbaum continues.

**Sophisticated combustion**

Axelbaum’s experiments involve a simple process called combustion synthesis. One classic example is a burning candle. When a candle burns, the wax vaporizes from the wick, becoming a gaseous fuel. The air surrounding the candle supplies the oxidizer, and when these two gases burn, visible carbon particles are formed in the flame. These particles give the candle its warm glow, and they can sometimes be seen breaking through the flame in a streak of black smoke.

Humans have been using combustion synthesis for millennia. Cave men wielded torches as primitive paint brushes, using the carbon, or soot, as paint to draw pictures. “We’re following a similar concept in a much more sophisticated environment,” says Axelbaum.

To make titanium boride particles, for example, Axelbaum brings gaseous chlorine compounds and sodium vapor together in a burner that glows red-hot. When the
two vapors react, they form a flame that produces sodium chloride (table salt) and titanium boride in a streak of black smoke.

Axelbaum and colleagues have developed and patented a way to condense the salt on the microscopic titanium boride particles, encapsulating them. The salt coating serves two purposes: It keeps the titanium boride particles from contacting each other in the flame, which would produce undesirable clumps of particles, and it protects the delicate particles when they are removed from the flame so they don’t react with air or moisture. “When we remove the salt, we get nice spherical particles that we can compact into dense and pure materials,” Axelbaum says.

A superstrength titanium product would have a variety of uses in the aerospace, defense, medical, and sports industries. In particular, it might be used for the body of high-speed civil and military aircraft.

Collaborating with Axelbaum on this study were William Buhro, associate professor of chemistry; Kenneth F. Kelton, associate professor of physics, in Arts and Sciences; and Shankar Sastry, professor of metallurgy and materials science, in the engineering school.

The process Axelbaum has developed is quite generic and can be used to make many substances. His laboratory has already produced titanium, aluminum, tungsten, titanium nitride, aluminum nitride, and tungsten-titanium composites in flames. These materials find applications from substrates that enable computers to run faster to replacements for radioactive materials used in military applications.

**DC-9 as laboratory**

Although unknowing passers-by might easily miss these innovative experiments in Axelbaum’s Hilltop Campus lab, they would definitely stop and stare at what he is doing at NASA’s microgravity research posts at the Lewis Research Center in Cleveland. This spring, Axelbaum was awarded a four-year, $288,000 NASA grant to experiment with the type of flame used in his sodium/halide reactions—all in a weightless environment. The microgravity flame apparatus will be built and tested at Washington University and then shipped to Cleveland for the microgravity experiments.

In Axelbaum’s lab experiments, the synthesis of particles is affected by the normal rise of low-density flame gases in Earth’s gravity. But in the physics of a weightless environment, Axelbaum is free from the complexities of earth-bound flame geometry. Guaranteed a “pure spherical flame,” he can more precisely study the particle processes and chemical reactions going on. “We can address questions like, ‘How do these two vapors react to form particles?’ and ‘How does the salt coat the particles?’” Axelbaum says. “We can focus on the dynamics of the process.”

Working in a weightless environment—which resembles conditions inside a space shuttle—brings its own challenges, of course. “It’s a whole different ball game,” says Axelbaum.

Just getting to microgravity is an adventure. Axelbaum’s group will perform two types of weightless experiments: one on land and the other in the air. On land, researchers perform drop-tower experiments: for example, they literally drop the experiment inside a 10-story building. During the fall, they gain two seconds of weightless environment. In the air, as microgravity researchers take a DC-9 aircraft on a flight path that resembles the ups and downs of a roller-coaster ride, they gain a weightless environment for 20-second intervals. “We perform experiments during that time,” explains Axelbaum.

**Flame research enlightens students**

Two of Axelbaum’s students will spend the next several years conducting and analyzing the microgravity experiments. One graduate student will spend summers conducting experiments in the drop towers and in NASA planes; the other will model the flames and develop theories. Other students, including undergraduates, will share in the knowledge gained. Axelbaum sprinkles recent research findings throughout a course he teaches about combustion. And for the last six summers, he has had undergraduates and local high school students working in his lab on related problems. He intends to continue to offer this opportunity with his microgravity research.

Axelbaum says his lab is thrilled at the chance to do NASA-funded research. Because microgravity combustion is a relatively unexplored field, the team has the chance to go beyond merely improving existing materials. “In microgravity, novel things happen within a flame,” says Axelbaum. “There’s a real potential for new discoveries.”

Given the discoveries Axelbaum has already made here on Earth, it’s interesting to imagine what he might do in space.

Kathryn S. Brown is a freelance writer in Columbia, Missouri.
"I always begin with a shocking statement," says Hong Kong University of Science and Technology's founding president Chia-Wei Woo. "The statement is: 'July 1, 1997, will see the most peaceful and successful transfer of sovereignty in the history of mankind.'

"It's shocking to readers of the Western media, but if you think about it, it is true."

A former student in St. Louis, the "Gateway to the West," Chia-Wei Woo says that China's Hong Kong is both gateway city and central crossroads for a resurgent Pacific Basin.

BY JIM RUSSELL
Woo speaks with due reverence about the coming date when Hong Kong government changes from British colonial to Chinese. The soon-to-be-former colony comprises a territory of more than 6.2 million people and is a pivotal arena of commercial and industrial growth in the region. As head of a fledgling educational institution in the heart of Hong Kong—Hong Kong University of Science and Technology (HKUST) opened in 1991—Woo hopes to help link East with West as Hong Kong grows into its new leadership role.

Starting the university proved its own challenge for Woo, who was president of San Francisco State University when he accepted the HKUST offer in 1988. "It was quite sudden that they offered me the job, and I wanted to let San Francisco State take time to find a strong successor," he says. "You can’t just stand up and walk away, so for 10 months, from 8 p.m. to 3 a.m., my wife [Yvonne Mary Lo, A.B. '62] and I worked in the United States on planning this university by building a network of advisers through the fax machine and computers—maybe a hundred people. The reason we worked from 8 p.m. to 3 a.m. [U.S. time] is that it was my own time and it is the time Hong Kong is awake and at work.

"In principle, if you want to build a university from ground zero, you need to first know the objectives, finances, and facilities, and then you should be hiring vice presidents who will hire deans, who will hire department heads, who in turn will hire senior professors, and so on. It's sequential, right? But it can’t be when you’re given only three years to have everything built and to have enough faculty to start teaching a class of some 800 students. So we had to do things in parallel. This is where I think research training becomes useful. You think like a flowchart—when you build this piece and that piece you must know they will connect later."

Woo, who is a physicist, suggests that perhaps so many university presidents in America and Asia have backgrounds in the physical sciences because of their research experience with logic and rational analysis. "Also, we’re troublemakers!" he says with a smile. "Theoretical physicists are trained to supposedly think the unthinkable and challenge any premise. After you more or less convince your students and colleagues of your theory, then you jump to the other side and start tearing it down because you want to make sure there’s no loophole left. Planning requires that kind of rational behavior and thoroughness."

Woo, a naturalized United States citizen who was born in Shanghai, China, came to the United States in 1955 from Hong Kong and began his training as a physicist at Georgetown College, in Kentucky. He earned his master's and doctoral degrees in physics at Washington U., and the heart of this forward-looking scientist still stirs with alma-mater reminiscences.

"One memory is softball," he says. "We had a Chinese softball team that would play the physics or chemistry department teams—I always played shortstop or second base. I couldn’t hit very well, but I ran pretty fast. We used to do research or study with our wives or girlfriends (Woo met Yvonne, his wife of 36 years, while he was a student) in Crow Hall—anywhere we could find desks—and then around 5:30 p.m. we would all go home to eat in our prefab housing and quickly come back to the lawn in front of the department to play ball for an hour or so. When it got dark, we’d go back into Crow Hall to work until about midnight. Those were good days. Physics graduate students always worked until the middle of the night—probably not any more!"

Woo, who came to campus in May to receive an honorary doctor of science degree, couldn’t help comparing the recent experience with graduating in the 1960s. "Of course, this time I was on stage, but last time I was in the audience. There’s this cobblestone space between the stage and the audience, and 30 years ago, my little boy, two years old at the time, shook off his mother’s hand and ran along the cobblestone walk looking for Daddy. I saw him; he was very cute. He didn’t find me, so he frowned and went back. Now, 30 years later, he’s a professor too!"
Woo himself experienced the initial thrill of becoming professorial material in 1966; he fondly recalls a subtle initiation with his much-revered mentor and doctoral thesis adviser, the late Eugene Feenberg, the Wayman Crow Professor of Physics.

"My classmate was Walter Massey (M.A., Ph.D. '66), now president of Morehouse College, in Atlanta. We shared office space and got our degrees within three days of each other," says Woo. "Afterward Professor Feenberg knocked on our door and asked if we wanted to join him for a cup of coffee. Oh, we were flattered and so thrilled!"

Woo's campus visit also evoked memories of his meeting, dating, and marrying Yvonne, and their early days raising a family in the campus' graduate-student prefab housing.

"A typical lunch would be a can of chicken soup, with two hot dogs thrown in for me and one hot dog for my wife," he says. "The prefab we lived in was 15 by 30 feet, with two space heaters. Yet we had five rooms—a bedroom, study, living room, kitchen, and dining area; it was not very well insulated. Only a lot later did I realize why our little ones were always catching cold—the temperature at my height and at their height could be 25 degrees off!"

Technological has come a long way since the prefab days, and university president Woo is doing everything he can to improve the state of the art in Hong Kong. It's an exciting time for HKUST research and teaching, yet bringing new technology to this fast-paced yet traditional metropolis could prove arduous.

"Many say that people in Hong Kong are entrepreneurial, but they are entrepreneurial in the sense of being able to be streetwise and to make quick decisions, not in the sense of taking risks with new technology and making it work. It's very different from Silicon Valley. Hong Kong has done too well with its low-tech, labor-intensive industries. Too much opportunity for making very good and very quick money in the all-important service sector is not necessarily a good thing for the creative manufacturing industry. I think that what we will have to do is start new technology-based businesses."

In fact, that's exactly what Woo says HKUST is doing. The university has played a prominent role in helping a Colorado-based nonprofit corporation (related to the National Center for Atmospheric Research) create the wind-shear warning system for Hong Kong's major new airport. "It's a $15 million system, and when it's done, it will be among the first in the world and exportable technology. It starts a new industry for Hong Kong," he says.

"Also, we have a liquid-crystal-display research center. We cannot compete with Japan or countries like that in general, but some of our faculty have nice little research niches the Japanese don't do, so we might get a window in a couple of years and start that industry. And, we ran a company called Hong Kong Supernet, the first and largest among some 80 Internet-providing services in Hong Kong. Singapore rated us as the best Internet-providing service in all Asia, and over the last two years the value of the company has shot up. We decided to sell it so that we could use that money to seed other efforts. It was sold in June, and the net profit was 4,500 percent of the investment capital."

Woo says that even with somewhat slow technological progress, "Hong Kong today is very different" from Hong Kong just a few years ago, thanks to the rapid rise of new infrastructure—freeways, tunnels, skyscrapers, and public housing—and the rapid expansion of higher education. And as the momentum builds, perhaps not so many years from now, when people are still saying of their transformed home, "Hong Kong today is very different," they will have far-sighted pioneers like Woo to thank.

Jim Russell is associate editor of Washington University Magazine and Alumni News.
Five mornings a week, architects Marianne Lau and Marc Diamond arrive at 600 Madison Avenue and take an elevator to Pei Cobb Freed & Partners, the Manhattan firm founded by renowned architect I.M. Pei. They have begun their work day this way ever since they signed on at Pei Cobb Freed in 1988—and they occasionally bump into each other at a water cooler—but several years went by before their colleagues figured out the two are married.

Maintaining a low personal profile was intentional, say the couple, who married in 1988. “We keep our home life and professional lives separate,” says Lau. “Work is so intense, with long days and big deadlines, that we made a geographical boundary—Bloomingdale’s [a department store two blocks away]. If we’re going home from work together, we stop talking about the office at Bloomingdale’s and talk about family matters. In the mornings, we don’t let ourselves discuss work until we’ve crossed the street at Bloomingdale’s.”

The fact that the couple works on different floors—Lau on the ninth and Diamond on the eighth—helps maintain the separation of work and family. So far they have worked on only one project together, JFK 2000, a plan to redesign John F. Kennedy Airport in New York City—and even then, they were on different teams.

Lau and Diamond, who are associates with the firm, also have different professional fortes. Lau prefers working on projects where she can practice design and coordinate teamwork, whereas Diamond enjoys the problem-solving aspects of design and working with computers.

Lau’s projects include The Rock and Roll Hall of Fame and Museum, in Cleveland, Ohio, which opened in 1995 to rave reviews. The building’s central element is a tower, surrounded by water, that features a glass “tent” and cantilevered box element. It is a very “dynamic form, but structurally a beast,” Lau says. “Every time I tweaked something on one side, it affected the other side. I learned the most about construction on this project.”

Lau is now job captain working on all facets of the Science and Engineering Quadrangle project at Stanford University, in Palo Alto, California. This project involves the demolition of several existing buildings and construction of four new ones, which will restore some of the planning originally proposed by landscape architect Frederick Law Olmsted.

Diamond’s latest team project, the ABN-AMRO Bank headquarters in Amsterdam, has 75,000 square meters of office space, an unusually large area for a single client. The design incorporates four distinct elements: a 28-story office tower, a seven-story courtyard building with a landscaped garden court, a conference center with a two-story congress hall, auditorium,
café, and more. The fourth element is an 18-story building to be constructed when expansion is required and fully integrated with the existing buildings.

Diamond is working on the public spaces and the building's core—the vertical elements such as elevators and shafts. Diamond also worked on the Ball State University Alumni Center, now under construction in Muncie, Indiana. The 50,000-square-foot building has "a lot of nicely detailed architecture in a small space," says Diamond. Features include a two-story atrium with a triangular skylight and a large ballroom.

Both Lau and Diamond say they enjoy the fluid structure of the busy 140-member firm, which functions less like a corporate office environment and more like studios Lau remembers fondly from Washington University. "At many firms, young architects are stuck in a draftsman's role: People bring you 'redlines' [corrections] and you 'pick them up' [revise the drawing]. Here, we have a team for each project and the team works together in a bay, much like studio. Each person is given much more responsibility [than in many firms] and is exposed to a wide range of architectural and design issues," says Lau. "We make models to study certain conditions. Often we use resources that allow us to simulate the actual building materials. I used to think every architecture firm did that, but that's not true."

Lau says her love of design was fed by an underlying desire. "I always knew I wanted my work to affect people," she says. "At one point I considered studying architecture or physical therapy. My father advised me that in architecture your work can have an effect on many more people at one time and the results are tangible and long-lasting."

Diamond, who holds bachelor's degrees in applied science and design of the environment, has been drawn to the notion of building since he was three. His childhood interests in math and geometry now encompass computers. In addition to his regular designing duties at work, Diamond developed a series of commands to streamline the firm's computer-aided drawing program. Many in the office now rely on his system.

Diamond's computer skills, combined with a love of tennis, led him to develop a more accurate ranking system for professional tennis, known as Universal Player Ratings (UPR). Diamond describes the project as "a programming exercise whose concept was based in mathematics." He envisions the UPR system taking root and branching out, in not only tennis but other sports. Published since August 1995, the rankings lists are on Tennis Magazine's site on the World Wide Web at www.tennis.com.

At the end of their office day, Diamond and Lau return home to their apartment on Roosevelt Island, a four-minute aerial tram ride from the east side of Manhattan. There they trade career demands for different creative challenges: their six-year-old daughter, Sasha, and two-year-old son, Tommy.
A solid-gold success story that taught four friends the basics of business.

By C.B. Adams
Flashback to the early ’70s.
Before compact discs, cassettes, and eight-track tapes. Before alternative, punk rock, and even disco. The days of the Album. That’s when you bought music on records—big as a serving platter, black as a government sedan, thin as a blue book. Made from virgin vinyl.

If you loved music 25 years ago, albums were your scorecard. The more the better, like so many notches on your turntable. You knew where every pop, scratch, and hiss was located. If you attended Washington University back then, however, indulging your passion for buying records was about as easy as getting front-row seats for the Stones concert at Kiel Auditorium.

“At the time, St. Louis had very few true record stores, and the ones that were around didn’t have a really great selection. They sold them at list price. Not to mention the fact nobody in these stores knew anything in depth about music,” says Jack Brozman, B.S.B.A. ’72, M.B.A. ’74.

Buying records close to campus was difficult, since most record outlets were in department stores and shopping centers. Brozman and three other undergraduate students decided to fill the vacuum with a small enterprise that came to be known as Streetside Records.

Genesis
Brozman went to high school with Harry S. “Hank” Jonas, A.B. ’72, M.S.W. ’74, M.A. ’74. The two roomed together at Washington University during their freshman year and remained close friends afterward. During his sophomore year, Jonas visited a friend who had a record store in Lawrence, Kansas, called River City Records. The friend mentioned he wanted to sell off the inventory of his record business to pursue other interests.

“I remember driving back to St. Louis on Interstate 70 and just saying to myself, ‘I could do that,’” Jonas says. “I remember coming back and telling Jack [Brozman] about this idea, and he liked it.”

They decided to invite two other students to join them in the venture. Brozman contacted his friend, Harold S. “Hal” Brody, A.B. ’72, M.B.A. ’73, while Jonas discussed the opportunity with Peter Van Raalte, A.B. ’72.

“‘It started out with discussions among all of us in Holmes Lounge, as I remember,” Van Raalte says. “We decided to do it because there was a need for inexpensive records in St. Louis and for a record store that was close to the University. We thought of it as a service, but it was also an idea to make money and have some fun.”

During their junior year, the four partners each agreed to invest $400 to purchase the inventory from River City Records. “It worked out because there was a need for inexpensive records in St. Louis, and for a record store that was close to the University. We thought of it as a service, but it was also an idea to make money and have some fun.”

Their business strategy was to supply the student population of the area with low-cost music, a wide selection, and knowledgeable sales personnel.

Traffic
After considering several names, including Ripple Head Records, they agreed on Streetside Records, a name offered by an acquaintance in one of Brozman’s business courses. The partners leased a storefront at 6277 Delmar Street, on “the Loop” in University City.

“The whole area along Delmar was pretty run down back then,” Van Raalte says. “But it was still the place where most of the students got their apartments, and there was a ton of traffic in the area. That was where everyone lived, so the location was great.”

The partners painted the 800-square-foot store and set up the racks. The owner
of River City Records delivered his stock of approximately 3,000 records to St. Louis. The store opened on May 9, 1971, to an inauspicious beginning. It was robbed three times by the same person during its first month of business. The perpetrator was captured red-handed while a new security system was being installed.

In addition to selling albums, Streetside also offered a delivery service and sold waterbeds for a short time, as well as something called a water chair.

"The whole thing was a great lesson in business," Van Raalte says. "Jack devised an inventory system using cards so we knew exactly what was in the store, and there was an ordering system attached to it. Hank and I would find sources for unusual records that you couldn't get anywhere else. The store became known for unusual records, as well as the more popular ones."

As Jonas recalls, "Back then, we thought nothing of throwing on a Captain Beefheart or some other crazy title. It wasn't a Top-40 deal."

The Who?

Many of the more obscure titles that Streetside sold came from a one-man wholesale company called House Distributors. Through this distributor came access to many small folk, rock, jazz, and blues labels, with such names as Arhoolie, Takoma, ESP, Alligator, Rounder, and Sun Ra—some of which are still in business today.

In an advertisement that Streetside placed in Student Life, the store advertised albums by Pharoah Sanders, Pearls Before Swine, The Fugs, Wild Man Steve, and The Holy Modal Rounders, among others.

In 1972, Streetside was turning a profit, and the partners bought House Distributors. They began developing this wholesale distribution business from the house the four of them rented together.

"There was a division of labor," Van Raalte recalls. "We would work in the morning on the wholesale business, restocking records, packing them up, and shipping them out to other stores. Then we would go down to the store and work through the afternoon. We'd close from 6 until 7:30 and eat dinner together; when we got back, people would be standing in line waiting for us. They knew our schedule."

Turn, Turn, Turn

In 1973, Streetside Records moved two doors down Delmar to a larger store and began its trademark "three for $10" sales. During the second or third such sale, "all hell broke loose," recalls Brozman. "We had so many people in the store that there was a line going up Delmar for two blocks. We had to put someone at the door to let them in one at a time. I was sitting at the counter thinking, 'God, either we're going to make it, or we're going to have to shut down because we can't handle it.'"

Streetside Records not only began to "make it," but the "three for $10" became one of its trademarks. "We saw a niche for ourselves," Van Raalte says. "We entered the market as a budget record store, and nobody was coming close to the prices we had. We got instant loyalty not only from the students but the whole St. Louis community as well."

Streetside Records was on its way—and so were the four partners.
Each of the original Streetside partners was in the business for a different reason. Each has followed his own path since they started the record store 25 years ago.

Hank Jonas was the first to leave. After earning his bachelor's degree and two master's degrees at Washington University, Jonas received a doctorate in organizational consulting at Case Western Reserve University, in Cleveland. He now works for Corning Inc., in Corning, New York, in the company's corporate human resource group. He sold his shares in Streetside Records in 1975. He finds an unusual reason for the teamwork that made their venture a success.

"Looking back, being held up at gun-point really brought us together. After that, we were determined that no one was going to shut us down," Jonas says.

Brody was next to leave. He moved to Kansas City, Missouri, and started Penny Lane Records, using the Streetside strategy. He sold the chain of stores to Brozman in 1989 and is currently the publisher of *Pitch Weekly*, a news and entertainment publication similar to St. Louis' *Riverfront Times*. Brody doubts the partners' experience could be duplicated today.

"We talked about starting the record store in our sophomore year," he says. "That's an interesting indication of how much discretionary time we had in those days, particularly when the professors were out on strike or whatever. We were able to get a bachelor's degree, get A's and B's, and still start a record store. I don't think you could do that now."

Van Raalte returned to his native East Coast and pursued a career in marketing and licensing. He is presently a vice president at Turner Broadcasting, in charge of merchandise licensing. He looks back at his Streetside days with a mixture of pride and nostalgia.

"I really learned the basics of business at Streetside, and I'd like to think that really sent me on my way to my future," he says. "I learned a lot of personal lessons, too. Sitting behind the counter and working retail at that point in my life was an interesting experience."

Brozman today is principal owner of Sound Disktributors, Inc., the corporate name of Streetside Records. There are currently 15 Streetside Records stores throughout the Midwest, each carrying approximately 30,000 titles.

Brozman learned invaluable lessons, such as self-control, during Streetside's early days. "It quickly became a big undertaking, even though it was a small store. You know, we were 21 years old, and if something better came up, like a party or going out with friends, you couldn't because you had to work. I spent a lot of time doing that. All of us did."

As a teenager, John Mandelker, A.B. '76, was one of the first employees hired to work at Streetside Records in University City; today he is the president and part-owner. His father is long-time Washington University School of Law professor Daniel Mandelker, the Howard A. Stamper Professor of Law.

C.B. Adams is a free-lance writer who lives in the St. Louis area.
George Pake is famous for facilitating the future—
including Washington University's.

George Pake's old car broke down on the way from Cambridge to St. Louis in 1948. Not a big surprise. Any graduate student lucky enough to own a car in those days probably owned a clunker.

When he finally did make it to the Washington University campus, the 24-year-old newly minted Harvard Ph.D. found not two or three physics graduate students waiting for him, but seven—he was, after all, the expert in the newer-than-new field of nuclear magnetic resonance (NMR).

"It was a big transformation," Pake says. "Suddenly you're not a graduate student anymore. Suddenly you're responsible for graduate students—seven graduate students!—of your own."

A mere four years later, he was physics department chair, with Nobel laureate and University Chancellor Arthur Holly Compton on his faculty. Only 10 years before, he'd been an 18-year-old at Carnegie Tech (now Carnegie Mellon), six months after Pearl Harbor, planning to become an aeronautical engineer and army pilot. By the end of freshman year, he'd declared a physics major; in his sophomore year, he enlisted in the Air Force.

Classified 4-F when his pre-induction physical revealed a congenital back defect, Pake resolved to get into war work as a physicist. He took full advantage of Carnegie Tech's war-accelerated trimester system, enduring one 80-credit and one 90-credit semester, and graduated in April 1945 with a bachelor's degree to Pake, who had served so admirably as academic, administrator, and trustee, citing him for his pioneering scientific contributions and for his leadership as an administrator "who has influenced the academic, corporate, and governmental worlds and helped transform society."

Don't mistake "transform" for citation-writer's hype.

As a graduate student in the lab of Nobel laureate-to-be Edward M. Purcell at Harvard, Pake wrote a classic paper—cited 435 times in the work of other scientists between 1961 and 1981—on NMR, decades before its attention has been paid.

In 1983, the American Physical Society recognized his expertise as a research manager by establishing the George E. Pake Prize, an award given annually to a physicist who combines research accomplishments with leadership in the management of research and development in industry.

In 1987, President Ronald Reagan presented Pake with the National Medal of Science, the country's highest science honor, for his "commitment to creative excellence in support of institutional purpose." While a WU administrator, Pake served on the President's Science Advisory Committee, a group of 18 distinguished scientists who met monthly with the nation's Chief Executive.

And in 1995, Washington University awarded an honorary degree to Pake, who had served so admirably as academic, administrator, and trustee, citing him for his pioneering scientific contributions and for his leadership as an administrator "who has influenced the academic, corporate, and governmental worlds and helped transform society."

As a graduate student in the lab of Nobel laureate-to-be Edward M. Purcell at Harvard, Pake wrote a classic paper—cited 435 times in the work of other scientists between 1961 and 1981—on NMR, decades before its
clinical form, MRI (magnetic resonance imaging), became a household term.

Then, beginning in 1970, he built from scratch, and then managed, the multimillion-dollar Xerox Palo Alto Research Center (PARC). Xerox wanted PARC scientists to provide the "advanced architecture of information technology" for the "office of the future"; Pake insisted they be free to be idea-driven, rather than product-driven, and at the same time introduced what he calls "the research ethic of physics into computer science" at PARC. He knew his people would come through. And they did.

In five years, the extraordinary young scientists he'd recruited created the first personal computer, the first word-processing program simple enough for ordinary folk to use, the (now-ubiquitous) on-screen icons, the "mouse" (whose prototype looked like a pop-up toaster on wheels), e-mail, local area computer networking (Ethernet), and the laser printer—a printer that for the first time printed exactly what the user saw on the computer screen.

PARC discoveries also served as the platform from which Apple, Microsoft, Adobe, Novelle, 3-Com, and countless other computer companies launched themselves as well as the office—and almost everything else—of the future.

Pake facilitated quite a lot of Washington University's future as well. In yet another of his big transformations, he returned to WU in 1962 after six years on the Stanford physics faculty, wooed away from teaching to the role of full-time administrator at the behest of Chancellor Thomas H. Eliot, a friend experienced in what Pake describes as "the administrative wars" of academe. Pake, who greatly admired Washington University as a community-involved institution where teaching and the student came first, finally made the difficult change—for he loved teaching best of all—"because," he says, "I shared Tom Eliot's vision for the University and wanted to help make it happen."

From 1962 to 1969—Pake's years here as provost and then executive vice chancellor—he was immersed in University planning but also excelled in the trenches. He was instrumental in facilitating two giant steps critical to University—especially Hilltop—advancement: a $15 million science grant from the Ford Foundation when only "big" schools were getting that kind of Ford money; and one of the National Science Foundation's first (and largest) Science Development grants, subsequently renewed, for the School of Engineering and Applied Science. That grant "put legs on the school," says former engineering dean James M. McKelvey. Along the way, Pake also managed to recruit a team of MIT computer scientists to the University. His honorary degree citation sums it up pretty well: "He played a key role in building Washington University into an internationally known teaching and research institution."

Most recently founder and now director emeritus of Xerox's Institute for Research on Learning, Pake remains active in University trustee activities and on Engineering's National Council. He says, "If I look back at something in my career that I'm really pleased with, I would say it has to be Washington University. I made a little bit of a contribution in its getting where it is today, and I'm pleased with that. I just knew the potential was there."

Pake has many fond memories of Washington University, he says—of daily brown bag lunches where young scientists talked physics with masters in the field, of office doors never shut to students who wanted to talk physics, of bringing home the bacon for the University.

Something suddenly occurs to this man who has done so much to transform the world around him. He says: "I hadn't thought of it before, and it may be remarkable because I never was a student here, but Washington University truly is my favorite university." A smile transforms his face.

—M.M. Costantin
Champion Volunteer Champions

Give volunteers valued, meaningful work, says ABG Chair David Shores, and you'll have

"Volunteers are an immense, generally untapped resource of skills and ideas."

David Shores
B.S.B.A. '67

"We involved every volunteer in solving the problem," Shores explains. "We listened to everyone's ideas and tapped resources in our volunteers—I'm not sure they knew they had. The resources were their smarts, not just their dollars. We made a successful move."

SUCCESS STORIES

"One is the Alumni and Parents Admission Program [APAP], where alumni and parents of students interview prospective students in their locale and report back to the University. APAP volunteers are kept current with what's happening on campus, so would-be students get useful information about Washington University in an informal, person-to-person setting. Obviously, the University benefits from this kind of outreach in recruiting topflight students. For the volunteer, what a significant hands-on experience!"

Shores thinks the National Councils also have the right stuff. The University schools, the Libraries, and Student Affairs have one advisory council each; the Councils are made up of alumni, parents, and friends whose real-world experience is used to help make the school the best it can be. National Council members also recently provided valuable feedback for Project 21, the University's self-assessment in preparation for the new century.

Shores' down-to-earth attitude about volunteers comes from his own experience. One of his first volunteer stints was as a board member of the nonprofit Clayton Child Care Center. Shortly after Shores became board chair, the Clayton school district wanted back the building it was lending the Center. A new location and lots of moving money had to be found, and fast!

QUALITY TIME

Shores says that the Center volunteers' time crunch of six years ago is everybody's time crunch these days: "Most volunteers have full-time jobs. If they take time out for a volunteer activity, they don't expect or want sitting around being talked at to be their entire volunteer experience. They want it to be an active experience. If it's not, they'll go somewhere else where they feel their time will be better used." And, he says, their donor dollars will probably go with them.

A meeting early in Shores' term as ABG chair featured a half-hour session in which the 150 ABG board members broke into small groups, challenged to come up with solutions to an actual ABG problem—how best to bring graduating seniors into the world of alumni activities.

The half-hour brainstorming session produced a lot of
Volunteers

friends for life. He should know...

interesting suggestions and enthusiasm. But the real pay-off for these volunteers came at the next ABG board meeting, where they heard reports on how their suggestions were yielding valuable results. “And then they really felt energized,” Shores says.

His great hope is that the University will look at the success of APAP and the National Councils and develop more programs—with alumni input—that use abundant alumni talent in constructive ways. “It’s a great resource, just waiting to be tapped,” he says.

Shores, the volunteer, just finished a term as president of the St. Louis Salvation Army’s Community in Partnership advisory board. He’s also a recent Leadership St. Louis graduate.

But it’s his interest in nature—and volunteer work in the field—that has given him a powerful avocation.

A world traveler, he’s seen the devastation of natural resources around the globe. Most ecology-minded folk might do their bit by writing a check or working a little harder at recycling.

Not David Shores. Well into his 40s, he earned a master’s degree in conservation biology from the University of Missouri-St. Louis’ International Center for Tropical Ecology, after being told by the Center’s director to come back when he had earned a B in genetics. Then a B in chemistry. Then a B in ... until he had accumulated 20 credits in essential subjects.

The whole process, undergraduate and graduate, took Shores four and a half years, with jacket and tie at Merrill Lynch by day and sweatshirt and jeans by night in Ecology Center labs.

Why? “I thought I’d be a better, more useful volunteer with some credentials,” he says. Was it worth it? “I now help bridge the gap between science and business,” Shores says with quiet satisfaction.

Bridging Science and Business

For example, he is—in his spare time—currently volunteering with Conservation International in Washington, D.C., as a private sector adviser, helping develop financing and venture capital techniques to support sustainable development projects. It’s a “job” that’s taken him, a biologist with financial smarts, to remote parts of the world.

Or is that as a stockbroker with scientific smarts?

In addition, he’s a Nature Conservancy of Missouri board member, and founder and chair of the Tropical Ecology Center’s development board.

While not every volunteer is dedicated enough to pursue a graduate degree as Shores did, he believes every volunteer contains the potential for becoming a passionate, dedicated volunteer—if only given the chance.

“Think about it,” he says. “It’s the perfect win/win situation.”

—M.M. Costantin

For information about WU Alumni Association volunteer programs, contact Alumni Relations Director Laura Ponte—Phone: 314-935-5212; e-mail: p17250lp@wuvmd.wustl.edu

For information about the Alumni and Parents Admission Program (APAP) contact APAP director Leslie Bradley: phone, 1-800-935-4826 or 314-935-4826; e-mail, apap@wustl.edu
John M. Pickering, LA 38, edits Pueblo Horizons and serves on the board of Friends of Indian Pueblo Cultural Center, in Albuquerque, N.M.

Norma J. McFarlane, NU 46, reports that her class had its 50th reunion in St. Louis in May. "There were 11 of us, all active and involved in life; we meet each year," she says. Wallace G. Klein, LA 47, GR 48, received a certificate of merit for furthering and encouraging study of German language, literature, and culture in the United States from the Goethe Institutes in the United States and The American Association of Teachers of German. He is an alumni coordinator and retiree of the School District of University City, having taught German in University City High School for 29 years.

Billy Morrow Jackson, FA 49, had a retrospective of his oil paintings, watercolors, and drawings held through November at the Craner Art Museum and Kinkade Pavilion, at the University of Illinois at Urbana-Champaign.

James B. Lovette, BU 50, after 24 years of research has published Biblical Related Coins, a 210-page hardcover book with 567 pictures—236 places, persons, and things related to the Bible. All proceeds above cost go to the Money Museum Fund of the American Numismatic Association. "This is a numismatic picture—a labor of love," he says.

Donald A. Wakefield, EN 50, was named a 1996 fellow and recipient of the Award of Merit from the American Society for Testing and Materials. The title of fellow accompanies the award. He is president of Masonry Information Services, in Sandy, Utah.

Warren Simonds, HA 52, received the Good Shepherd Emblem in recognition of his many years of participation and leadership in church-sponsored Scouting and other civic community programs. The Emblem was presented in Baton Rouge, La., upon recommendations of Programs of Religious Activities with Youth (P.R.A.Y.) of St. Louis, the Istrouma Area Council Boy Scouts of America, and the Boardmoor Baptist Church. Eugene "Buddy" Albert, BU 53, was named a court-appointed guardian ad litem for abused and neglected children. He also was appointed a Florida Family Court mediator and moved his law office to Palm Beach, Fla., from Dade County, Fla.

Richard F. Janssen, LA 54, married Helen O'Connor, formerly of Glasgow, Scotland, on April 13. They honeymooned in France and live in Nokomis, Fla. He is retired from Business Week after 25 years of reporting for The Wall Street Journal, in which he had been recommended by a WW professor, and he is working on a first novel.

Ronald E. Goldenberg, LA 56, GR 56, will retire in June 1997 after 11 years as dean of the graduate school at Eastern Michigan University. He taught at Oklahoma State University, the University of Georgia, and the University of Evansville before being appointed graduate school dean in 1985. He and wife Carol live in Ann Arbor, Mich., and plan to retire to Hilton Head Island, S.C.

Frank M. Cleary, UC 57, GB 68, was named a fellow of the American Society of Safety Engineers at the organization's professional development conference, in San Diego, in June 1996. He holds a private consulting firm and is an adjunct instructor at Oakland University, in Rochester, Mich., where he has helped develop college-level safety courses.

John Spratt, HS 59, is co-editor of Home Health Care Principles and Practices (St. Lucie Press, Florida), part of a series on health services management written from the physician's perspective.

Bettie Reed, SW 60, was one of the recipients of the Educator of the Year Award presented at the ninth annual St. Louis American Salute to Excellence Community Awards banquet.

Marvin Doerr, LA 61, reports that after about a year's retirement from work as a research chemist for Hoechst Celanese, he has accepted an administrative position at Clemson University, working with local industries and the National Science Foundation to establish a Center of Excellence for the domestic fiber and films industries.

Stanley R. Fraeger, BU 61, received the Carnegie, Inc., Prestigious Community Good Human Relations Award for 1996, given for outstanding and continuous community services. The Carnegie Graduates is an organization devoted to lifelong learning and self-development.

Katherine Klein, FA 63, is represented by the Virtual Gallery in Palo Alto, Calif. Her work and bio can be seen at http://www.artnet.com/ -klelk.

Peggy Morrow Bush, BU 63, was elected president of the National Speakers Association; she also has a new book, Customer Service: The Key to Your Competitive Edge, published by Advantage Plus Publishers.

Tommy Jacobs, LA 65, received a Ph.D. in English from Northern Illinois University. Her specialty area is Native American literature, and her current research has been on Louise Erdrich, the subject of her forthcoming book. She teaches at Fort Lewis College, in Durango, Colo., and at San Juan College in Farmington, N.M., where she is the English teacher for Native American Head Start teachers living on the nearby reservations.

John Rice, GB 65, joined Coca-Cola Industries, in Charlotte, N.C., as director of compensation. He had been director of compensation and benefits for American Retail Group, an operator of specialty retail stores.

Richard Lischer, GR 67, is author of The Preacher King: Martin Luther King, Jr., and the Word that Moved America (Oxford University Press), which was named the Outstanding Book of 1995-96 by the Religious Speech Communication Association. The book is a rhetorical biography of King, analyzing his sermons and speeches.

Ken Stout, FA 67, had a solo show of recent paintings at Rockhurst College's Massman Gallery, in Kansas City, Mo., in early 1996. He and his wife Donna Phillips Stout had their first joint exhibition of paintings at the Spiva Center for the Arts, in Joplin, Mo., from May to June 1996. It featured Ken's "Inner Sanctuary" series of oils in a show of more than 50 paintings and drawings. He is professor of art at the University of Arkansas, Fayetteville.

Jane (Pfridy) Ellington, LA 68, is associate professor and chairperson of the Department of Psychology and Sociology at Austin College, a Presbyterian liberal arts college in Sherman, Texas. Jane, GB 68, was one of four men who broke a 143-year-old record by sailing across the Pacific Ocean in less than 20 days. The athlete added a trimaran (which has three parallel hulls) from San Francisco to Yokahama, Japan—a distance of 4,525 miles—in 19 days, 15 hours, and 18 minutes.

Harvey M. Tettebaum, LW 68, was re-elected to a three-year term on the board of directors of the National Health Lawyers Association, and he was appointed chair of its Audit Committee. He is a partner in the Jefferson City office of Husch and Eppenberger and chair of the firm's health, administrative law, and government relations departments.

Robert D. Benjamin, LA 69, was elected president of the Academy of Family Mediators at its annual Conference in July. He is with Mediation and Conflict Management Services, in St. Louis, and has been a professional mediator since 1980, providing training in mediation negotiation, and conflict management.

Gerald N. (Jerry) Padawer, LA 69, was named senior vice
By the Book: Attorney Pens Great Escapes

The scene is St. Louis, where a pretty Washington University professor of African-American studies tells a handsome police chief she's been having nightmares about a black-clad strangler. What's worse, the victims in her dreams appear the next day in news accounts of actual murders.

The mystery unfolds along with an intense romance in Looks Are Deceiving, attorney Anita Williams' first novel, which Book World called "exciting," with an "electrifying" solution to "the web [the writer] so cleverly weaves." The 1994 book is the first in the Harlequin Intrigue series to star an African-American hero and heroine.

But don't search for books by "Anita Williams"; the byline is "Maggie Ferguson," her mother's name. Williams explains: "I want my two careers separate. At work I'm Anita Williams, assistant general counsel for the Illinois Department of Public Aid. When I write, I take on a new persona—Maggie Ferguson is a different aspect of myself."

Unlike writers whose calling is so anxiety-provoking that they agonize, ritualize, procrastinate, or block entirely, Williams finds the creative process relaxing. In fact, she began writing partly in the transom" submissions, and nine months later had her first contract. Next came Crime of Passion, which a reviewer called "a provocative legal intrigue...a complex, tension-packed story," and In Name Only, a classic romance, a medical thriller about a deadly virus that sweeps Chicago, is due out in January 1997.

Not that all this is easy—and by conventional work-to-rest-and-recreation ratios, Williams' schedule is unthinkable. "I get up at 4 a.m.," she says. "I write from 5 until 7, then I leave for the office. When I get home, I write for another two hours, often from 8 until 10. On weekends, I run errands, see friends, and try to get in four to six hours. "Writing has cut into my social life substantially," she says. "But I always wanted to be a writer, and you make time for anything you want badly enough."

"That's not to say I don't enjoy law," Williams adds. "I enjoy the constant challenge that law presents. It not only sharpens the mind but stimulates the imagination—an invaluable tool for a writer."
Charles Cantalupo, LA 73, was promoted to professor of English at Brown University. In the last year, he has authored the following books: *The World of Nguyen Van Thieu* and *Nguyen Van Thieu: Texts and Contexts* (both with Africa World Press); *Poetry, Mysticism, and Feminism: “From the Nave to the Chrys"* (Spectacular Diseases Press); and *Animal/ Woman and Other Spirits* (Spectacular Diseases Press). He lives in Bethesda, Md., with wife Barbara Cantalupo, associate professor of English at Penn State, and their four children.

Ann Neuer, LA 73, founded Medical descriptions in 1995. Medical descriptions is a Cincinnati-based firm that writes articles for national publications and conducts market research for pharmaceutical and biotechnology clients. Her articles have appeared in *Buy-side, The Scientist, and Genetic Engineering News.*

Robert Rubin, LA 73, was elected president of the New Jersey chapter of the Rabbinical Assembly for the 1996-97 term. The Rabbinical Assembly is the international association of rabbis in the modern Conservative Movement within Judaism.

Frank Strelec, LW 73, has obtained certification by the Florida Bar as a board-certified business litigation lawyer. He is one of only 22 attorneys in Florida to be board-certified as both a business litigation lawyer and a civil trial lawyer. He is a shareholder in the law firm of Williams, Parker, Harrison, Dietz, and Getzen, in Sarasota, Fla.

Barbara W. Wallace, LA 73, LW 76, was appointed by Missouri governor John Ashcroft as Circuit judge for the 21st Judicial Circuit of St. Louis County.

Harvey Cohen, LA 74, was named a principal with NBBJ, an architectural and planning firm. He has managed the health care architecture practice in the Raleigh, N.C., office for the past seven years. He lives in Durham with his daughter Lauren and a cat named Tigger.

Laura Freid, LA 74, was appointed spokesman and vice president of university relations at Brown University, in Providence, R.I. She oversees four external affairs offices, including the Brown News Bureau and the Office of Government and Community Relations.

Kenneth L. Rosoff, SI 77, SI 81, was named chair of the University of Massachusetts Medical Center Department of Pathology. He is principal investigator for five separate federal grants related to immunohistology.

Hubertina Anna Ritmeester, GR 75 87, was appointed head of women's studies at the University of Minnesota's Duluth campus. She can be reached via e-mail at tritmees@umn.edu.

Marty Babinski, EN 76, joined SCH Technologies as director of computer systems analysis. He is responsible for managing implementation projects at major storage management accounts that use SCH's storage management products and services.

Nina Balsam, LW 76, received the first Niva Balsam Meritorious Service Award (named in her honor) in October from the St. Louis Metropolitan Region of the Missouri Coalition Against Domestic Violence. She is managing attorney at Legal Services of Eastern Missouri, and she was honored for devoting more than 20 years to helping abused women.

Ellen R. Barker, LA 76, and husband Thomas A. Shoup, GR 77, GR 81, moved from Lowell, Mass., to Los Altos, Calif. Ellen works as a consultant for the environmental engineering firm Metcalf and Eddy. Tom is department manager of a corporate lab. "In lieu of kids," Ellen says they "live with Ralph, a canine escape artist, and Jesse, Ralph's cat." Ellen can be reached at eebarker@comcast.com.

M. Susan Martin Cigelman, PT 76, received an Ed.D. degree in education administration and higher education from Drake University, in Des Moines, Iowa, in May 1996. She is director and associate professor of the program in physical therapy at the University of Osteopathic Medicine and Health Sciences, in Des Moines.

Steven Gordon, GF 76, had a one-person show of recent pastel paintings in May at Horwitch/Newman Gallery, in Scottsdale, Ariz. He appeared as a featured artist in a February 1996 *Southwest Art Magazine* article on live California landscape painters. He also opened the Stryker/Robert Gallery in Scottsdale in March 1996 in Yountville, in Napa Valley, Calif.

Roberta Silver, LA 76, and husband Ralph Pinskey have a son, Nathaniel Louis, born March 8; he joined sister Hillary. They live in Harrisburg, Pa.

Elizabeth Campbell Jenkins, SW 77, was selected as 1996 woman of the year at the Veterans Affairs Medical Center, in St. Louis. She received the award in March at a hospital ceremony.

Kenneth L. Rosoff, SI 77, SI 81, is dean of the College of Engineering at the University of Texas at El Paso.

Randy Bean, LA 78, lives in the Boston area with wife Elizabeth, a retired National Public Radio producer, and their sons Matthew, Parker, S., and Christopher Harris, 2. Randy works in market development. Randy says that when he and his family aren't otherwise occupied, they "enjoy summer vacations on Nantucket, and New England autumn afternoons."

Mitchell Schwarz, LA 78, is associate professor of art history at California College of Arts and Crafts, in San Francisco. He is author of *German Architectural Theory and the Search for Modern Identity,* published by Cambridge University Press in 1994.

June Westech, GR 79, presented a slide show on "The Games of the Third Olympiad" at the Official Host National Olympic Committee Reception in Atlanta's Marriott Marquis in July during the Games of the XXVLth Olympiad. She also presented the show in St. Louis at the Missouri Historical Society's celebration of the 1904 World's Fair in St. Louis. A free-lance writer in Olympic and sports history, she is a member of the International Society of Olympic Historians and was chosen Missouri's Communicator of the Year by the Missouri Press Women.

Donald Blaustein, BU 79, was promoted to president of Guinness Import Company's Caribbean and Latin America Region. He and his family have relocated from Toronto to Boca Raton, Fla. He says "my wife, Roni, and our two children, Olivia, 8, and Ivan, 4, are enjoying meeting new friends and adjusting to our new home.

Laurie Hollabaugh, BU 79, is director of human resources at Color Art, Inc., a St. Louis-based provider of commercial printing, typography, and map-making services. Laurie, husband Gregg, and their two children, Melissa and William, live in Kirkwood, Mo.

Gary B. Knapp, LA 79, (owner of Reeler the Wonder Dog, 1976-79) lives in Sugar Land, Texas, with wife Charmaine and daughters Christy, 15, and Cassie, 13. He is a petroleum geologist with Miller and Lents, Ltd., in Houston. He says he "still refuses to give his red jacket to Mike Holznecht, EN 80, who covets it fiercely."

Ruth Rensicov, FA 79, served as coordinator of the visual arts program at the Atlanta Committee for the Olympic Games Cultural Olympiad from 1993 to 1996. She is now the editor of *Art Papers,* a non-profit contemporary art magazine based in Atlanta, and she serves as executive director of its associated advocacy organization, Art Papers, Inc.

Fran Hamilton, GR 80, attended the Twelfth Annual Highlights Foundation Writers Workshop at the Chautauqua Institution, in western New York, in July; she has taught language arts for 18 years and wrote a column in the St. Louis West County Journal.

Peter Longley, GA 80, is senior associate at The Hillier Group. He has returned from Australia, where he worked as senior project manager on Hillier's $800 million Sydney Harbor Casino Complex, to become project architect for Mere Griffith's Resorts Casino Hotel, in Atlantic City. He has 20 years' experience in all phases of architecture design and project management.

Steven Paul Reise, BU 80, EN 82, is owner-consultant of SPR Technical Services and has relocated his consulting firm to a rural area, where he expanded his clientele base and developing his property.

Richard Saint-Denis, EN 80, received his M.B.A. from San Jose State University to open a new systems management firm, and to systems manager of mobile communications satellites for Lockheed-Martin, in Sunnyvale, Calif.

Patti Litman, SI 81, says that after 13 years in the intelligence business, she has joined Rockwell International to open a new northern Virginia office for the Air Force's homeland and Missile Systems Division. She credits her multidisciplinary education in the former "technology and human affairs department" for preparing her to tackle the variety of problems encountered in complex problems. She is married to Greg Swift, SI 80. They have two sons, Gabriel and Jay, and their family lives in Washington, D.C. She can be reached by e-mail at plitman@anet.rockwell.com.

Scott Sandford, GR 81, GR 85, is an assistant professor and research scientist at the American Samoa Community College. He was named a 1995-96 National Science Foundation Graduate Research Fellow and in 1996 he won an Fulbright Scholar Award. He is the author of an article in *The New England Journal of Medicine* on the epidemiology of the human papilloma virus in Samoa.

Kenneth Mallin, SI 82, joined the St. Louis law firm of...
The Legacy Endures

See page 9

Robert S. Brookings
Your Legacy Can Endure

See page 9

BROOKINGS PARTNERS

Recognizing the Importance of Planned Gifts
Washington University in St. Louis
his considerations of body relation and body image. “When I make a piece I consider the viewer approaching it and looking at it in relation to his or her own body,” Butter says. “This is a very traditional approach to sculpture, rooted in the making of statues. Although my work doesn’t resemble a figure, it has a presence—the ability to hold a room like a figure would.”

The sculptures also have a presence in the art world, having been exhibited in numerous U.S. galleries and in museums such as New York City’s Metropolitan Museum of Art. Butter, who has lived in Manhattan since his formative graduate years at Washington University, has also been represented by the Curt Marcus

Orville Lee, LA 83, is an assistant professor in the department of sociology at Northwestern University, in Evanston, Ill. JoAnne Levy, LA 83, LW 86, and husband Jim Thomeczek have welcomed Marianna LeVa Thomeczek to their family. She joins brothers Jerry, 2, and Jake, 5, and sister Samantha, 9. JoAnne is regulatory attorney with Mallinckrodt, in St. Louis. Jim is an education attorney in private practice.

Alan Michael Parker, LA 83, is author of a forthcoming volume of poems, Days Like Praws (Alet Books, 1997); co-editor of The Routledge Anthology of Cross-Gendered Verse (Routledge, 1996); and co-editor of the forthcoming Who’s Who in 20th Century Poetry (Routledge, 1999). He is assistant professor of English at Penn State Erie, The Behrend College, and is a free-lance book reviewer for The New Yorker and other publications. Alan and his wife, the painter Felicia van Bork, have a son, Eli, and they live in Erie, Penn.

Gabriel C. Spalding, LA 83, was named assistant professor of physics at Illinois Wesleyan University, in Bloomington/Normal. In addition to teaching the “usual undergraduate canon,” Gabe says he looks forward to involving the students in “studies of novel materials at temperatures as low as 0.3 K.”

Michael Stiber, EN 83, has moved with his wife to Berkeley, Calif., where he is a research assistant professor in the department of molecular and cell biology at the University of California, Berkeley.

Jeffrey Tauber, LA 83, has founded the first online department store in cyberspace—it can be found at http://cybershop.com.

The Sculptor Whose Work Defies Gravity

Tom Butter M.F.A. '77

The sculptures Tom Butter creates are attempts to avoid gravity—"in both senses of the word," he says. Crafted primarily of translucent fiberglass shells, his human-sized pieces are actually quite light and have an airy quality. And although the work is heavy on content, Butter maintains a touch of humor—a characteristic mentioned in a December 1993 review in Art in America, in which one of Butter’s works is described as “funny, daffy, and unabashedly corny.”

Primarily abstract yet vaguely representational, the work makes direct references to the organic world, Butler says. The membranic forms, created ironically of fiberglass, seem thoroughly contemporary. Yet Butter views himself as a fairly traditional sculptor in
Renee (Speck) Luba, LA 84, is practicing dentistry in Salinas, Calif., and is opening a second office in Carmel. She and husband Dan have a son, Joey, born July 19, 1995; he joins brother, 5, Rachael, 4, and Jake, 3. They live in Monterey, Calif.

Alan J. Moltz, LA 84, completed a dental surgery degree at the University of Illinois in 1988. His practice is in downtown Chicago. He is president of Alpha Omega Dental and married Shawn Cooper in 1989. They have two children, Lindsey, 4, and Eric, 1. They live in Hoffman Estates, Ill.; Alan coaches football in the fall at Niles West High School, in Skokie, Ill., and he enjoys golf and racquetball.

Roger Noel, GR 84, published, with Horace G. Danner, a Thesaurus of Medical Word Roots, available from B&FPRIMIS, Books, in Occoquan, Va. He is now teaching modern foreign languages at George College, in Milledgeville, Ga.

Margaret E. Bauer, LA 85, received a Ph.D. in medical microbiology from the University of Wisconsin-Madison in May 1996 and is doing a postdoctoral fellowship at Indiana University School of Medicine, in Indianapolis.

Steven Goldberg, LA 85, and Carol Moon Goldberg welcomed to the world their daughter, Christine, born September 9, 1995. They are both surgeons. She and husband David have a daughter, Jennifer, born May 22. They live in Denver, Colo., and works at Denver Health Medical Center.

Gay Lipman, BU 86, GR 93, wants her classmates to know that she is teaching sixth grade and living in St. Louis.

Tim Duncan, LA 86, requests that classmates offer their prayers for Steve Deutsch, who was injured in a car accident in Wyoming in September. His arm and leg were severely broken, which resulted in joss of speech and paralyzed his left side. "A prayer from the heart is a strong gift; give it often and freely," says Tim. His family has often kept classmates updated on Steve's condition. For updated information (and further information on contributors to the Steve Deutsch Fund), call Thom at 312-973-3906 (up to 10:30 p.m. Chicago time) or write him at: 6519 N. Fairlaid Ave, Chicago, IL 60645.

Steve Schietinger, BU 86, and wife Ray Ellen have a son, Evan Benjamin, born Oct. 23, 1995. Doug received his M.B.A. from Loyola College in May 1996. He works at the Department of Defense and can be reached by e-mail at mdwag@al.com.

Bernardino Garcia, LA 86, and Robyn Meredith Garcia, LA 86, have a son, Maximiliano Luis, born April 19; he joins brother Benny, 4. Robyn graduated from the University of Illinois College of Medicine in May 1996. She is now a resident in family practice at MacNeal Hospital, in Berwyn, Ill.

Robin Novak, LA 86, married Irwin Nach Dec. 1. They live in Highland Park, Ill., where they own a law practice. She is a former assistant professor in the anthropology department of UCLA, where they will begin teaching after her postdoctoral fellowship at the University of California, Berkeley.

Cindy Grushin, LA 87, GB 93, married Erik Trusler, EN 93, GB 93, on June 22 at Graham Chapel. They plan to live in St. Louis once Erik completes his duty at Fort Riley, Kan. In addition to her career at Anheuser-Busch, Cindy is the social chair for her class' 10-year Reunion. She says she "hopes to see all those from the Class of 1987 in St. Louis next May."

Michael Turmon, EN 87, SI 90, finished his Ph.D. last year at Cornell University. He and wife Rebecca Niederlander (in Califonia. Rebecca studies ceramics at the California College of Arts and Crafts, in Oakland, and Michael works on scientific data processing at NASA's Jet Propulsion Laboratory in Pasadena.

Laura Valero, LA 87, resigned as a captain from the U.S. Air Force after more than eight years, including an eight-month stint in the United Arab Emirates with the first F-16 Falcon squadron deployed to Operation Desert Shield/Desert Storm. In December 1995, she closed her class of 137 from the Defense Intelligence College, in Washington, D.C. She now works for the Federal Aviation Administration, in Washington, D.C. Laura is the first analyst covering military threats to civil aviation. "I'm in a few moments of spare time I do the accounting for my husband Juan's construction company and I am trying to manage my daughter Marisa, 2," Laura can be reached at lljrvalero@aol.com.

Jim Wells, LA 87, and wife Melissa (Pierce) Wells, LA 87, have a son, Benjamin David, born June 17; he joins brothers Jimmy and Bradley. Jim is an architectural and engineering designer for Fluor Daniel Engineering and Management in Jacksonville, Fla. In October 1995, Melissa earned the Chartered Property and Casualty Underwriter professional designation; she is a staff claims examiner for Aetna Life and Casualty in New York.

Thom D. Chesney, LA 88, received a Ph.D. in English from Florida State University in April. He received the department's award for outstanding graduate work as well as a universitywide outstanding teaching award. His specialization is post-Colonial literature, and this fall he joined the English department faculty at Whitman College, in Walla Walla, Wash. He would love to hear from classmates by e-mail at chesnet@whitman.edu.

Anita Cleaver, LA 88, and husband John M. Horn have a daughter, Laura Katherine Cleaver Horn, born March 10. Anita also graduated from the University of Missouri-St. Louis in January 1994.

Nathan Gould, EN 88, and wife Melissa (Pierce) Gould, EN 88, have a son, Matthew, born April 24. They live in St. Louis, where Nathan is a project engineer for DQE International, a structural/
earthquake engineering firm, Ilene works part time as a home health physical therapist for the BJH Health System and "full time as a mom." Cheryl Pomerantz, FA 88, married David L. Bogner on Sept. 15, 1991. They live in New York City, where Cheryl works as a graphic designer and David works as a consultant and a musician. They have two children: daughter Ariella Tamar, born Jan. 4, 1994; and son Gilad Chai, born Oct. 13, 1995 (named for Cheryl's mother, who died in March 1994). Cheryl would love to hear from classmates by e-mail at 73373.1621@compuserve.com.

Thomas E. Warfel, EN 88, completed his Ph.D. in electrical and computer engineering at Carnegie Mellon University in May 1996. He will graduate from the University of Pittsburgh School of Medicine with an M.D. in May 1997. He is pursuing a residency program in radiology.

Dale A. Werts, IW 88, is a partner at Lathrop and Gage, L.C., in Kansas City. His practice includes business transactions and corporate law.

Anne Beitel, LA 89, is U.S. director of marketing at Dr. Solomon's Software, a worldwide leader in computer virus detection and repair, based in Burlington, Mass. She is a member of the management team, responsible for marketing programs, public relations, and marketing communications activities throughout North America.

Aricelli V. Bouza, GB 89, and husband Gee Ming Chow have a son, Jonathan Wesley, born Dec. 21, 1995; he joins brother Christopher, 5. They live in Miami, Fla.

Pam Lieberman Edelman, LA 89, and husband Dean Edelman have a son, Benjamin Louis, born March 5. Prior to Benjamin's birth, Pam was associate brand manager at Kraft Foods, Inc. Pam and family live in Ridgewood, N.J.

David Moellerling, BU 89, and Susan Poynter Moellerling, LA 90, have a son, Alexander Charles, born May 22. They live in St. Louis.

Avery Nathanson, LA 89, completed his residency in internal medicine at Allegheny General Hospital, in Pittsburgh, Penn., and in July 1996 he began a fellowship in pulmonary/critical care medicine at Cedars-Sinai Medical Center, in Los Angeles.

Cynthia E. Rigg, LA 89, is working as the online editor of Weekly World News Online on America Online. She would love to hear from classmates by e-mail at WWNCindy@aol.com. She is engaged to Sean Brodick and plans a February wedding. She lives in Boynton Beach, Fla.

Richard J. Wolf, IW 89, and Kelly R. (Byrnes) Wolf, SW 88, have a second child, Jared Dylan, born May 17. Richard has joined HFS Incorporated as assistant general counsel, responsible for franchise compliance and litigation.

Emily Dorost Asofsky, LA 90, GR 91, and husband David Asofsky, LA 90, have a daughter, Amantia, born April 14. They live in Gaithersburg, Md., where Emily is an English teacher and David works as an architect in Washington, D.C.

WASHINGTON PROFILES

Rita Tateel M.S.W. '80

Star Search No More—Go to the Source

You say you're a v.p. for marketing and your product promotion demands a TV actor born on Chicago's south side who can do the Macarena and pass for a construction worker? Call The Celebrity Source in Los Angeles, and consider it done.

Company president Rita Tateel helps clients like Toyota, Ralston Purina, and the American Red Cross match famous faces with marketing or fund-raising needs. (For the St. Louis feed company, she finds feline cointenances for its hit promotional calendar starring celebrities' cats.)

The first step in any celebrity search, Tateel says, is asking callers to draw up a wish list of actors, musicians, sports figures, or even business tycoons they'd like identified with their project. Then she runs a reality check. "Everybody wants Tom Hanks, Tom Cruise, Whoopi Goldberg, and a few other names. They say, 'We need Tom Hanks for five days for this, this, this, this, and this'—but I know there's no way he can do it unless millions and millions of dollars are being paid."

If clients are unrealistic, Tateel and her staff of four work to educate them about their projects warrant stars on the soap-opera or the blockbuster level—or somewhere in between. Then, from the company's 4,500-name database at headquarters on Sunset Boulevard (where else!), they create a list that matches the client's market, close the deal—and another star project is born.

Tateel was star-struck as a child in West Hollywood: Across the street, CBS Television was (literally) her playground. But she didn't work with celebrities until she earned her M.S.W., promptly became director of the Young Adult Division at St. Louis' Jewish Federation, and headed up its speakers bureau.

Two years later, she moved to L.A., worked with the Federation's speakers bureau there, and in that capacity made a friend whose company recruited celebrities for charity events. He hired Tateel away; she became partner and president. In 1988, she founded The Celebrity Source, Inc., and today, it has correspondent offices in New York, London, Paris, Hawaii, and Australia. It offers a vast range of services, from event production to charity fund-raising. Tateel's specialty is cause-related marketing, in which clients like Michelob link a charity such as the Starlight Foundation (which grants wishes to terminally ill children) and a celebrity like Judd Hirsch to what becomes a "fabulously effective" marketing strategy.

Such matchmaking is critical, but it's only the beginning. The high-profile set's "absolute basics" are luxurious, two first-class air tickets, and luxury hotels. And they want fondnesses indulged: a particular car color, a precise number of bath towels, certain cut flowers, the correct mineral water. As Tateel negotiates this world, she finds her social-work training invaluable—not to mention her undergraduate study in child development.

"Celebrities are probably the most insecure people on the planet," she explains. "I use my psychological training in dealing with so-called difficult stars—ones with big egos, who need a lot of hand holding." One helpful social-work model, Tateel says, is the idea of starting from where people are and moving them to another level, empathizing instead of blaming.

Of all Tateel's happy matches, probably none tops her own career. "I've combined my personal interest in show business with my academic and professional nonprofit backgrounds," she says. "It is so perfect, and I sleep really well at night."

—Judy H. Watts
N. Daniela Assail, LA 90, moved to Seattle, Wash., in 1992 after completing an M.S. in geography at Oregon State University. For the past four years she has taught geography at Olympic College in Bremerton, Wash., and received tenure in February 1995.

Jeremy Blum, LA 90, started a software company in May 1996. He celebrated his second wedding anniversary in August 1996 with wife Surabhi Dabir, a dancer and advocate for the rural poor. They share a home in Washington, D.C., which features a "two feline companions, Vagoba and Shiva." Jeremy can be reached by e-mail at blumj@gysg.com.

Gabe, SL 96, EN 90, received an M.B.A. from the University of Kansas in 1992. Gari and wife Angela have a daughter, Caroline Kathryn, born June 2. He is an account executive at Procter & Gamble. He can be reached at cats@aol.com.

Jun W. Hu, GB 90, was named assistant vice president at Chibank Malaysia's Global Project Management Group. He is responsible for business development in mortgage sales and for financial products development.

Rayna L. Hurwitz, LA 90, married David M. Richardson, of Baltimore, Md., on Aug. 30. They live in Washington, D.C.

Danna Kalkstein, LA 90, GR 91, is entering the Davidson School of Education at Jewish Theological Seminary, in New York City, to pursue an Ed.D. in Jewish education. Danna was awarded a Wexner Fellowship, which targets students beginning studies in Jewish professional fields who have the potential to become leaders in the North American Jewish community. Danna "sends regards to the old storynight gang!"

Karen S. Knox, LA 90, married Matthew Dettmer, LA 91, on May 21, 1994, at Graham Chapel, following their completing graduate school. Karen received her M.D. from the University of Missouri and is finishing her residency in pediatrics at the University of Maryland. Matt received his M.F.A. in costume design from the University of Illinois and works in the University of Delaware costume shop. They live in Baltimore.

Laura Meckler, LA 90, is on the national staff of the Associated Press' Washington Bureau. She can be reached by e-mail at LMeckler@ap.org.

Halley Porter, LA 90, received an M.B.A. from the Darden School at the University of Virginia, in Charlottesville, Va., in June 1996. He lives in Concord, Mass.

David W. Waterneier, LA 90, HA 92, married Regina Hummel on June 8 in New Orleans, La.

He is the senior consultant for the Systems Improvement Group, a division of DeRoyal Industries in Knoxville, Tenn.

Alexander (Sandy) Weil, BU 90, celebrated his five-year anniversary with Microsoft Corp., in Redmond, Wash. He spent two years working on Word for Windows and the past three years on a CD subscription product called Microsoft TechNet. In May 1996 he climbed Mt. McKinley, in Alaska.

Erick Wolffmeyer, FA 90, is in the third year of a post-doctoral fel­lows­hip in speech-language pathology at Western Illinois University, in Macomb, Ill., in preparation for application to the medical program.

Susan Bates, GR 91, 94, was named assistant professor of chemistry at Ohio Northern University. She had been conducting postdoc­toral research and served as a tech­nici­an at the Sandia National Laboratories, in Albu­querque, N.M.

Andrey Girard, EN 90, SI 91, married Jennifer Minke, BU 90, on August 3, and they are living in Maryland. Andy is very close to finishing his doctoral degree, and they report they are planning to have children.

Beth Joy Goldstein, FA 91, says that "after becoming disillusioned with the fashion industry, I began taking evening classes at the New York School of Interior Design." In March she became a designer with Mariette Himes Gomez Associates, an internation­ally recognized interior design firm. "I love my new career and encourage everyone who is unsatisfied with theirs to make a change," she says.

Joe Graziano, PT 91, married Theresa Tran Flaspohler on July 6 in a small family ceremony in Lee­sburg, Va. They live in Chincam­uck, Wash., and Joe says that he'd love to hear from his classmates.

Matthew S. Greenberg, LA 90, graduated from the University of Tennessee, Knoxville, with an M.S. in microbiology in 1995. He was working at Duke University Medical Center, in Durham, N.C., through June 1996 in the Depart­ment of Pediatric Nephrology. He is attending medical school at the University of Tennessee, Memphis, and can be reached via e-mail at mgreenber@UTMEM1.utmem.edu.

Michael C. Hawker, LA 91, received his M.B.A. in 1996 with Kromm Rikurami and Johansen, Inc., of St. Louis, and relocated to the Detroit area. He is attending the evening master of architecture program at Lawrence Technological University of Southfield, Mich., and expects to gradu­ate in 1998. He also has a full-time architectural design position with internationally recognized Gunnar Birkerdt and Associates, Inc., of Birmingham, Mich.

Leah Kaufman, LA 91, says she's moved "just about every year since graduating!" Her latest move was from Washington, D.C., to Pittsburgh, Penn., where she is helping produce the journal Genetics. She would love to hear from classmates by e-mail at us0205151@ntreramp.com.

Cathy Schwartz, LA 91, married David Peter Migden of New York, N.Y., on June 9. They live in Roslyn, N.Y., and Cathy can be reached by e-mail at Allnt@aol.com.

Kelli J. Station, BU 91, graduated from Yale Law School in June 1996 and is working as an associate at the New York law firm Simpson, Thacher, and Bartlett.

Elizabeth Stolar, LA 91, married Lawrence Bressler in Chicago on Aug. 3. She graduated from Boston University School of Law in 1994 and practices law in Chicago. She can be reached by e-mail at lbressler@lawq.com.

Karyn S. Weinberg, LA 91, married Aaron J. Polak on Nov. 10. They are both New York City attorneys. Karyn graduated from New York University School of Law in 1994 and practiced for two years as an associate at Rogers and Wells in New York. She then worked in the field of finance and securities law at Cleary, Gottlieb, Steen, and Hamilton, in New York.

Peter Aspalch, EN 92, reports that after a "miserable year as an engineer, I joined the Peace Corps and taught math and physics in Swaziland for two years. I then took 6 months off to read just, relax, travel, and hang out." He is moving to Japan to teach English in a small village, learn Japanese, and "make money."

Allison Ast, BU 92, married Hal Mintz, BU 92, on June 1. They live in New York City, where Allison is a financial analyst at American Express and Hal is a trader for Harbor Securities, a New York hedge fund.

Melinda Bante, BU 92, mar­ried Mike Burns in St. Louis on Sept. 14. She works as a buyer for Finlay Fine Jewelry at Famous-Barr and lives in Florissant, Mo.

Michelle Crowell Coburn, BU 92, moved to Dallas to begin law school at SMU. She can be reached by e-mail at mcoburn@law.smu.edu.

Christopher Gledoe, BU 92, left his position as merchandise analyst with Famous-Barr to attend the University of Chicago's M.B.A. program.

Linda Kreider, LA 92, married Eric Riak, BU 92, in Newton, Mass., on Sept. 3, 1995. Linda is a pediatric occupational therapist for the New York City Board of Edu­cation. Eric is a CPA and works for Executive Money Management, in Manhattan. They live in Forest Hills, N.Y.

Marideli Lopez, LA 92, and husband Ricardo were expecting their first child in July; they live in Syracuse, N.Y., where Marideli is a first-year psychiatry resident at SUNY Health Science Center.

Thanasis Papaioannou, SI 92, graduated with an M.B.A. in finance from Emory University, in Atlanta, and is working as an associate with Legacy Investment Group, Inc., a leading private investment and merchant banking boutique based in Atlanta.

Julia Schiller, LA 92, married in Ham­mond, Ind., and moved to Detroit to begin banking with Legacy Investment Group, Inc., a leading private investment and merchant banking boutique based in Atlanta.

Sam Adler, BU LA 93, was promoted to manager of public policy at AirTouch Communications. He worked in the AirTouch-Entertainm ent's newest talk entry, Pat Bullard. "Check your local listings for time and channel!" he says.

Debra Faber, BU 93, passed the May 1996 CPA exam and is employed as a financial statement accountant at T. Rowe Price and Associates, Inc., a retirement planning services firm. She can be reached by e-mail at 102324.51@compuserve.com.

Sue Goetinck, GM 93, received a William Harvey Award for excellence in newspaper writing on the subject of high blood pres­sure. The awards are sponsored by the American Medical Writers Association; the National Heart, Lung, and Blood Institute of the National Institutes of Health, and Bristol-Myers Squibb. She writes about life sciences for the Dallas Morning News, in Texas.
Imagine opening a business in Moscow in 1990, when free enterprise was all but unknown in the heart of Russia. Imagine, too, competing against the Soviet bureaucracy.

Now, meet Frank Clasquin, who at the age of 75 and 10 years into his retirement went to Moscow to set up an office to supply periodicals and information subscription services to the U.S.S.R. during the initial phase of glasnost.

From 1960 to 1980, Clasquin had been the executive vice president of FW Faxon Company, an international serials acquisition and information management services firm. When Faxon asked him to open the foreign office, he accepted because he considered it an opportunity. "My wife, Signe, had died, and I had to take my mind off myself," Clasquin says. "We had been together almost 50 years, and I needed something to immerse myself in. This seemed like just the right challenge."

To add to that challenge, Clasquin knew only a smattering of Russian and had to teach English to his assistant. He also encountered a tangle of time-consuming procedures and processes. Determined to demonstrate the can-do attitude of an American-style service operation, Clasquin says he "concentrated on finding a way to get around people whose singleness of purpose was to control. I wanted people to know that I was not about to be controlled."

What began as a six-month trial period turned into six years. Faxon sold its European properties, but Clasquin stayed on to direct what is now Swets International Moscow, where he supersedes 15 Russian employees. Now a multimillion-dollar operation, the company is the only legally registered enterprise of its kind. It provides scientific, technical, business, and medical journals for clients in Russia and the Commonwealth of Independent States. "I teach my staff that they do not have to compromise their principles, and never to take no for an answer. They are learning what it means to be a service business."

Clasquin, who continues to learn the Russian language, believes Americans in Russia should live as the Russians do: "I stand in the same lines, eat in the same restaurants, live in a one-room apartment, and socialize with Russian friends." A letterman in gymnastics and swimming in his undergraduate days, Clasquin does play squash at the American Embassy and lives part of each year in Boston. He also contributes to serials review magazines in the United States and Europe and is on the editorial board of Serials Librarian.

As a student at Washington University during the Great Depression, he went to morning classes and then worked 40 to 50 hours a week to cover his $125 semester's tuition. Studying was relegated to streetcar rides and weekends.

Although Clasquin was offered an excellent teaching job in an Edwardsville high school after he earned his education degree, he decided not to take the job. "I thought about it and felt I was not prepared enough in life experiences to teach these kids," he says. Instead, he worked for 23 years in the research department of Cook Paint and Varnish Company, and then in industrial sales. He became vice president of the firm's southern division.

"Learning from scratch with each new job helped me understand what it takes to build an organization," Clasquin says. "Where there is no door, you build a door."
John L. Alderson, LA 37, 9/96.
Edward S. Foster, Jr., GR 37, 10/95.
Lester E. Haentschel, MD 37, 9/95.
Eugene O. Heberer, EN 37, 8/96.
Charles Spitzfaden, Jr., EN 47, 8/96.
Juanita C. (Freitag) Bowring, LA 38, 5/96.
William A. Bruce, GR 38, 7/96.
James J. Cummins, FA 38, 9/96.
Robert B. Schmidt, EN 38, 8/96.
Kenneth C. Kausal, AR 39, 7/96.
Gaylord (Epperson) Landau, SW 39, 9/96.

In Memoriam

Pre-1920s

Jesse L. Coats, DE 17; 1/91.

1920s

May Jeanette (Popper) Stern, LA 23; 7/96.
Peyton Elizabeth (Hawes) Dunn, LA 24; 7/96.
Besie (Rossen) Garfinkel, BU 24; 3/96.
Irving Ben Cooper, LW 25; 9/96.
Alfred Kay, BU 27; 7/96.
August L. Magnelia, MD 27; 11/94.
Eleanor W. Foulis (Miller) Miller, LA 27, GR 30; 7/96.
James W. Reid, BU 28; 2/96.
Louise M. Schiffer, LA 28; 11/94.
Russell M. Bollinger, BU 29; 8/96.
Riley G. Maxwell, GR 29; 7/96.
Harriet Ume (Chaplin) Price, LA 29; 9/86.

1930s

Jillian L. (Case) Bonkowski, LA 30; 6/96.
Stanley H. Dixon, BU 30; 4/96.
Lester C. Haeckel, AR 30, GA 31; 9/96.
Frederick L. Liebolt, MD 30; 8/96.
Anna Margaret (Othle) Rogers, LA 30, 6/96.
Willbur H. Gehring, EN 31; 4/96.
William Fletcher Hall, LA 31; 3/95.
John K. Herrmann, BU 31; 7/96.
Bertha F. (Winkelmann) Plummer, LA 31; 6/96.
Edwin F. Horman, EZ 32, GR 34; 8/96.
Charles H. Playford, EN 32; 7/96.
Charlotte Loverde, NU 33; 8/95.
Mary B. Reinhard, LA 33; 9/96.
Jack W. Schaper, BU 33; 8/96.
William M. Yates, EN 33, SI 35; 7/96.
Frederick E. Nienoeiler, LA 34; 5/96.
Reese H. Potter, MD 35; 7/96.
Robert John Mueller, MD 36, 9/96.
O. Elliott Ursin, MD 36; 8/96.
Virginia Valtion, NU 36; 5/96.
Richard P. Wunderlich, DE 36; 8/96.
Marvin A. Yawitz, BU 36; 7/96.

Tiejun (Tom) Tang, GB 96, was named a senior research analyst at Aragon Consulting Group's research division, in St. Louis. He is an expert in econometric modeling and forecasting that uses sophisticated statistical techniques.

Hoolbert's biology lab, completed two years of study in the School of Medicine before leaving to marry Robert H. Levin II. The Levises were married for nearly 40 years—until Robert's death in 1982—and three of their four daughters attended the University.

In 1987, she married Glenn L. Allen, Jr., a retired Dow Chemical Co. executive.

A rancher, a conservationist, and a collector of early American Indian art and of natural landscape paintings, Allen fervently devoted her energies to education. She was a founding member of the Arts and Sciences Council and an enthusiastic supporter of the Spencer T. and Ann W. Olm Fellowship Program for Women. In James S. McLendon Hall, a plaque outside the Viktor Hamburger seminar room acknowledges the generosity of the Robert H. Levis II family. In addition, Professor Barbara Pickard's biography of Mabel was named the Levis Allen Laboratory of Plant Sensory Physiology to recognize the generous support of the Levises toward plant biology research.

Jessie Bernard, GR 35, a pioneering feminist researcher and sociologist, died October 6 at a nursing home in Washington, D.C. She was 93.

Bernard's research and writings on women's issues are credited with having provided a scholarly basis for modern feminism. Within 10 years after her 1964 retirement as a Penn State professor, Bernard had written a number of books that brought her recognition as a central scholar of the women's movement. Among those were The Sex Game, The Female World, The Future of Marriage, and The Future of Motherhood. She was married to Luther Lee Bernard, called a founder of modern sociology.

Albert G. Hill, EN 30, GR 34, who helped develop radar in World War II, died Oct. 21 at his home in Needham, Mass. He was 86.

Hill was a professor emeritus at the Massachusetts Institute of Technology; he retired from M.I.T. in 1978 as director of its Plasma Fusion Center. He was until 1982 the founding chairman of the Charles Stark Draper Laboratory, which developed the space probe and inertial guidance system that steered Apollo 11 to the Moon in 1969.

He was an M.I.T. instructor in 1941 when he joined its Radiation Laboratory (Radlab), which was working on radar for military use. He was head of the radio frequency group in the laboratory's transmitter components division and

Allen, who conducted undergraduate research in Viktor Hamburger's biology lab, completed two years of study in the School of Medicine before leaving to marry Robert H. Levin II. The Levises were married for nearly 40 years—until Robert's death in 1982—and three of their four daughters attended the University.

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became chief of the 800-person division by the end of the war. Hill then became professor of physics and associate director of the Research Laboratory of Electronics, and he was named its director in 1949. He went on to serve as director of the M.I.T. Lincoln Laboratory in the 1950s. During his 41 years at M.I.T., Hill actively recruited minority students and faculty, and he helped implement M.I.T.'s Office of Minority Education.

Edward H. Birkenmeier, L.A 69, MD 73, a leading geneticist, died of a brain tumor July 27 at his home in Bar Harbor, Maine. He was 48.

Birkenmeier was a senior staff scientist at the Jackson Laboratory, in Bar Harbor; the laboratory is the world's largest mouse breeding lab and a center for mammalian genetic research. Birkenmeier was a pioneer in using mice as models to study human diseases. He was well-known as the co-director of two courses on mouse and mammalian genetics offered by the laboratory every summer for leading researchers in the field and for postdoctoral and graduate student researchers.

He was born in St. Louis in 1947. After earning his degrees at Washington University, he worked at the National Institutes of Health and the Carnegie Institute before joining the Jackson Laboratory in 1980.

Richard P. Bunge, former professor of anatomy and neurobiology at the School of Medicine, died of cancer Sept. 10 at his home in Coral Gables, Fla. He was 64.

Bunge earned a medical degree in 1960 from the University of Wisconsin School of Medicine in Madison. He was a faculty member at Washington University from 1970 to 1988 and then became scientific director of The Miami Project to Cure Paralysis at the University of Miami School of Medicine.

Throughout his career, Bunge collaborated with his wife, Mary B. Bunge. Their research focused on myelin, the insulating layer around nerves. The Bunges pioneered methods for cultivating myelin-forming glial cells, either alone or with nerve cells, enabling them to study the capabilities of isolated glial cells and interactions between glial cells and neurons.

Bunge's numerous honors include two Javits Research Awards from the National Institutes of Health. In November, he posthumously received the 1996 Wake- man Award, given by Duke University for research leading to a better understanding of recovery from spinal cord injury.

Robert H. Durr, assistant professor of political science in Arts and Sciences, died Aug. 3 of cancer at his home in St. Louis. He was 75.

Durr joined Washington University in 1952, the same year he was diagnosed with cancer of the pancreas and given one year to live. Durr battled the cancer with chemotherapy and continued teaching through the fall semester of 1995. He was active in the Wellness Community of Greater St. Louis, a nonprofit group that offers free counseling for cancer patients and their families.

Durr earned bachelor and master's degrees in political science from Kent State University in Kent, Ohio, and a doctorate in political science from the University of Iowa. His research focused on public opinion, political parties, and the media in American politics.

Richard J. Ferry, assistant clinical professor of neurology, died of a heart attack July 16 at St. Mary's Health Center in Richmond Heights. He was 60.

Ferry had a private practice in the St. Louis area for 30 years. Among his many appointments, Ferry was on staff at Barnes-Jewish Hospital and was director of the Electroencephalogram Laboratory at Deaconess Hospital.

Ferry received a medical degree in 1962 from Saint Louis University, from which he also earned a bachelor's degree. He did his neurology training at the University of Michigan.

An avid trumpet player, Ferry performed with the University City Symphony Orchestra and the Compton Heights Band.

James Lee Johnson, Jr., a longtime supporter of Washington University and other St. Louis educational and cultural institutions and first vice president of investments for Stifel, Nicolaus & Co. Inc., died Oct. 2 of heart failure in his Ladue home. He was 64.

Johnson's primary interests focused on education. He served on Washington University's Board of Trustees for 25 years after his 1970 election. He chaired the University's George Warren Brown School of Social Work Task Force of the Commission on the Future of Washington University from 1979 to 1981 and chaired the social work school's Capital Resources Committee during the Alliance for Washington University.

In addition, he was the founding chair of the Washington University Student Affairs National Council, serving from 1988 to 1994. He also was a member of the Williams Greenleaf Eliot Society.

Johnson and his wife, Bettie Schroth Johnson, established the Bettie Schroth Johnson Program in Social Service Management in 1986, a premier scholarship program for women entering the field of organizational management. The Johnson Challenge, a fundraising effort initiated by the Johnsons in 1988, helped the social work school build alumni participation and contributions to a record level at that time.

Johnson attended Princeton University, where he majored in history and received a bachelor's degree in 1955. After graduation, he joined International Shoe Co., now Interco, and remained there until 1989, when he became an account executive with the Reinhold & Gardner brokerage firm. In 1979, he joined the major regional investment firm of Stifel, Nicolaus & Co. Inc. as a broker.

Constance Urdang, a nationally recognized poet and novelist, died of complications from cancer Oct. 8 at Barnes Jewish Hospital. She was 73.

Urdang's first association with Washington University came in 1974, when she served as an instructor in advanced exposition in University College in Arts and Sciences and in the Writing Workshops for Women program in the School of Continuing Education. She also coordinated the Writers' Program from its inception in 1977 until 1989. From 1989 to 1990, Urdang was a lecturer in English, and in 1991, she taught in University College.

Urdang's husband, a 40-year poet, Donald Finkel, is a professor emeritus of English in Arts and Sciences.

Born and reared in New York, Urdang received a bachelor's degree, cum laude, from Smith College in Northampton, Mass. She earned a master's degree in fine arts from the University of Iowa.

Urdang's earliest published work was a Christmas poem that appeared in a national children's magazine when she was 8 years old. Her most recent books are short novels titled American Earthquakes, The Women Who Raid Novels, and Provocateur. A book of poems titled Alternative Lives was published in 1990.
I've just come back from St. Louis, and I wish I hadn't. It's become a yearly occurrence now, my teaching Shakespeare to the very eager students of Washington University in St. Louis, Missouri. I teach Shakespeare all over the [British] shop, but there's nothing like teaching it where the energy put out is matched by the energy received.

Washington U. is just below the Ivy League, and its fees are £15,000 a year. And for that money you get two theatres on the University campus that are better equipped and professionally staffed than most provincial theatres in England.

In one semester there, I saw the Tyrone Guthrie Theatre Company from Minneapolis do an adaptation of Kafka's *Metamorphosis*, a one-man show by Robert LePage from Montreal, and a collage of other events. The dance students did their own evening of in-house work that included ballet and some very modern dance.

Costumes, choreography, and some of the music was in-house, too. When I left, the drama bit of the Performing Arts Department [PAD]—to which I was attached—was rehearsing a full-scale Elizabethan production of *Romeo and Juliet*, directed by Henry Schvey. And that's just one small section of the University syllabus.

Most of the PAD students were in my class. I rarely had to ask for volunteers. Arms shot up whenever a new piece of the Bard was to be tried, illustrating heightened prose or naturalistic verse or rhyme. I rarely had to resort to the cajoling that I normally employ in England. They'd hook me into conversations after class, accost me as I was crossing campus—all enthusiasm and ideas.

In the home of my hosts, Henry and Patty Schvey, every room was lined with rich, dark wood and had its own set of finely finished, built-in cupboards in the same warm American oak, lovingly finished by an antique hand with a caring eye for detail and craftsmanship. To find these and many other gems of Art Deco and Art Nouveau architectural wonders in Midwest of America was a delightful surprise.

Food plays a large part in my memory bank. There were six types of coffee and as many types of bagel in the campus cafe. I was taken to Country Kitchen on the interstate highway, where diners sported checked shirts and baseball caps—worn the right way 'round. The menu was a cliché of American food at its best: pancakes and maple syrup, waffles and bacon, homemade hash browns, onion rings, biscuits and gravy.

Food is everywhere in the States. At every intermission at an ice hockey game, the packed auditorium would, as one, get up and get a hot dog, a bucket of popcorn, a Coke, or a beer—and there are a lot of intermissions in a game of ice hockey.
They threw me a surprise party the night before I left. My students had just said goodbye at the end of the afternoon's class, and I had to sniff back a whisker of disappointment that this lot hadn't even signed a farewell card. When I returned "home," my host's wife pleaded a headache and absented herself from the final dinner we had arranged for them and their two daughters at a local restaurant. So, disappointed on two counts, off I went to dinner with mine host, the girls, and a male friend.

It looked like my last evening was going to finish in a flurry of nothing around 8:15. After walking back through the dark streets, my mood even darker, I said as we approached the house, "Henry, there are a lot people outside your house." It wasn't until one of the girls sniggered that I realised something was up. A few steps further, and I could detect the tune of an Elizabethan canon I had taught my class to sing. All my students who had so hurriedly said goodbye that afternoon were lining the path to the house, holding candles and singing. And there was I, my mouth open in disbelief, and my eyes full of tears.

Inside, the house was awash with every colour of helium balloon, shiny sparkles were scattered all over the floor, and every member of the PAD was there holding a glass of champagne and sporting a huge smile. An iced cake the size of a small table—with "We love you, Jane" on it—accompanied a supermarket trolley-sized basket full of all the tackiest American inventions I love: zip-lock plastic food bags, fat-free Coffee Mate, and chocolate-chip cookies—fat-free too. A paperback copy of the First Folio that they had all clubbed together to buy was inscribed with the most heartwrenching goodbyes and thanks. It was one of the greatest evenings of my life.

It must have taken Patty—she of the brilliantly acted headache—weeks to organise that party. Almost as long as it took me the next morning to sweep up the hundreds of sparkles stuck to that beautiful wooden floor. It wasn't totally altruistic. I wanted to bring some of those sparkles home, apart from the one embedded in my memory. You see, America is still the land where dreams can come true. ❯

Jane Lapotaire, who lives in London during the seven months she is not teaching at Washington University in St. Louis, is an award-winning actress, an honorary associate artist of the Royal Shakespeare Company, president of the Friends of Shakespeare's Globe, where she first met Henry Schwey, and about to open in her one-woman show, written for Henry and Patty Schwey, called Shakespeare as I Knew Her. She is now playing Katharine of Aragon in Henry VIII, which Washington University students will see in Stratford-upon-Avon in summer 1997.

Concised and adapted from an article in The Herald, Glasgow Scotland, June 8, 1996.
Six in a Row!
The WU volleyball team deserves an extra-big hand for its play in the 1996 NCAA Division III Final Four. And it could use it—to help hold the championship rings the volleyball Bears have won for six consecutive years. On December 7 the team defeated archrival Juniata College (Huntingdon, Pennsylvania) in only 70 minutes, winning their seventh national crown in eight years. "It feels like we started over and it is our only national championship," said WU head coach Teri Clemens (surrounded at center). "Our success is the result of how we train and play every day. We talk about playing good volleyball, being good people, and being a class act. What we reap from that sometimes is a national championship."