

The Graduate

*A Magazine for the
Graduate Community*

Volume XIX • Number 2 • 2007

UNIVERSITY OF CALIFORNIA, BERKELEY



Do Babies Matter?

What graduate students have to say about parenthood

The Magic of Berkeley is Something We Make Together

Peg Skorpinski photo



THIS IS MY LAST MESSAGE TO THE GRADUATE COMMUNITY.

I have had the privilege of serving as Graduate Dean for one of the greatest universities in the world for seven years, since August 2000. These have been, for me, the most fulfilling years of my career. Each May when I confer degrees on some

of the most promising students in the world, I feel the pride and the responsibility of maintaining this incredible institution of higher learning. I have always believed that Berkeley is magical. It is a unique world that offers the best of learning and the best of living. When I travel, I am often approached by grad alums around the world who want to recount their days at Berkeley. They tell me their graduate years were, often in these exact words, “the best years of my life.”

I hope that I have helped to sustain the “magic” of Berkeley. One of my particular concerns, arising from my research as a faculty member, has been to try to keep the doors open for the women students (about half of all graduate students) who choose to have a family while completing their degrees or launching their careers. Our research has shown that a large proportion of our graduate students who became mothers were not able to realize their career goals as professors. I am proud and encouraged that, with support from the Alfred P. Sloan Foundation, the entire UC system has strengthened its family-friendly policies, from the graduate years through the early faculty years. These innovations will, we hope, help all our students and future faculty to fulfill their potential.

Public universities everywhere are fragile. We at Berkeley need the support of our alums and friends to maintain our unique position as a great research university with open doors to the best and brightest. We count on you to help us do so. I know you too understand the exceptional magic of this incredible institution.

Much of that magic lives in our graduate students themselves, in each successive generation. Our graduate students play essential roles in the twin missions of the university, assisting in the teaching of undergraduates and the performance of vital research. We have students now

who are helping unlock the secrets of human life through our DNA, and who are helping develop new low-cost medicines, such as the artemisinin that will soon combat malaria. Others are working to preserve the languages of California’s own numerous Native American tribes, and more are assisting our latest Nobel Prize winner, George Smoot, in measuring the age of the Big Bang that created the universe.

The magic reaches out, too, through the teaching they go on to do in their careers, some at Berkeley, many in other parts of California (including other UC campuses), and elsewhere in this country and around the world. And their research brings great benefits to society. One measure of that is in Nobel Prizes: among Berkeley graduate alumni there are nearly as many Nobel Laureates as have been produced by the entire nation of Canada. Our graduate alumni are serving as university presidents, governors, Congressional representatives, Supreme Court justices, ambassadors, and leaders in journalism, engineering, and business.

They are everywhere. And they are you. I have enjoyed serving as your Dean. Next spring I will return to teaching, but I will remain involved in graduate education. I know that as you contemplate your own time here, you will stay connected to the campus and help make sure that Berkeley’s magic continues to inspire its students — and change the world.

A handwritten signature in dark ink that reads "Mary Ann Mason".

Mary Ann Mason
Dean of the Graduate Division
Professor of Social Welfare

Graduate Division

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Mary Ann Mason, Dean of the Graduate Division (left), walking with graduate student Lorelei Mitchell and her baby, is the principal investigator on several studies of how parenthood affects academic careers. Her pathbreaking research has encouraged UC and other universities to establish new family-friendly policies for graduate students and faculty.

Photo by Peter DaSilva

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The Parent Rap

A conversation with Mary Ann Mason on why babies matter

By Lisa Harrington



Peter DaSilva photo

A shared enterprise: Mary Ann Mason (walking with graduate student Lorelei Mitchell and her baby) has been in a unique position as dean of the Graduate Division to study work/life balance issues. From fireside chats with students to national speaking engagements, Mason is a tireless advocate for family-friendly policies. Another graduate student, Chrysanthi Leon, who is completing her Ph.D. this year ("in six years, along with a JD and a daughter who will be two") says Mason's "work on behalf of women in academia like me has made Berkeley a wonderful place, and has been part of my spiel to potential admits to our graduate program. My ability to finish was due to student family housing, University childcare, and the Normative Time Grant. I wish I had been able to benefit from paid maternity leave — this is a truly wonderful accomplishment." (Maternity leave for supported women graduate students was approved by UC in February.) Adds Leon: "I will push for similar accommodations for grad students in my new position as an assistant professor of sociology at the University of Delaware."

Early babies, tenure babies, or no babies at all — is there a good time to have a baby in academe? "While the question seems so straightforward," says Mary Ann Mason, dean of the Graduate Division, "there is no easy answer."

Mason has been pursuing the answer for some time. A professor in law and social welfare in the Graduate School of Social Welfare, she publishes and lectures nationally on child and family law matters; the history of the American family and of childhood; and public policy issues related to work and family, child custody, children's rights, and stepfamilies. Among her publications are a major work on work/family issues, *The Equality Trap*, and two major works on child custody, *From Father's Property to Children's Rights: A History of Child Custody in America* and *The Custody Wars: Why Children are Losing the Legal Battles and What We Can Do about It*.

For the past several years, Mason has been leading a major study on family formation issues called "Do Babies Matter?" that has captured the attention of universities around the world and received wide coverage in the media. Stories have appeared in the *Wall Street Journal*, *Science* magazine, *Newsweek*, the *Boston Globe*, the *Chronicle of Higher Education*, *Academe*, *Change*, and on CNN, to name a few. Marc Goulden, co-author of the study, has a Ph.D. in social history and a background in life-course analysis and is a full-time academic researcher with UC Berkeley. "The press has been very important to us," says Mason. "Our UC family-friendly policies have

gotten a lot of national attention, and other universities have felt encouraged to follow suit. So it has been enormously important in spreading the ideas across the country."

In 2005, the presidents of nine research universities (Cal Tech, Harvard, MIT, Princeton, Stanford, Berkeley, Michigan, Pennsylvania, and Yale) issued a joint statement on gender equity in higher education that said, in part: "Our goal as research universities is to create conditions in which all faculty are capable of the highest level of academic achievement. Continuing to develop academic personnel policies, institutional resources, and a culture that support family commitments is therefore essential for maximizing the productivity of our faculty."

Last fall, the National Academy of Sciences published a major report, "Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering" (<http://newton.nap.edu/catalog/11741.html#orgs>) that cited the Berkeley study and called for an end to gender bias in academic institutions.

"Institutional change is typically slow, but change is exactly what is happening," says Mason. Change that will improve many work environments. We spoke with her this spring about her ongoing research.

Q: Your study “Do Babies Matter?” has been referred to as the gold standard for research on how children impact an academic career. How did the project begin?

A: When I became dean in 2000, it was the first time that women outnumbered men among new graduate students at Berkeley. Fifty-one percent of the students in the entering class were women who had come to pursue doctoral studies or professional degrees in law, public health, social welfare, and other fields. It was an historic moment. But having dealt with family issues over the years in my research on gender equity, I knew that this was good news but not necessarily the moment of victory for women. So the “Do Babies Matter?” project began as a way to forecast the effect of family formation on the lifelong careers of these women, and Marc and I knew exactly which data could be used to do this.

Q: Which was?

A: The Survey of Doctorate Recipients, a longitudinal employment database on Ph.D. recipients that the National Science Foundation sponsored along with the National Endowment for the Humanities and the National Institute of Health. The SDR was an incredibly rich source of data. It followed more than 160,000 Ph.D. recipients from 1973 to 1999 so we could actually pinpoint the exact effect of family formation. Because it was such powerful data, it allowed us to show the campus and the UC system, and ultimately the nation, how women Ph.D.s got stuck in the academic pipeline and where they dropped out — primarily between getting the Ph.D. and taking the first job. There was a huge leak out of the pipeline there.

Q: Because of babies?

A: That was the major reason, family formation. Overall, only 55 percent of women with early babies — babies born any time up to 5 years post-Ph.D. — became tenured professors. By comparison, 78 percent of men with early babies got tenure. Women dropped out of the track not because they were denied tenure — but because of family issues and wanting to have babies, to start their families. It's a terrible loss of talent.

Q: What's been done so far to keep women in the academic pipeline?

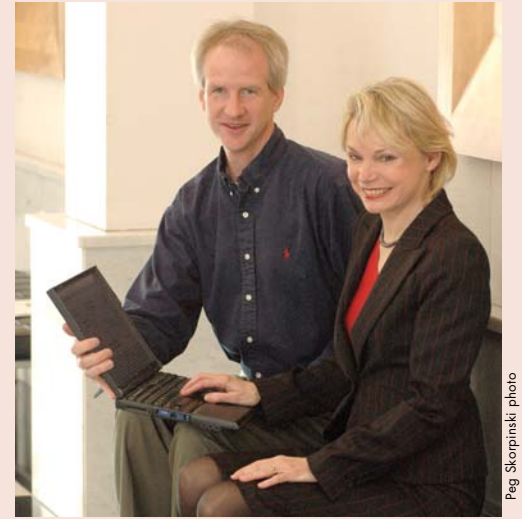
A: We're offering stronger family-friendly initiatives. That's what we proposed, which was the beginning of the UC Faculty Family Friendly Edge, a UC-wide program for ladder-rank faculty. As a result of the *Do Babies Matter?* research and our survey of UC faculty, we received funding from the Sloan Foundation to implement flexible career policies at UC, expanding the family-friendly policies that have been in place since 1988. Though UC has been relatively progressive in this area, the policies, we found, have been underused by faculty.

Q: Did your survey of faculty reveal why?

A: Yes, several reasons. One was that the policies were not well known. There also was confusion about eligibility. So communication was a problem. Although UC offered an active-service, modified-duties policy, faculty members who knew about it were reluctant to take advantage because of departmental climate and fear of retribution if they requested it. To make these policies more effective, we needed to shift the culture and restructure the University workplace so that the policies became entitlements.

Q: How did the UC faculty survey response compare to the SDR data? What were the major findings?

A: In the first project, we used the SDR data to look at how family formation affects academic men and women. In the second project, the survey of UC faculty, we turned the evidence on its head and asked how career affects family formation — what happens to both men and women who put academic success, securing an assistant professor job, before parenthood. And here we saw an even bigger gap between the outcomes of men and women — what we call the



Peg Skorpinski photo

Changing society: Strong interests in equity and societal issues are what drive Marc Goulden and Mary Ann Mason, research partners on *Do Babies Matter?* — a path-breaking study of academic careers and family issues. Says Goulden, “I’ve lived the grad school experience and have seen people come in with a great sense of purpose and wanting to contribute and then, for various reasons, get pushed off to the margins.” They knew the anecdotes, explains Goulden, but their data on Ph.D.s, faculty, and grad students now shows the need for family accommodation policies compellingly. “The struggle to balance career and family while the tenure clock is ticking affects people’s dreams,” says Goulden. “Highly talented men and women who have trained for years and years look into the future and ask, ‘If I pursue this path, how can I have a family?’ This can also affect the health of an institution. Administrators are beginning to see that the younger generation wants a better work-family balance. I think one of the reasons our research has received so much attention is that these policies are truly low in cost and high in yield.”

“baby gap.” Our survey showed that being married with children was a formula for success for men, but the opposite was true for women. We learned that 70 percent of tenured male professors, compared to only 44 percent of tenured female professors, were married with children. And only one in three women who postponed motherhood to take a fast-track university job ever had children.

Q: How did academic women without children do?

A: Having no babies at all was the dominant success mode for women. Among tenured professors, we found a much larger percentage of single women without children. There was a higher divorce rate, too, among women faculty at the top tier. So we saw a dramatic shift in family demographics — not only do women with children drop out of the academy, but those who continue on are far less likely to have children or to be married. This presents a double standard in terms of gender and equality.

Q: What kind of support do academic families need?

A: A flexible part-time option for tenured and tenure-track faculty, better child-care options, relocation assistance, re-entry postdoctoral fellowships, and measures to discount resume gaps in hiring faculty. These are some of the things we've proposed.

Q: You recently added graduate students to the mix, in the third part of the *Do Babies Matter?* project. What kinds of questions did you ask them and what was their response?

A: Since graduate students are the first part of the academic pipeline, we wanted to find out what their attitudes are about balancing their professional goals with their personal lives at Berkeley. So last fall, we surveyed 4,201 students who were in the second year of their doctoral program or beyond, and around 50 percent of them responded. Almost 12 percent of the respondents have children. Their response told us how extremely busy all graduate students are. We learned that most would not consider starting a family while pursuing the Ph.D. Women doctoral students, more than men, have experienced a chilly climate when they have chosen to have children. So we're focusing on that and working on ways to encourage them, because actually it's probably a good time to have children. There's more flexibility and support, in some ways, as a graduate student than when you're an assistant professor. Also, graduate students are getting older, on average. By the time they earn their Ph.D., they're 34 or 35 years old.

Q: One of the questions you're asked most often is whether there is an optimal time to have children. Is there a best time?

A: No, it really depends on one's circumstances. But what we're trying to do is to study the problems and identify the kinds of support needed at every stage of an academic career so women — and men — will have more options.

Q: Overall, is combining career and family significantly easier for men in academia?

A: Yes. Across the board, men can have children at any time and still be considered serious in their research. Women in academia who do the same are considered less serious, because women have a very significant second shift as caregivers. In our survey of graduate students, the men with children report that they are doing a considerable amount of child care too, so it's not entirely a women's issue. What this really means is that graduate student parents need family-friendly benefits as much as faculty. We have to have support for families every step of the way.

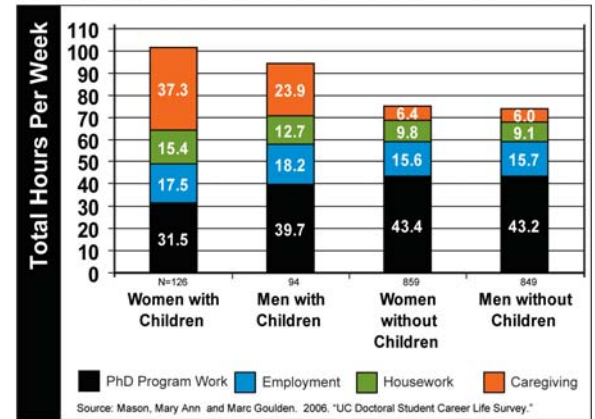
Q: What kinds of support does Berkeley offer?

A: The campus just approved paid maternity leave, which is a huge step forward. Beginning next fall, women doctoral students who hold fellowships or academic appointments as Graduate Student Instructors and Graduate Student Researchers will be eligible for six weeks of paid leave. We also provide a graduate student parent policy for "stopping the clock" — extending academic milestones, preliminary exams, qualifying exams, normative time.

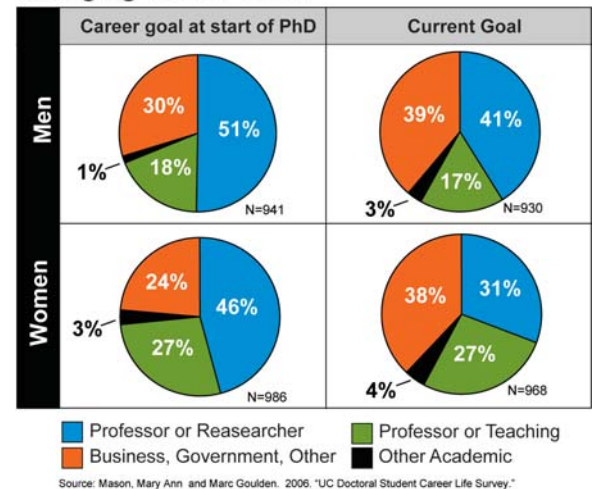
Q: What about child care?

A: Child care is a major issue as well, and we've increased the number of spaces in campus child care somewhat and would like to do more. Parents also need ways to connect with each other, so we've established a wonderful online network for faculty and student parents called UC Families. Campus housing for families has improved, and to help with expenses we offer a graduate student parent grant. So we are doing quite a lot for graduate student parents at Berkeley.

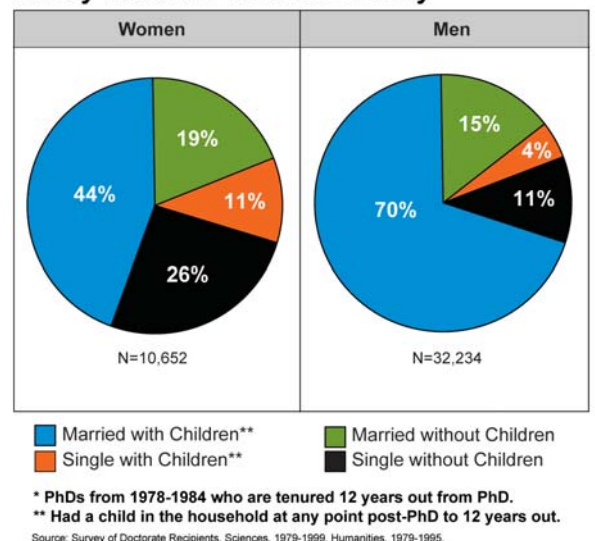
Everybody is Busy (UCB Doctoral Students)



Changing Career Goals



Family Status of Tenured Faculty*



Q: In a recent interview, you said, "Encouragement is 99 percent of the game. Individual differences between genders are far less important than social encouragement." Is your research having an impact on University culture and providing more encouragement for women?

A: Yes, I think so. I think one of the ways to

encourage women is to share success stories and strategies, because there are success stories out there too. We need to share them with all graduate students, but especially women. A major reason why graduate women change their career goals during graduate school is the perception that balancing an academic career with family is impossible. In our latest survey, we see roughly 50 percent of both men and women at the beginning of their doctoral programs wanting to become professors at research universities. But as they move further along in their graduate career, the number for women drops to 31 percent. So in graduate school we're already seeing this bifurcation based on family issues, where women are thinking of dropping out — and do. It's such a huge waste of trained minds. We're losing the best and brightest if we give up on them.

Q: Are larger numbers postponing childbirth until later in their careers?

A: Well, in our study of UC faculty, this is the case. Most women in the study had their children between age 38 and 40. They waited until they got tenure. That seemed to work quite well for some, but others regretted not being able to have as many children as they wanted. The risk of the “tenure baby” is that a woman's fertility rate drops.

Q: What are reports from Berkeley Ph.D.s now entering the academic job market?

A: I've heard some good stories lately. For instance, one of our graduate students who had a child during graduate school was pregnant again when she went on the job market. When you're interviewing, there's always the question of whether to say you're a parent or plan to become a parent, but when you're pregnant it's hard to ignore. So she just went in and said she was looking for a university with family-friendly policies, and the University of Illinois hired her and gave her the first semester off. So that was a good story.

Q: Then family-accommodation policies will help in recruiting future faculty.

A: We think they will be extremely important, as the next generation of scholars, both men and women, seek a healthier work/life balance. I was having lunch at the Faculty Club recently and sat next to a young man who had just come to campus as an assistant professor with his wife — both were hired, he and his wife. And he said, “We came here because you have family-friendly policies and we're thinking of having a baby.” That was so nice to hear. So it does pay off, the idea that the university becomes more competitive when graduate students and new faculty can pick a place that's better for those kinds of policies. It's going to have a national effect and will be extremely important to UC as larger numbers of faculty retire and we compete with other institutions for the world's top scholars.

Q: You've written openly about your own journey through academia in your books on gender and equality. Were you a graduate student parent?

A: Yes. I had my son Tom at the very end of graduate school, and back then it was, “don't ask, don't tell.” I had begun graduate school back East, but by that time I was living on the West Coast and was married — I had followed my husband out here and was part of a dual-career couple. But it was hard to get a job as a new

The leading edge: Angelica Stacy (pictured), associate vice provost for faculty equity, and Mary Ann Mason, dean of the Graduate Division, were co-principal investigators of the 2003 Sloan grant of \$420,000, which helped support an intense internal review



Peg Skarpinski photo

of UC policies to help faculty balance caregiving responsibilities with their careers. The UC Faculty Family Friendly Edge became an initiative for tenure-track faculty at all 10 UC campuses and its 5 medical centers. UC policies for faculty parents now include child-bearing leave, parental leave, active-service modified duties, part-time work to accommodate family responsibilities, stopping the tenure clock, and personnel-review procedures. “The policy changes position UC well for the

approaching hiring boom, as aging faculty prepare to retire in large numbers and campuses prepare to replace those teachers and expand the ranks over the next decade,” says Stacy. Last fall UC was one of five universities (Duke, Lehigh, Florida, and Washington were the others) selected for the Sloan Foundation ACE Award, which included \$250,000 for each institution to implement flexible family-friendly policies. “Flexible career paths can meet the needs of an increasing diverse faculty and advance institutional goals, such as improved recruitment and retention and maintaining academic competitiveness in a global market,” says Kathleen Christensen, program director for Workplace, Workforce, and Working Families at The Alfred P. Sloan Foundation. “The winning institutions demonstrated the ability to accelerate existing programs, quickly implement creative new approaches and model best practices in faculty career management.”

Ph.D. in history in the '70s, so I went to law school. Then I had to drop out of practicing law after I went through a divorce, because, as a single mother, I didn't have a support system. So I had my difficulties. I was one of the people who really dropped out of the track, but unlike most I got a second chance and came back ten years later. It happened because I wrote a book, *The Equality Trap*, which got attention. I also remarried and had another child, my daughter Eve. I tell my story in the introduction to my new book. My story is part of the reason that I'm so interested in this work.

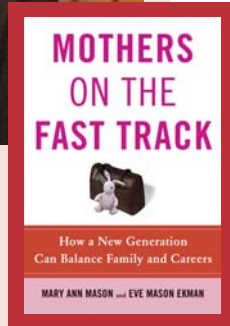
Q: You are the first woman to serve as graduate dean at Berkeley. Why haven't we seen more women in top administration positions?

A: There are very few. I was the only woman dean at Berkeley for several years. Part of the reason that there haven't been more women at the top is because there's a kind of lock-step progression in academia in which you're supposed to take on certain administrative duties at certain times — become department chair and so on. And many women are raising children and can't take on those kinds of service jobs until later, so they get out of the regular track. One of the ways you can obviate that is to jump. You take people who are very good and promising and don't require them to go up through every stage to get to the higher level, because they're ready for it now. They may not have been able to participate in their 40s, but in their 50s they're able to do quite a lot.

Q: Does your new book, *Mothers on the Fast Track*, include your research on women in academia?



Eve Mason Ekman photo



All in the family: A picture says a thousand words...in January, cameras flashed as Nancy Pelosi, 66, gently cradled her baby grandson while she made history as the first woman elected Speaker of the House of Representatives. When she stepped to the podium to accept the gavel, she invited all of the children attending the swearing-in ceremony to join her there. Surrounded by boys and girls of all ages, Speaker Pelosi declared, "We have cracked the marble ceiling." For our daughters and granddaughters, she said "The sky is the limit." In March another historic moment occurred as historian Drew Gilpin Faust, 59, a mother of two, was selected to lead the country's oldest campus. "I would have bet big money that we'd have a female president of the United States before we had a female president of Harvard University," quipped *Boston Globe* columnist Ellen Goodman. Yet four out of eight Ivy League schools now have women in charge (Harvard, Penn, Princeton, and Brown). Women who walk the corridors of power like them no longer hide their family ties. Nor should they, says Mary Ann Mason (above, right). Co-author of a new book, *Mothers on the Fast Track: How a New Generation Can Balance Family and Career* (Oxford University Press), she shares her personal path in academia and the stories of other ambitious women who began careers in medicine, law, business, and media in the 1970s and '80s. Mason wrote the book with her daughter, Eve Mason Ekman (above, left), who received a Masters in Social Welfare from Berkeley in 2005. (An aspiring journalist, Ekman founded *Ethsix*, an award-winning publication focused on graduate research in the schools of journalism and social welfare.) Their book, *Mothers on the Fast Track*, published this spring is "a roadmap" for women just beginning their professional careers; mothers wanting to reenter the job market after a baby-break; and older women seeking a second chance at a top tier career. "I know that women's experiences of the last decades have not dramatically simplified the choices for the future," says Mason. "I've watched many a class of excellent women struggle to find their own way...without clear models for 'how to' have a career and family." The book is a guide for men, as well, she explains, "Transformative structural changes in the workplace to accommodate family must work for them as well, or they will fail. Men must also have the opportunity to become full participants in the raising of their children."

A: It's based on it, but it's not exclusively about academia. We trace the career paths of women lawyers, doctors, and women in the corporate world, and in media. What we've found is that the patterns are all very much the same. Women start out toe-to-toe with men, but during the make-or-break years, between ages 30 and 40, women are faced with difficult choices—whether to have children at all and, if so, how to fit it in with their career. For women, the timing is terrible — their biological clock is on a collision course with their career. Because of this many women settle for the second tier. So we also follow what happens to women who, for family reasons, decide to go into the second tier. In

medicine, the second tier can be pretty comfortable with a part-time practice, being well-paid, and having good status. In academia, when women choose to go into the second tier as part-time lecturers — the gypsy scholars — they're pretty much labeled and may never get a tenured faculty position on that track. And until recently in many places, those positions included very little in benefits or security and no participatory rights in the university. So that becomes a very frustrating track.

Q: Is the second tier growing?

A: Yes. The second tier is growing. For example, more than 50 percent of undergraduate college classes are taught by part-time instructors. In law, women drop out at twice the rate of men, so only 16 percent are partners even though women make up a substantial part of law classes. In the media world, many women freelance — a copy editor, for instance, may work from home because she has children. So there's this huge army of part-timers and freelancers. In the corporate world, there's the middle management plateau where many women stop. Our book focuses on the make-or-break years — how we can make that period better for families. The number of hours we work has been ratcheted up, and is especially difficult for parents with young children, because early childhood is very intensive.

Q: Would you say the outlook is improving?

A: There are signs that it is. There are other universities like us, who take it seriously. Administrators acknowledge that the culture is changing — and pretty quickly. It's not just a women's issue. When we surveyed the UC campuses, the men faculty, in fact the majority of them, said they wanted a part-time tenure track as well. So I'm very hopeful we can transform the workplace so that it's a more positive place for both women and men.

Q: Your daughter Eve wrote your latest book with you. How have you talked about these issues with her?

A: Well the best way to talk with Eve was to have her do the interviews for the book. She heard so many different stories and saw how the workplace structure has been set up to defeat mothers. But she believes the next generation, hers, will be more committed to sharing the child care than mine was. She's very confident about that, that her generation can make it happen.

Something to talk about

The following links will take you to news and articles about the *Do Babies Matter?* study.

Do Babies Matter? The Effect of family formation on the lifelong careers of academic men and women (Academe Nov–Dec 2002): <http://www.grad.berkeley.edu/deans/mason/Babies%20Matter1.pdf>

Do Babies Matter? Closing the Baby Gap (Academe Nov–Dec 2004): <http://ucfamilyedge.berkeley.edu/babies%20matterII.pdf>

UC Faculty Family Friendly Edge:
<http://ucfamilyedge.berkeley.edu>

Mary Ann Mason Online:
<http://www.grad.berkeley.edu/deans/mason/index.shtml>

The UC Faculty Family Friendly Edge

A major reason why top faculty recruits decide to accept or turn down job offers has to do with family responsibilities and perceptions of where they will be able to achieve a work/life balance.

To explore these issues further, UC Faculty were asked to complete a Work and Family Survey in 2002–2003. More than 4,400 tenure-track faculty responded, providing critical insights into the struggle academics face when trying to manage research and teaching with caregiving responsibilities. In the survey, in fact, women faculty reported that they were working over 100 hours per week. Many respondents argued for a flexible part-time option. Said one, “I believe that it is essential that faculty can maintain tenured track appointments but be allowed to be part time for periods of their career, especially with young infants or with problem teenagers or elderly ill parents/spouses. The present policies are antiquated.”

The faculty survey and its results are Part II of *Do Babies Matter?*, a national study by Mary Ann Mason and Marc Goulden. The UC Faculty Family Friendly Edge initiative, designed to develop and implement a comprehensive package of innovative work-family policies and programs for ladder rank faculty in the UC system, is an outgrowth of their pathbreaking research. The UC Faculty Family Friendly Edge, supported by a \$420,000 grant from the Alfred P. Sloan Foundation, is led by Mason and Angelica Stacy, Associate Vice Provost for Faculty Equity. Other members of the research group include Goulden, Carol Hoffman, Manager, Work/Life, and Karie Frasch, Senior Research Analyst, all from UC Berkeley.

Since 1988, UC has supported faculty parents with:

- **Active-service modified duties or ASMD** (relief from teaching duties for a semester or quarter)
- **Tenure clock extension** for assistant professors with substantial responsibility for a newborn or newly placed child under 5
- **Paid maternity leave** for birth mothers (typically six weeks)
- **Unpaid parental leave** (up to one year)

In its 2005 report, the UC Faculty Family Friendly Edge team made the following recommendations to strengthen and improve existing policies:

- Make clear that **ASMD and tenure clock extension are entitlements.**
- Develop and disseminate a **faculty recruitment brochure** emphasizing UC’s family friendly policies, resources, and benefits.

- Provide comprehensive family friendly policy **informational packages** for chairs, deans, and others, and an informational session during **annual chair orientations.**
- Encourage policy use and a UC family friendly culture through the development of a **UC wide listserv/website** for faculty and others to share their UC work/life experiences and insights, **family friendly scheduling** of meetings and seminars for faculty, and campus **work/family advisory committees, work/life managers, and faculty equity officers.**

In 2005, the project produced the UC Families newsletter and website. A resource for faculty, staff, and students who are balancing academic goals or careers with family life, the newsletter provides a valuable network. Its subscribers can post questions or engage in discussions with other UC parents. Visit the UC Families website (<http://parents.berkeley.edu/ucfamilies>) for details.

Last fall, the team received an ACE Award from the Sloan Foundation that provided \$250,000 for the Berkeley and Davis campuses to expand programs supporting career flexibility for tenured and tenure-track faculty. The award came at a fortuitous time, just one week after the National Academy of Sciences (NAS) released a report on the barriers faced by women in academic science and engineering. Chancellor Robert Birgeneau and Alice Agogino, professor of mechanical engineering, were members of the panel that authored the NAS report.

This spring, UC mounted a systemwide educational campaign to assure that its faculty are aware of the policies and that they are used equitably. “It’s not enough for these progressive steps to be on the books,” says Mason. “These policies have to be firmly embedded into the workplace culture to be effective.”

In March, an online toolkit called “Creating a Family Friendly Department,” was launched. Intended for use by deans and chairs at all of the UC campuses, the toolkit is a 23-page downloadable PDF that includes family accommodation policies and laws, case examples, faculty quotes, charts and timelines for family leave, and family-friendly resources and programs.

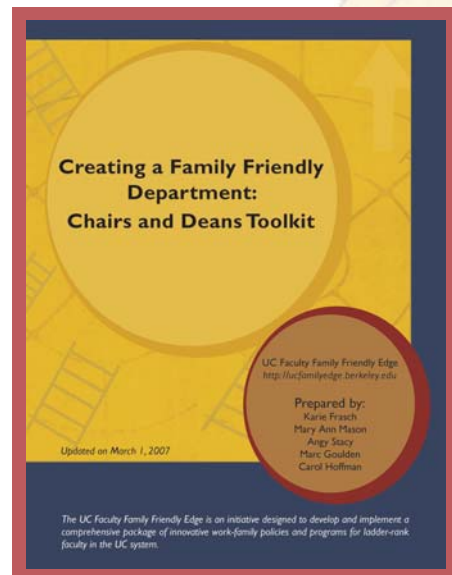
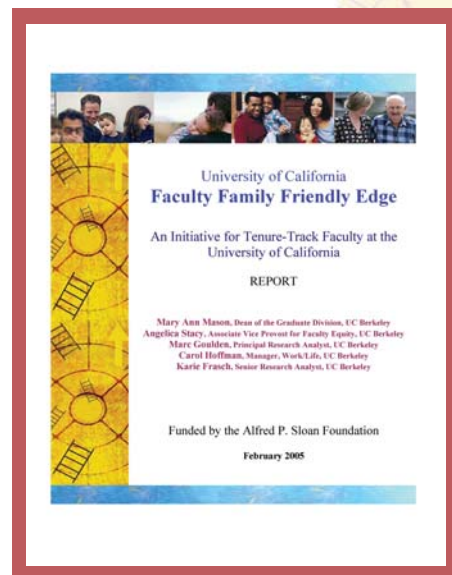
Additional UC Faculty Family Friendly Edge initiatives include:

- Offer a flexible **part-time option** for tenure-track faculty with caregiving responsibilities
- Provide a **relocation counselor** for new faculty recruits and their families, and to assist with spousal employment issues.

- Increase the availability of high quality **university-sponsored infant and child care.**
- Create a university-sponsored **emergency back-up childcare** system.
- Encourage faculty hiring committees to **discount caregiving resume gaps** in order to assist PhDs in their efforts to return to academia after a family-related stop-out.
- Provide **adoption benefits** and **tuition reimbursement** for faculty and their family members; cover a portion of childcare expenses related to travel through existing faculty **travel grants**; and provide an **elder/adult dependent care counselor** at each campus.

To keep up with the latest developments, visit the project’s website (<http://ucfamilyedge.berkeley.edu>), and check back often.

— Lisa Harrington



THE GSI CENTER: FROM BABY STEPS TO NATIONAL EXAMPLE

Learning to teach, with a little help

By Dick Cortén



Peg Skorpinski photo

Great at what they do: the 2006 crop of Outstanding Graduate Student Instructor Award recipients, at the presentation ceremony in Alumni House.

BEING A GRADUATE STUDENT INSTRUCTOR is not only a good way to offset the expenses of your graduate education, it's a heck of a good way to develop your skills and instincts as a teacher, help educate Berkeley's undergraduates — and get a real jump on the market.

About a sixth of the currently enrolled grad students are GSIs this semester. Over their time here, the vast majority of all grad students will take this option, teach undergrads, become role models (whether they realize it or not), and affect their own futures.

For the first 121 years of UC Berkeley's existence, GSIs — known until 1985 as teaching assistants or TAs — were pretty much on their own. Nadesan Permaul, a lecturer in the rhetoric and political science departments, was a TA in the 1970s, and likens it to somewhere between sink-or-swim and being cast adrift. “I was fortunate as a graduate student to have some individual professors who were generous with their time and gave me advice, but otherwise there was nothing organized where everyone could go for help in becoming a teacher.”

Then in 1989 came the first baby steps. In the basement of California Hall, where the Graduate Division was at that time, the Office of GSI Training was started under its wing, with a director, one grad student helper, and one desk.

Seventeen years later it's a fixture and a necessity, nationally recognized and emulated, under the name Graduate Student Instructor Teaching and Resource Center (usually nicknamed the GSI Center), and operating out of offices in the southwest corner of the third floor of Sproul Hall.

Undergraduates tend to have mixed impressions of GSIs. They're a slightly more exalted breed of student, but are “mere students” nonetheless; they're not yet “real” faculty. An undergrad will work with quite a few of them in four or so years of courses and, if interested, may realize that beyond whatever administrative and grading power they have, they're positioned to unlock mysteries of the disciplines, even more than individual professors, because they're usually in closer contact with individual students.

But what's involved in reaching this privileged (and paid, if not royally) position of steering the knowledge-acquisition of other, more junior, students? Quite a lot more than most undergrads might guess.

The minimal qualifications to be chosen as a GSI by the department are: a grade point average of 3.1 or better, excellent scholarship as a student, promise as a teacher, willingness to be an apprentice supervised by a regular faculty member. Each GSI must be registered and enrolled in at least eight units

for the semester they're instructing, and yet must not, with the GSI position and any other employment, work more than 50 percent of the time that semester (20 hours per week). GSIs must either be native English speakers or demonstrate their English proficiency by passing a formal language test. They have to take a for-credit semester-long seminar on teaching within their department and successfully complete an online course on professional standards and ethics in teaching. First-time GSIs must also attend a full-day start-of-the-semester teaching conference. (This year, Chancellor Robert Birgeneau told the new GSIs of his envy of them — he clearly misses teaching — that “teaching matters at Berkeley in a way that is close to unique,” and that “by teaching undergraduates you’ll learn more about your field in the process.” He also said that “if someone made a difference to you, inspired you while you were an undergrad, keep in mind that you are now that teacher, that mentor, that role model.”)

The intensive orientation for new GSIs was one of the first offerings of the GSI Center in its early years. It also gave workshops, offered small grants for grad students to use for course improvement, and presented awards to the each year’s outstanding GSIs — all of which it does to this day

Linda von Hoene, the current director, “always wanted to teach, ever since I was a kid.” She had been a GSI for several years, teaching students in the German department, when she first joined the Center as a “campuswide consultant” in the early 1990s. She was still working on her dissertation — “Fascism and Female Melancholia: the Lure of Fascism for the Female Subject in Psychoanalytic Theory, German Literature, and Film” — when she found herself wanting to make a broader contribution to the university’s teaching mission, through her work at the Center. She’s been there for all the other major changes, and has had a hand in most.

“If someone made a difference to you, inspired you while you were an undergrad, keep in mind that you are now that teacher, that mentor, that role model.”

— Chancellor Robert Birgeneau

In the mid-1990s, she says, “two new programs were developed, two that I think are particularly good. One is the seminar for faculty on teaching with GSIs, which helps individual faculty to mentor and work effectively with GSIs. Approximately 150 faculty members have benefited from this three-afternoon seminar. Another is the Teaching Effectiveness Award, an idea that came out of our brain trust, the Advisory Committee for GSI Affairs, a subgroup of the Academic Senate’s Graduate Council. It rewards GSIs for pinpointing problems in teaching and learning, and road-testing innovative solutions to them. Their award-winning essays are posted on our website so more instructors — GSIs and others — may benefit from these terrific ideas.” (http://gsi.berkeley.edu/awards/tea_index.html)



Peg Skorpinski photo

Looking out at the landscape of higher education: GSI Center director Linda von Hoene, left, with Ph.D. candidate Anuradha Mukerji at the 2006 Summer Institute for Preparing Future Faculty.

When the century turned in 2000, von Hoene took over as director. She rethought, renamed, and beefed up the Center’s workshops on teaching (“to get the topics to be a little more germane to the actual graduate student teaching experience”), and increased the number offered each semester.

She expanded workshops and seminars on developing a teaching portfolio as a way to help GSIs to reflect on and improve teaching, and to document their teaching for the academic job market. Many graduate students create portfolios now, to demonstrate that they have a sophisticated approach to, and knowledge of, teaching. Their portfolios enable them to show that they’re not only top-notch researchers, which most Berkeley graduate students are, but also excellent teachers.

Over the last decade and more, studies showed that graduate students “weren’t being well prepared for their future responsibilities,” says von Hoene, “only the immediate ones of teaching undergraduates in sections and labs.” Building on her experience in preparing GSIs for teaching, she teamed up with Sabrina Soracco, the Graduate Division’s Academic Services director, to offer a remedy, at least locally. The result: in 2003 and every year since the Summer Institute for Preparing Future Faculty, an intensive six-week program for students nearing the end of their graduate programs, designed to make the transition into the academic workforce not only possible but less of a shock and even enjoyable. “Our program prepares graduate students for all components of faculty life,” says von Hoene. “It also looks at the landscape of higher education, trends in higher education, in addition to going on the job market, applying for academic jobs, and the life of a new faculty member. One aspect always leaves graduate students with the biggest impression — the panels of faculty from different institutions talking about faculty life.”

Von Hoene’s personal overarching goal is “to ensure that Berkeley is not only the best place in the country to pursue an advanced degree, but also to develop one’s skills as a teacher.”

"I love working with graduate students," says von Hoene, "because they're so new to teaching, and they're enjoying the amazing fact that they are invested with the authority to teach something they absolutely love, and to share their passion."

"When most people begin to teach, there's a lot they don't know about teaching. In addition to knowing their subject matter inside and out, they have to develop levels of competency in teaching. I feel privileged to work with graduate students, helping them to think through what they're doing, what's working well and why, what's not working and why not, and to make adjustments to the way they teach."

Von Hoene knows how vulnerable people are and feel at this formative stage and she respects the courage to self-examine and

"I love working with graduate students because they're so new to teaching, and they're enjoying the amazing fact that they are invested with the authority to teach something they absolutely love, and to share their passion."

— Linda von Hoene, GSI Center director

especially to ask for some help. What makes it easier for all concerned is that generally the effort pays off so well.

"One of the most challenging things we offer is also one of the best," she says. "It's voluntary, and completely confidential. It's a video consultation, where, by request, we videotape a GSI teaching in the classroom and give feedback. We meet with the GSI before the classroom visit to discuss the areas he or she would like feedback on, the material to be taught, and what the GSI wants students to take away from the class session. After videotaping the class, we give the GSI the tape and tell them to watch it once to get over how they feel about their appearance and how they sound, and then a second time to look at the teaching and learning that took place in the class. The GSI then watches the tape with a consultant from the Center and identifies areas of teaching they'd like to work on and specific steps they can take to improve in those areas. I would recommend it to anyone. It's the activity that people can get the most out of, watching themselves on videotape, with a trained consultant. The consultant knows how to guide you to whatever big-ticket items you may need to work on, but it's the process of establishing goals that's most significant."

The Center's emphasis on professional development for graduate students has been rising since the late 1990s, as a way of helping them bridge into a changing career landscape, where the goal might or might not be academic, and might not remain the same over the years.

"We recognize that the teaching life is not part of everybody's plan," says von Hoene. "Forty to 60 percent of the

Honored and online: the GSI Center in recent years

THE GSI CENTER was given a signal honor in 2004, the Berkeley campus Educational Initiatives Award, which said in part that "The programs of the Center go well beyond the nuts and bolts of teaching, forging a research-based, reflective approach to teaching and learning." Among various testimonials, then-history GSI Heather McCarty was quoted: "Each program I have participated in at the Center has taught me new techniques, which I have applied in the classroom. The amazing staff there not only helped to prepare me for teaching as a first-time GSI; they also offered programs to aid in my continuing growth as an instructor throughout my graduate studies. My experiences with the Center have been nothing short of phenomenal." (McCarty is now an assistant professor in the history and political science department at Ohlone College.)

In the university's 2004 reaccreditation review, the Center was referred to as "a model for TA development centers everywhere" by the external review team.

Another honor came in late 2005, the Chancellor's Outstanding Staff Award, which went to team members in the GSI Center and people in a number of campus offices who collaborated with them in creating the groundbreaking online course for GSIs on professional standards and ethics, which, like many of the Center's resources, is available on its website. The online course is a treasure trove of information about professional standards, campus policy, student demographics, and pedagogical strategies to enhance student learning..

Would you have guessed, for example, that 28 percent of the undergraduates at Berkeley were born in countries other than the U.S.? Or that 25 percent of Berkeley's undergraduates come from families with a combined household income of less than \$35,000?

Is it okay to inject things not really associated with the subject matter of the course into classroom presentations or discourse? No, that's actually a breach of campus policy.

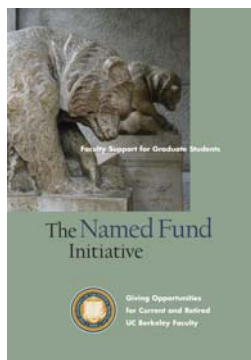
Did you know that prompt return of student papers is an ethical issue? Not doing so can be an infraction. When you assign a lot — more than you can grade and turn back in a timely manner — you are not giving students the feedback they need to progress in your course.

The GSI Center is currently designing a certificate program in teaching and learning in higher education and is preparing to make its online course on professional standards and ethics in teaching available for use by other institutions. News about both the certificate program and online course will be posted on the Center's website (<http://gsi.berkeley.edu>).

Ph.D.s in engineering, for instance, do not go into academe. But a lot of the skills you learn through teaching as a GSI are highly transferable. When I worked with a group in engineering last year, I took over a list of skills that are involved in teaching. I asked them to think about which ones they might need in a future career that was not an academic position — synthesizing information, oral presentation, time management, maintaining records, evaluating work of others, and so on. Most of these graduate students are not going to go in on the ground level. If they go into industry, they'll be in management positions. So they'll be supervising teams, giving feedback on work, explaining concepts, answering questions all of the skills that one learns through teaching."

87 FUNDS, 92 DONORS, AND GROWING

The **Named Fund** Initiative



Thanks to an enthusiastic response from both active faculty and emeriti, more than 87 endowments totaling \$2.9 million have been established for graduate student support at Berkeley.

“Fellowships do more than pay some of the bills,” says Graduate Division Dean Mary Ann Mason. “They help people build their dreams, become who they hope to be.”

THE NAMED FUND INITIATIVE, developed by Dean Mason in spring 2006, has enabled faculty, or their surviving spouses and partners, to support Berkeley graduate students in an extraordinary way:

- With a minimum contribution of \$10,000, donors can create named endowments for graduate student support and designate the school or department these endowments will benefit. The Graduate Division will match the gifts 1:1 up to \$10,000 thanks to the generosity of Bill and Trudy Ausfahl and a bequest from William Power.
- Donors can establish their funds with an outright gift or a five-year pledge. The minimum amount required to establish an endowment through the Named Fund Initiative means that those who wish to participate can do so for less than \$167 per month, or \$2,000 per year. (The minimum gift or pledge required to establish all other University endowments is \$50,000.)

The newly endowed funds will provide fellowships and awards to graduate students in over 20 departments, programs, schools, and colleges, among them Business, Chemistry, Education, Engineering, Information and Management Systems, Letters and Sciences, Natural Resources, Optometry, Public Health, Public Policy, and Social Welfare.

Though the Named Fund Initiative is scheduled to end in June 2007, Chancellor Birgeneau announced a program in April that will build upon its success. Called **“OUR PROMISE. THEIR FUTURE. THE CHANCELLOR’S CHALLENGE FOR STUDENT SUPPORT,”** the new five-year program is open to faculty and staff, active and emeriti. Donors may contribute to any of a list of existing fellowship funds, or, with a current minimum contribution of \$10,000, create a named fund. Gifts in any amount — up to \$250,000 — will be matched. This program will be in place through June 30, 2012.

“It’s a no-brainer,” says Michael Manga, associate professor of earth and planetary science and a fellowship donor through the Graduate Division’s matching program. “It’s a stretch for a lot of faculty and staff to donate, but with the campus doubling your gift, it seems like the obvious right thing to do.”

To participate in these programs, or to learn about other ways to give, please contact:

Kasia Allen, Director of Development, Graduate Division, 425 Sproul Hall #5900,
510/642-8614, khallen@berkeley.edu.

- **THE NAMED FUND INITIATIVE:** http://www.grad.berkeley.edu/alumni_friends/pdf/named_fund.pdf
- **OUR PROMISE. THEIR FUTURE. THE CHANCELLOR’S CHALLENGE FOR STUDENT SUPPORT:** <http://ourpromise.berkeley.edu>

What makes the wheel go around

By Dana Buntrock

When I was a graduate student, I was a teaching assistant (more than once) for a very inspiring mentor, a man named Manos Vakalo. His teams of teaching assistants had remarkable autonomy. He never questioned a grade we gave, and he always treated us as respected equals. In retrospect, we could be dumb at times; I remember bringing beer to a critique for our undergraduates, and Manos simply raising an eyebrow in reprimand. That, however, was enough. He had remarkable expressions, every one of which I think I could still imitate perfectly today, nearly 20 years later.

My last semester teaching as his assistant, five of us worked together. Manos never told us what to do in the classroom, although he would often praise something we had done well. He told us (only once, I think) what he expected: excited, productive students. How we achieved that was never explained.... He left all the grading to us as a group, on open-ended design problems not easy to grade. As a result, the teams I taught with spent a lot of time debating what we should do, and learning what we believed about teaching. At the end of that final semester, two of us had decided on teaching as a career — although that was not what I intended when I began graduate school. Both of us, Laura Lee and myself, were hired as Assistant Professors by Carnegie Mellon — without any of the formalities of interviewing. Laura is today the Director of the School of Architecture at Carnegie.

When Manos died in 2000, I realized with deep regret that he would never see my first book, and he did not see Laura become Director. In a way, mentoring (like teaching) is an act of hope. Manos never knew the depths of his influence. Many of us who teach never do.

But there are great joys in the day-to-day tug of mentoring as well. Some of the faculty who received the Faculty Award for Outstanding Mentoring of GSIs last year spoke of it as an honor — and it is, albeit a fleeting one. The real honor is the daily honor of teaching together with the GSIs, as a team of strong, dynamic people. In the introductory courses, we address both convention and innovation in construction systems and materials. The GSIs' strengths and interests within a very broad and rapidly evolving context effectively complement my wide-ranging and (for the most part) longer understanding of the field. I respect the knowledge they bring to the team, and each GSI is invited to carve out territory and define their interests, presenting a lecture if they wish. Their knowledge also influences the class each day. This year, I have a GSI who knows a lot more about structural design than I do; if I am trying to explain a structural principle and feeling he could probably do a better job, just having him in the room makes me work harder. The group who seem to have nominated me all



Photo courtesy of Dana Buntrock

Dana Buntrock is an associate professor of architecture whose research interests include the construction industry, with a special interest in architectural practice in Japan. She received the Faculty Award for Outstanding Mentoring of GSIs in 2005. In this essay, she talks about her philosophy of mentoring. Essays on the same topic by other recipients, each with his or her own approach, are available on the website of the GSI Teaching and Resource Center (<http://gsi.berkeley.edu/awards/>).

have things I want to learn from them: one of my GSIs loves a good construction detail, thinking elegantly about materials and their connections; another has a far deeper understanding of steel than I can ever hope to, based on long professional experience; still another has been doing genuinely ground-breaking research on computer-aided fabrication; the last (and last but not least) has more heart than I have ever seen in a single human being, and motivates everyone around him in a way that I can only envy — from him, I learn more about pedagogy. These are not the only strengths they have; that would make a far longer list than is fair to impose on anyone. My little summation just begins to explain why I like to teach with the terrific GSIs we have at Cal.

I am like every other professor I know. You walk into a large lecture hall and discover you cannot find the remote control for the slide projector

or do not know how to work the lights on an overly complex light panel that you encounter twice a week for a whole term. How we as a group have so aptly earned the appellation of absent-minded, I will never know. The GSIs always patiently and with only mild amusement sort out these problems while I do the work of getting class underway. I sometimes feel as if they are benign babysitters...and from their occasional amused chuckles, I suspect they may feel the same.

Yet while I may not always be able to work out where the appropriate light switches are, I do know something that my GSIs often seem not to understand: their great knowledge, and the experiences they have accrued at Berkeley, make them leaders in the field, right now. They are able to see how this translates into a relationship with the undergraduates, but I challenge them to do something about their leadership beyond the classroom. As a result, I think they take their research more seriously, and go further with it: applying for grants and fellowships, talking to publishers, considering where teaching will fit into their long-term career choices, which, like mine, probably were initially based on professional goals.

Recently, one of my GSIs was awarded a Fulbright Fellowship. We began class by acknowledging it, but he took control and went further, encouraging the undergrads to think about applying for Fulbrights themselves, and explaining why he thought this was a reasonable goal. The students were rapt. In casual conversations since then, the subject has again come up, and it is very clear than many of our undergrads he touched are seriously considering what this possibility means in their lives. If I create the right context for the class, the GSIs comfortably accept leadership, even sometimes when I am present. I want to be able to stand aside and let the next generations teach me, even as they are teaching each other.

I naturally asked the GSIs to look at the approach I took to writing this piece. My GSIs unanimously wanted me to add the point that we have weekly lunches together in the Faculty Club. For some, the location was important, as it added dignity and perhaps even gravitas to the group. For all of them, these meetings were a good opportunity to talk about the work we were doing and how we do it. Eating together is an important part of the week, as it also establishes a relaxed atmosphere where they feel comfortable adding their thoughts and ideas — it is hard to see me as intimidating when I am stealing French fries from your plate. They are a tough crowd — this is where they tell me a test question was a stinker (and with their help, I am getting better at writing tests). Manos, as I remember it, would take us out for beers, and we would sometimes impiously imitate those remarkably expressive gestures, much to the shock of our classmates who found him intimidating. Perhaps that was why I mistakenly tried drinking beer with my undergraduates; I learned in time to consider my own way of applying the models he offered.

I have avoided a prescriptive response to this essay,

but in summary, this is what I have come up with to make teaching with GSIs a joy: find people who are passionate and know a great deal something exciting, encourage them to live up to the responsibility of their gifts, and get out of the way when they do. And if you are lucky, you get to see some of the fruits of what it means to support such people — but the truth is, you will never know all of what they accomplish, or what role your support may have played in them getting there. The wheel goes around and around.

What is mentoring?

And where are all these awards coming from?



Peg Skorpinski photo

Thanks, coach: Former California Alumni Association president Nadesan Permaul congratulates 2006 winners (and one stand-in) for outstanding mentoring of GSIs as teachers. From left, Permaul; Michelle Douskey, lecturer in chemistry; John Hurst, professor of education; Rosemary Joyce, professor of anthropology; Janet Adelman, professor of English; Linda von Hoene, GSI Center director; and, substituting for Paul Groth, professor of architecture, Sarah Lopez, Ph.D. student in architectural history (and 2005 OGSi Award winner).

IN MODERN USAGE, a mentor is a wise, loyal adviser or a teacher or coach. In ancient derivation — Greek mythology — Mentor was a person, the loyal friend, specifically, of Odysseus (he of the eventful wanderings) and teacher of his son. Mainly, a mentor is a trusted friend. In the campus context, it's someone who has good judgment and is informative.

As Dana Buntrock's essay here admirably demonstrates, teaching isn't just a one-way street, especially when you're teaching GSIs about teaching. The teacher gains from the process, and so, cumulatively, do the undergraduates in the classes taught by the teacher and his/her GSIs. While various individual faculty members over the years have just gone ahead and acted as mentors, from their own generosity or because they've perceived the value of the process, the surrounding long-term tradition hasn't, until recently, actually encouraged mentoring or given much credit to those who make the effort to do it. Several organizations in recent years have been working to rectify the situation, and now there are three awards with lengthy names that reward the previously unsung:

The **Faculty Award for Outstanding Mentorship of GSIs**, presented by the Graduate Division's GSI Teaching and Resource Center, co-sponsored by the California Alumni Association. This award primarily honors the mentoring of teaching.

The **Distinguished Faculty Mentoring Award**, presented by the Graduate Assembly, honors outstanding leadership in mentoring graduate students in their role as researchers.

The newest honor, which joined the family in 2007 and also recognizes faculty mentoring of student research, is the Graduate Division's **Sarlo Distinguished Mentoring Award** for senior and junior faculty members, made possible by a generous gift from the Sarlo Foundation, which supports excellence in education.

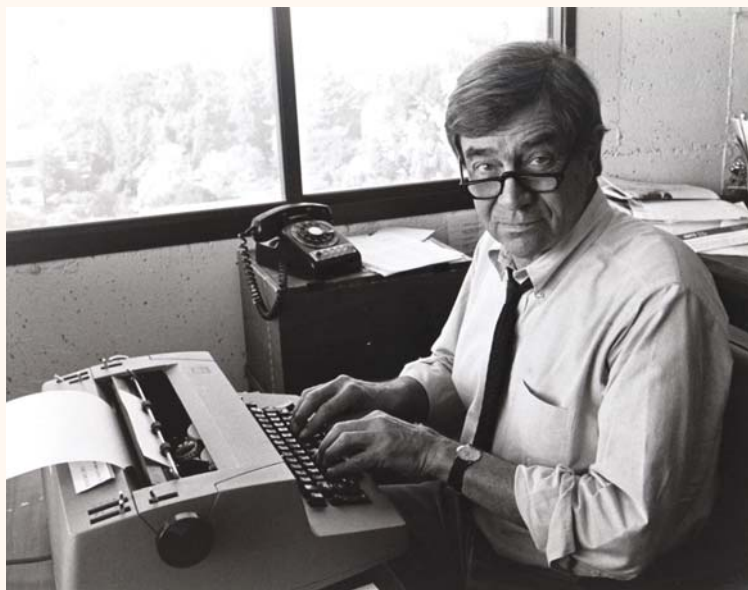
Dateline: Berkeley

A look inside the Graduate School of Journalism

By Dick Cortén

BY BERKELEY STANDARDS its journalism program is young. On the American, even the world scene, it's respectably hoary.* By any standard, the J-school, as it's nicknamed, has been respectable, period, for decades. What it has acquired in recent years is more pizzazz and more clout.

The beginnings were humble and earnest, as befits the old stereotype of a stepchild, which it initially was. In 1936, four "journalistic studies" undergraduate courses were launched within the English department (all taught by the same faculty member). In 1941, a full major in journalism was developed, and a decade later a graduate program was added.



Founding Dean Ed Bayley pounds out copy on his faithful IBM Selectric.

From the 1930s to the mid-1960s, more than a thousand journalism-related degrees were granted, mainly to undergraduates. In 1965, the undergraduate program was discontinued. What would emerge from the metaphorical ashes of the program, in 1969, was a graduate school modeled after — and before long mentioned in the same breath with — the nearly legendary one at Columbia.

The founding dean was Edwin R. Bayley, a veteran political reporter from Wisconsin who covered the rise and fall of Senator Joseph R. McCarthy and later worked in the White House, for the State Department, and for National Educational Television, the predecessor of PBS. He served as dean for 16 years.

* The first journalism school in the world was created at the University of Missouri in 1908.

His successor was Ben Bagdikian, famed as a Pulitzer Prize-winning investigative journalist for the *Washington Post* and as a media critic. He was followed by an "insider" already on the journalism faculty, Professor Tom Goldstein.

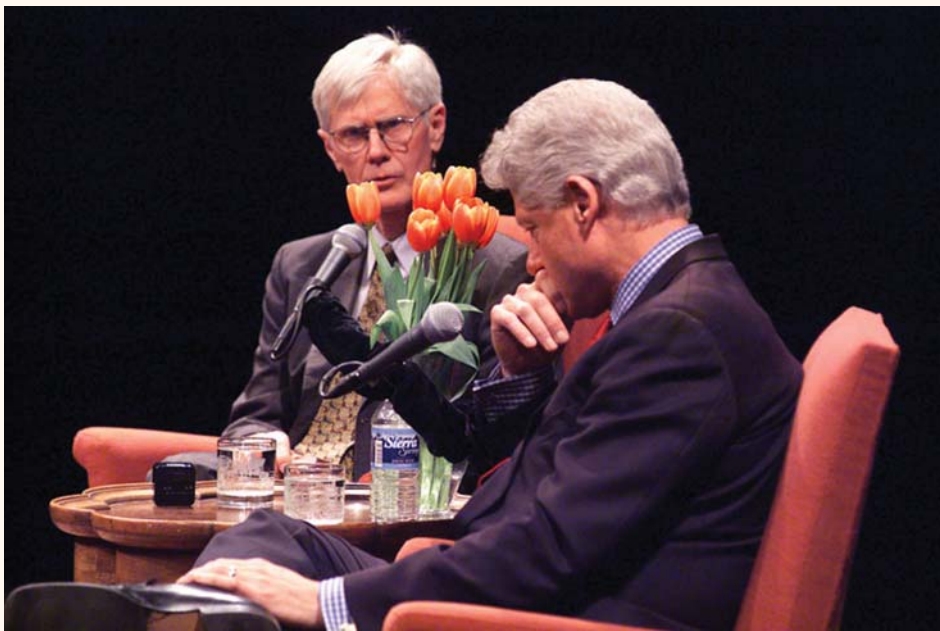
"From the very start nearly 40 years ago, Berkeley was a small gem of a school," says Goldstein. "At first, it was not particularly widely known. But over the years, and with successive deans, particularly under Orville Schell, it became known to a broader audience, all the while remaining a small gem of a school."

On comparisons with Columbia, Goldstein knows whereof he speaks; from Berkeley he went to Columbia as dean there for five years, then came back to the Berkeley faculty in 2002. He says, "The two schools — the only two in the country where journalism is taught only at the graduate level — operate from the same premise: that journalism is taught by practicing journalism under the guidance of first-rate teachers/editors."

Orville Schell, the current dean, came into office in 1996 with his own very personal spin on that basic premise, plus other ideas aplenty. He was in some ways an unlikely choice. He was not a real academic. He was best known as a magazine writer and author of 14 books, and he had won an Emmy as a television producer. In the main, he was a freelancer, independent of both the benefits and the limitations of being "on staff," in and of an organization.

On the other hand, much of his work is a very readable hybrid between reporting and scholarly analysis. Which makes sense because he was trained as a scholar — B.A. magna cum laude at Harvard, graduate work in Chinese studies at Berkeley (M.A. in 1967 and all-but-dissertation for his Ph.D.) — and then chose a not entirely different path, as a leading authority on China, writing for the *New Yorker* magazine.

SHELL's abrupt shift to academic administration and teaching, after a long and satisfying career as a professional writer, was very much a family matter. He first learned the dean's job was available when he was asked to suggest names of people who might be interested, which he did. But then his wife, film and television producer Liu Baifang (who earned her B.A. in psychol-



Dong Lin photo, courtesy of Orville Schell

Fireside chat: Journalism Dean Orville Schell interviews former President Bill Clinton on stage in Zellerbach Hall, January 2002. The school's faculty and staff are well aware that Schell's own star power has helped draw other bright lights to Berkeley, as teaching fellows, special guest lecturers in J courses, and speakers on campus.

ogy from Berkeley in 1984), asked a key question: "Why not you?" And the wheels started turning.

"I had written an awful lot, books and so on," says Schell, "and I wanted to continue writing. But I also started thinking about what I had learned, how I had learned it, and whether there was some way to pass it on. I started to wonder, what would a school look like that sought to train journalists, writers in a different way, more master-apprentice-like, to learn by doing? And when I started to think about that, I thought, well, that could be interesting.

"I had been here as a Ph.D. student in Chinese history, and when I finished my orals, I realized I was probably not cut out to be an academic's academic. I started to do writing and journalism from Asia, the kind of journalism that really appealed to me, located in that zone where the world of academic writing and research overlap with the more timely and time-sensitive craft of journalism itself — things like the *New York Review of Books* and the *New Yorker* published. That's what I felt I was better at. Moreover, when I left grad school, I couldn't imagine taking seven years to get tenure!

"So, it was odd that I should have, many years later, doubled back into academic life. Had I really known then what I know now about the university bureaucracy, how you have to hire people, do faculty advancement cases, all these incredibly turgid, laborious faculty and staff processes that take a lot of time, I'm not sure how I would have reacted. My greatest asset was that I didn't know what I couldn't do."

How would he proceed? It was a very personal path.

"I tried to think what, and how, did I learn, back when I wasn't a good writer? I remembered very vividly a paper I wrote on Confucius at Harvard in an honors seminar that I found some years ago, in a trunk at home. It had all kinds of red marks, circles and Xs, that went on for three or four pages. At one point, I had written that Confucius was a 'courtesan' in the court of the king of the state of Lu. I had meant 'courtier,' and my tutor had written in the margin next to that, '*Oh, my God!*' And then there were no more red marks on the paper.

"I looked at that and was able to remember back to when good writing was an opaque process to me. I couldn't tell the difference between good and bad

writing. I didn't really yet know how to do it well.

"If you have good eyes, good ears, a good sensibility, a good sense of metaphor, and a good analytical brain," adds Schell, "you can actually learn how to write. However, it takes thousands and thousands of hours. In many ways, that understanding lies at the heart of what we do here."

One of the best ways to spend a sizeable chunk of those hours sounds positively medieval — the master-apprentice relationship — but it seems to work. It certainly did in Schell's case.

"When I was a graduate student, Franz Schurmann, a professor in the history and sociology departments, asked me if I would help him with a book. He put me in charge of organization, getting things done, keeping track, which I could do, and I learned a lot. By the time we finished, we'd done three books for Random House, and I was a co-author. That was an incredibly important experience for me. It got me into New York publishing. And then, when I started writing for the *New Yorker*, I had a wonderful editor with whom I worked for a decade or more, and we had an incredibly close collaborative relationship. The editing process would go on for hundreds of hours — face-to-face, some of it over the phone, sometimes by FedEx. And that's how I learned to write, interactively with a great editor."

The challenge, as dean, was to see if he could "in some measure duplicate that kind of very close experience, viewing the younger people not as students but just younger journalists working with older, more experienced journalists and engaging in that interactive process of editing and writing," says Schell. "In that vein, we set up a course in the last six or seven years that we called 'the editing workshop,' where we have three or four of the world's best editors come to teach. They work with six or seven students on one piece of writing — all semes-

ter — on something the students have already written. It involves not ‘writing,’ but rewriting, rewriting, rethinking, more rewriting — and then getting it published.”

The problem with such a course was that there were no round holes to fit these new square pegs.

“If you have good eyes, good ears, a good sensibility, a good sense of metaphor, and a good analytical brain, you can actually learn how to write, but it takes thousands and thousands of hours. In many ways, that understanding lies at the heart of what we do here.”

— Orville Schell

“One of the things we did early on in my tenure was to more or less invent a faculty category here called ‘teaching fellows’ for people who work day to day as journalists, writers, filmmakers, photographers, or whatever. They come to Berkeley for a semester, or possibly a year, to teach one class, and work on a project with students. Again, a master-apprentice sort of relationship is the goal.

“In many ways, the school is idiosyncratic and in many ways it’s unlike the rest of the university. It doesn’t do, strictly speaking, academic kinds of work. So we must, and usually do, get judged by a slightly different standard. We publish, obviously, but the whole cycle’s faster. Academics take years, journalists take months, weeks — or days, for newspaper reporters.”

From his own experience in the outer world, Schell was “keenly aware that working journalists who aren’t at newspapers, but write books and magazine pieces, are basically isolated, just out there all on their own.” He started to think, “Wouldn’t it be interesting to try to build a place that was not only a school, but something of a lodge hall for such people who could cycle through it and teach, be part of collegiums, speak, whatever — have a port of call.”

The faculty—and what they bring

If he had to point to a single aspect of the school of which he’s most proud, Schell would choose his faculty.

“We’ve added some really wonderful people.

Cynthia Gorney, who writes for the *New Yorker* and *New York Times Magazine*; Mark Danner, who writes for the *New York Review of Books* and other magazines, and is a MacArthur fellow. Lowell Bergman, a *New York Times* and

PBS/*Frontline* correspondent, Pulitzer Prize winner; Michael Pollan, who writes books and for the *New York Times Magazine*; Jon Else, a really fine documentary filmmaker and another MacArthur Fellow; and Bob Cato, who was an NBC producer.

“They’re all energetic and distinguished, good teachers, and they’re also very engaged in the world — as journalists. That’s an absolute requirement. There’s nothing deadlier than journalism schools where people go to die. If you’re not running along to keep up, you lose a huge ability to teach well, and to place students in jobs, and to make them feel relevant. You want to be out in the middle of the blood on tooth and claw, of Darwinian competition. Without that, as you can see in a lot of schools, people get very sleepy, and out of it.”

Counting Schell, there are now 18 fulltime faculty members and half a dozen emeriti at the J-school. They are supplemented, too mild a term, by lecturers and teaching fellows, 32 of whom are “current.” Over 120 have done a stint at Berkeley — and could be on tap to come again.

One of them, *New Yorker* and *Vogue* writer Kennedy Fraser, says “Everyone who is anyone in the world of journalism seems to pass through sooner or later.” She found the students, faculty, and visitors “a rare and admirable community,” and “a drink of cool water after years in the desert” of the increasingly hard-boiled and mass-market-dominated world of magazine publishing. Her magazine writing students were “courteous, smart, idealistic, and ambitious in the right way — that is, for doing the best possible work.”

Sandy Tolan, who came to oversee international reporting, was just nominated for a National Book Critics award and, with his students, won the 2006 George Polk Award in radio reporting for the multi-part series “Early Signs: Reports from a Warming Planet.”

Science writer Laurie Garrett came to Berkeley with a Pulitzer, a Peabody, and a Polk.* “At the peak of my career I got my batteries charged by sharing my skills and knowledge with an extraordinary group of Berkeley students,” she tells in an essay. On the first day of class, she remembers being brutally blunt, announcing, “I consider this a trade school. I never went to J-school, and I’m not interested in discussing hifalutin theories of the news business. If you take this class you will work as hard as most reporters do in a newsroom, and I will judge you by professional standards. Deadlines are serious — the dog can’t eat your homework at a newspaper, missed deadlines get reporters fired. So no excuses. Your deadlines will be frequent, and it will get tougher as the semester wears on.”

* Garrett is the only writer ever to win all three of the “Big Ps” — the Pulitzer, the Peabody, and the Polk. Her stint as a teaching fellow was a return trip to Berkeley. She was advanced to candidacy in the 1970s while pursuing a Ph.D. here in immunology, but changed course and left academia to follow her hobby-turned-passion, science journalism.

Says Garrett: “I figured,” says Garrett, “that with an introduction like that I’d have four or five daring souls to teach. But I was wrong, and my failure to initially appreciate the hardworking enthusiasm of Berkeley journalism students left me in a state of surprise and pride. Twelve students enrolled and completed the course... two now have jobs writing about science for the *Boston Globe* and *Los Angeles Times*. Another is trying to choose a regional paper for which to write, and several others are freelance science writers for major publications.”

The current extended faculty (professors, lecturers, teaching fellows, and emeriti) have among them garnered four Peabody Awards, six Polks, more than a dozen Emmys, four MacArthur Foundation “genius” fellowships, two Oscar nominations, and even an Edgar (from the Mystery Writers of America). When previous lecturers and teaching fellows are added, that brings in another Polk, two more Peabodys, several National Magazine Awards, a National Book Critics Circle Award, five more Oscar nominations, and, last but hardly least, a half dozen Pulitzers.

Their work has been printed, broadcast, or posted online by *The New York Times*, *The Washington Post*, *The Wall Street Journal*, *The Chicago Tribune*, the *Los Angeles Times*, *Associated Press*, the *Atlantic Monthly*, *Harper’s*, *The New Republic*, the *New Yorker*, *The New York Review of Books*, *The Nation*, *Business Week*, *Discover*, *National Geographic*, *Newsweek*, *Time*, *U.S. News and World Report*, *Vanity Fair*, *Vogue*, *TV Guide*, *MacUser*, *MacWorld*, *PC World*, *Wired*, *Salon*, ABC, CBS, NBC, MTV, PBS, PRI, NPR, AOL Time Warner, MSNBC, *The Industry Standard*, *Le Monde*, *Ha’aretz*, *India Today*, and many more.

In the wider campus context, two journalism professors, William Drummond and Tom Leonard (a 1973 Berkeley history Ph.D.), are the current Academic Senate chair and the current University Librarian, respectively.

The program

Unlike the early days, when the only courses were in “History of Journalism,” “News and Editorial Writing,” “The Country Newspaper,” and “Propaganda and the News,” the offerings now range all over the philosophical,

ALL OVER THE MAP

J-school Alums — where they go, what they do

The school is small, but its products are working in the full gamut of media outlets, from giant corporations to weeklies in one-horse towns. They not only get published and broadcast while still in school, sometimes projects they created here keep on generating reactions. What follows is a brief catalog of what some of them have been up to.

FILM, VIDEO, AND TELEVISION

Dan Krauss (M.J. ‘05), below, is a filmmaker whose master’s thesis and first film — *The Death of Kevin Carter: Casualty of the Bang Bang Club* — won a Student Academy Award for 2005. He is the only winner of that award ever to be nominated for a regular Oscar category (Best Documentary Short for 2006). The film was optioned by DreamWorks and Parkes/MacDonald for a possible feature-length production.



Peg Skorpinski photo

At the 2006 Student Academy Awards ceremony in Beverly Hills, **Carrie Lozano** (M.J. ‘05) won the gold medal and \$5,000 in the documentary category for her film *Reporter Zero* (about San

Francisco *Chronicle* reporter Randy Shilts). **Xiaoli Zhou** (M.J. ‘05) took the documentary silver medal (and \$3,000) for *The Women’s Kingdom*, a shorter version of her *Frontline/World* piece.

Three other J-students have contributed to Berkeley’s major showing in the Student Academy Awards in recent years.

Kimberlee Bassford (M.J. ‘03), to the right, won documentary gold for 2004 with her film *Cheerleader*. The silver medal that year went to **Shilpi Gupta** (M.J. ‘04) for her documentary *When the Storm Came*, about a mass rape in India. The 2003 documentary silver went to **Elizabeth Pollock** (M.J. ‘02) for *Indiana Aria*, the story of four young hopefuls at the top U.S. opera school.



Ferenc Esekfi photo, courtesy of Kimberlee Bassford

In late June 2006, all three stories on *Frontline/World*, the international television news magazine, were reported and produced by recent J-school graduates **Alexis Bloom** and **Cassandra Herrman**, both 2001 grads; **Claudine LoMonaco** and **Mary Spicuzza**, both 2004 grads, and **Xiaoli Zhou** (M.J. ‘05).

In mid-October, 2006 PBS aired “The Enemy Within,” a joint *Frontline* and *New York Times* investigation of the terrorism threat five years after 9/11, produced by Berkeley journalism professor **Lowell Bergman**; **Rob Harris** (M.J. ‘05) was an associate producer and current students

cultural, economic, and technological map. Business Reporting, Documentary, Environmental and Science; International Reporting; Investigative Reporting; Magazine; New Media; Newspaper; Photojournalism; Political Reporting; Radio; Television; and Urban Reporting, to name a few.

Each program immerses its students; for instance, student teams in international reporting have been sent to Africa, China, India, Central America, Japan, Eastern Europe, Israel, and South America. And last year, says Schell, the whole school went digital — video, television, documentary, editing, and radio.

Professor William Drummond gives an example of how things work in the Urban Reporting program: In the spring of 1998, 11 journalism students “embarked on an experiment to rediscover the roots of community reporting,” says Drummond. Over a 15-week period, with all trading roles as reporters and editors, they produced five editions of a community newspaper called *Inside Oakland*. The publication was inserted into 60,000 copies of the *Oakland Post*, an East Bay African American newspaper.

In addition to “learning by doing,” says Drummond (former Los Angeles Times bureau chief in New Delhi and Jerusalem, and editor and correspondent for National Public Radio), “the Urban Reporting class in many ways symbolized the new direction the school has taken. It was a collaboration with news media in the real world. The class

filled a void in news coverage that the corporate, mainstream media have been unable or unwilling to fill.”

What's going on?

Another hallmark of the J-school is the cornucopia of events it now offers.

The school hosts a staggering array throughout the year. Recent examples include a forum on climate change in the U.S. and China; former Vice President Al Gore and his film, *An Inconvenient Truth*; former CBS news anchor Dan Rather on whether the media are failing America; a food politics series with visiting scholar Marion Nestle (a Berkeley graduate alumna — Ph.D. '68, M.P.H.'86); a photo exhibit and lecture on the aftermath of the World Trade Center attack with photographer Joel Meyerowitz. Speakers have included Bill Clinton, Molly Ivins, Robert McNamara, Hans Blix, Cokie Roberts, the Dalai Lama, William Kristol, Christiane Amanpour, George Soros, Tom Brokaw, and Terry Gross.

“A journalism school, logically, should be very much in the world,” says Schell. “So we started the series of campus-wide events, and it kind of snowballed. Slowly we began to realize that it was not just good for our students, who get to hear correspondents for the *Washington Post* who've been to Baghdad talk about what it's like to cover this war, or David Remnick, the editor of the *New Yorker*.

Matt Levin, Kate Golden, and Joseph De Avila helped with research, and Charlotte Buchen and Marjorie McAfee were assistant editors. The *Frontline* website featured related special reports by **Jeff Kearns** (M.J. '06) and **Cathy Bussewitz** (class of '07).

Jason Spingarn-Koff (M.J. '01) has been a producer, director, reporter, and editor for *Nova*, *Frontline*, *Frontline/World*, MSNBC, and *ABC Nightline*. His master's-thesis film *Robofly*, about research by Berkeley students and faculty, won a national Student Emmy in 2001 and was showcased at the 2002 Cannes Film Festival.

Rebecca Liss (M.J. '95), an associate producer for CBS's *60 Minutes II*, says “I probably would not have ended up at CBS if I hadn't gone to J-school,” or “it would have taken much longer.” Berkeley required her to take a course in television, which “gave me the moxie I needed to talk my way into a weekend job at a Los Angeles television news bureau.”

Sam Green (M.J. '93) is a documentary filmmaker whose feature-length film *The Weather Underground* premiered at the Sundance Film Festival and was nominated for an Academy Award.

William Skane (M.J. '81) is executive director for news and public information of the National Academy of Sciences and previously was producer of *CBS Evening News* and *CBS Sunday Morning*.

Bill Whittaker (M.J. '78) is a national correspondent for CBS News, based in Los Angeles.

Sam Egan (M.J. '71) writes and produces, mainly for television. His credits include *Quincy, M.E.*, *The Fall Guy*, *Northern Exposure*, *The Outer Limits*, and *Stargate SG-1*.

Roxanne Russell (B.A. '69, 'M.J. '70) teaches at George Washington University. She was a producer with CBS for 20 years, and was field producer for *NBC News*, where she produced all coverage of the Patricia Hearst kidnapping. Her many honors include four national Emmy Awards while at CBS News, two Peabody Awards, and an Edgar (for her documentary, “The Case of Dashiell Hammett”).

NEWSPAPERS, MAGAZINES, AND THE WEB

John Battelle (B.A. '87, M.J. '92), below, co-founded of *Wired*



James Duncan Davidson photo/O'Reilly Media Inc.

magazine, founded *The Industry Standard* magazine and website, and is now the founder and chair of Federated Media Publishing, a network of author-driven websites.

Investigative reporter **Lance Williams** (M.J. '74) of the *San Francisco Chronicle* and a Polk Award winner recently wore another badge of honor of the trade: he and his reporting partner faced possible jail terms — up to 18 months — for not revealing their sources of confidential grand jury testimony about star athletes' use of

steroids. The newspaper, also held in contempt of court, stood behind its reporters, possibly facing fines in excess of a half a million dollars. After five months of suspense their source himself gave federal authorities the information in question.

Bringing in outsiders has been a great resource for the campus. People really seem to appreciate it. We found it's a good way to bring people from off campus who want some connection with the university, but have had a hard time getting purchase on it."

Back to writing — and more

When he's done as dean, Schell will do more writing. "I've been writing some long pieces, and I do have a book due. After all, I am a writer. I'm not a bureaucrat. I think I've learned something about how to become a better bureaucrat than I was when I started, but I don't want to let go of my writing."

"A journalism school, logically, should be very much in the world." — Orville Schell

Last fall, the nonprofit Asia Society in New York City announced that Schell would become the director of its new Center on U.S.–China Relations after he finishes the 2006–2007 academic year at Berkeley.

Looking ahead to the school's future, he says, "When I was here, studying Asian history, it was a time when Asia was politically on fire. There was a communist

revolution, war in Indochina and Indonesia, and much political uncertainty. I got a really strong sense at that time of the kind of political significance of journalism. And I still believe that what is most essential is keeping people informed. I know some academics see journalism as a sort of profane avocation — and I think in many ways it has recently been inclined to debase itself. But in its best form, it is anything but profane, and absolutely elemental.

"When people leave school — high school, college, graduate school — they stop having a formal education. At that point, their education comes from whatever media they're exposed to, including books. And if all that fails, then their education stops, or gets amputated in some way. So I think that in large measure the dangers that beset this country are ones that grow out of the media's failure to provide interesting and comprehensive coverage of the world.

"So, I see the school playing a necessary role in policy issues — FCC regulation, conglomeratization, consolidation, globalization, marketization of the media — because it's just what universities ought to do. We're part of civil society. We should be a place where these things are debated, studied, researched. A school such as ours should be at the center of all these issues."

Loretta Tofani (M.J. '82) is a staff writer for the *Philadelphia Inquirer*. As a writer for 10 years at the *Washington Post*, she won a Pulitzer Prize for investigative reporting. Many of her stories at the Post "were profiles, a skill I learned at the Graduate School of Journalism."

Edward Wong (M.J. '88; also M.A. '88, international studies) is a reporter for the *New York Times*.

Joe Heim (M.J. '97) abandoned one career at the age of 28 and abruptly dove into another one, starting J-school with "only the slightest inkling of what it meant to be a reporter." He is now the music editor at *WashingtonPost.com*.

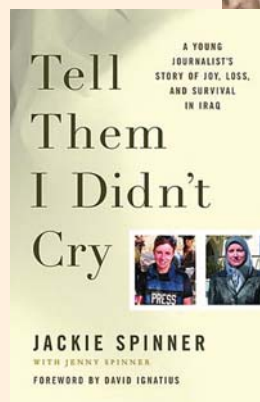
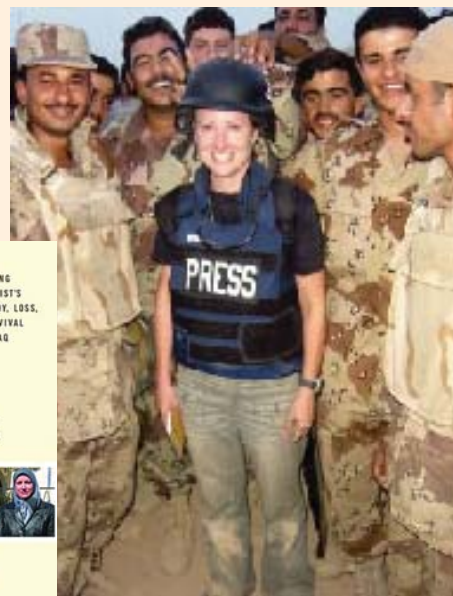
Amy Stevens, who studied journalism while working for her Boalt law degree (J.D. '90) was a reporter (covering law) and editor for the *Wall Street Journal* for 15 years before joining Condé Nast *Portfolio* last year as deputy editor.

Tim Reiterman (M.J. '77) helped direct the *Los Angeles Times*'s coverage of the 1992 L.A. riots and the 1994 Northridge earthquake and shared in the resulting Pulitzer Prizes. He was wounded by gunfire in 1978 while covering the cataclysmic end of Jim Jones and the People's Temple in Guyana and later co-wrote a book on the saga. He still works for the *Times*.

Richard Zoglin (M.J. '72) is an associate editor and television critic of *Time* magazine in New York.

James Willwerth ('65, M.J. '70) parlayed a part-time job as *Time* magazine's first Berkeley campus stringer into a 34-year career covering major news stories in Southeast Asia, Central America and the U.S. The author of four books, he now teaches journalism at California Polytechnic State University in Pomona.

Jackie Spinner (M.J. '95), below, wrote a "postcard from the edge" to the J-school in the summer of 1997. It said, in part, "When one of my stories led the front page of the *Washington Post* for the first time, I actually cried. You see, these weren't exactly my caviar dreams back in graduate school. I had merely hoped for a job." That reaction may have seemed slightly ironic to her early last year, with the publication of her book about reporting from Iraq in 2004 and 2005 (and nearly being kidnapped). Its title: *Tell Them I Didn't Cry*.



Photos courtesy of Scribner/Simon & Schuster

A brainy night in Berkeley



Deborah Stafford photo

**If it's Thursday, this must be the corpus callosum.
Has anyone seen my homunculus?**

By Barry Bergman

FOR THE INEXPERIENCED TRAVELER, Aubrey Gilbert's "whirlwind tour of your nervous system" blows past the hippocampus and cortex of the frontal lobes like a five-day package excursion through the great cities of Europe. Looking back, there's no doubt it's been a remarkable trip, but you're unsure in which region of the brain you encountered Broca's area, or the precise location of the olfactory bulb; your most vivid take-home memory is apt to be Gilbert's admonition never, ever to order brains for lunch.

That, and the indescribable moment following the breakneck slide show when, for the very first time, you cradle a human brain in your hands. Its synapse-bridging days may be over, but Gilbert — as enthusiastic a tour guide as one could possibly hope for — makes it come alive, transforming a lecture hall in the Valley Life Sciences Building into a makeshift planetarium of inner space.

Gilbert, a Ph.D. candidate in the Helen Wills Neuroscience Institute and two-time winner of Berkeley's Outstanding Graduate Student Teaching Award, is partial to the cerebellum, the sack-like structure at the base of the brain that governs posture and balance and regulates the coordination of complex limb movements. But she finds the entire nervous system "beautiful," and sets forth every semester or so — wielding a laser pointer behind a counter laden with buckets and jars of brains, spinal cords, meninges, and cranial nerves — to give a tour-de-force performance on behalf of the Cognitive Science Student Association, which dubs the event "Feel Dead Brains — Show and Tell Neuroanatomy."

"I really am a big ham," admits Gilbert, who speaks fluent French and Spanish in addition to rapid-fire English,

made news as the lead author of a widely noted research paper (published earlier this year in the journal *Proceedings of the National Academy of Sciences*) on how language affects perception, and plans to attend medical school next fall. Elite credentials notwithstanding, she's no elitist, peppering her talk with pop-culture references ranging from Tom Waits — who famously said, "I'd rather have a bottle in front of me than a frontal lobotomy," though Gilbert suspects he cribbed the quote from W.C. Fields — to the Three Stooges, "The Far Side," and Mike the Headless Chicken.

Mike, as everyone knows, was the arguably lucky fowl who survived a beheading by a Colorado farmer in 1945, thriving for 18 months with only a brain stem. Fed on corn dropped directly into his gullet, Mike choked to death during a sideshow tour in 1947, when the farmer — after forging a new and profitable relationship with Mike — was unable to clear his esophagus, having forgotten to bring along the eyedropper he used for that purpose.

Brains, it seems, are far less crucial for chickens than for humans, Berkeley students or not. Humans can do nicely without a corpus callosum — that thick band of nerve fibers that connects the right and left hemispheres of the brain — but only if they're born that way. People whose corpora callosa are severed later in life — a surgical procedure sometimes performed to prevent epilepsy from spreading from one hemisphere to another — will suffer significant effects.

In the course of an hourlong lecture, Gilbert runs through no fewer than 180 slides. ("What was I

thinking?” she wonders aloud.) These cover the history of the brain, from Plato and Aristotle through phrenology founder Franz Joseph Gall and beyond, with side trips to trepanation — the drilling of a hole into the skull, whether for medical or mystical reasons — and prefrontal lobotomies.

There is a brisk walk through a gallery of brain-related diseases, including Alzheimer’s, muscular sclerosis, myasthenia gravis, spina bifida, and several types of aphasia. There is a brief discussion of “phantom limbs,” the phenomenon whereby the brains of people who have lost an arm or leg still register pain in their missing extremities.

There is enough anatomy to make one’s head explode.

And there is inspiration. “It’s really astounding,” she marvels, describing how receptors in our skin transmit sensory information into the spinal cord and up into the brain, and how electrical impulses move via neurons at

speeds of up to 250 miles per hour to end up as thoughts, feelings, and movements. “This is going on every millisecond at billions of places throughout your nervous system.”

Expanding the theme, she adds, “There are as many neurons in your brain as there are stars in the entire Milky Way,” sounding a bit like Carl Sagan. Unfortunately — at least for those in the audience whose student days are behind them — she goes on to say that we lose “about 85,000 neurons a day, or one every second.”

The good news comes later, when she mentions the work of Berkeley anatomy professor Marian Diamond, whose research showed that mental stimulation can cause dendrites — the branch-like projections that enable the brain’s electrochemical cells to connect to other cells and transmit messages — to grow back.

“Use it or lose it,” advises Gilbert, quoting Diamond herself. “The more you exercise your brain, the more you can increase the dendritic growth of your neurons. So keep your brain active, with crossword puzzles and stuff like that.”

One fast way to lose it, should that be your goal, is to consume brains, which, if diseased, can cause your own brain to be taken over by prions, infectious agents made up of proteins. Notable prion afflictions include laughing death, Creutzfeldt-Jacob disease, and mad cow disease.

“Eating brains,” Gilbert says, “is not a good idea.”

And, speaking of food: If you stretched out the hemispheres of the cerebral cortex, the thin outer layer of the brain, Gilbert says, they would be “basically the size of an extra-large pizza.”

A slide of a homunculus, known as “the little man” inside the brain, provides a sensory map of the body. Based on the amount of cerebral cortex used to process various touch receptors, the homunculus features prominent lips, hands, and genitalia, reflecting the relative sensitivity of those portions of the human anatomy. Gilbert calls it “a representation of the body on your cortex.”

When the lecture is over, Gilbert invites everyone up to the front of the hall, where — aided by Elizabeth Mormino and Bradley Voytek, also grad students in the Wills Institute, and undergrad Kevan Wang — she answers questions while the curious handle one of at least a half-

dozen brains preserved in jars and buckets. There are also several half-brains — the better to see those hard-to-reach gyri and ganglia — and a number of spinal cords.

The living brain, Gilbert tells us, is “the consistency of unset Jell-O.” Dead and soaked in formaldehyde, it feels like a three-pound hunk of ground beef that’s begun to defrost.

It is, in fact, astounding.

“Think about it,” says Gilbert. “You have

all these specific interfaces for interacting with the world around you — everything from taste to vision to olfaction. All of these things involve very special receptors and highly evolved systems that allow you to pick up the information that’s in the environment around you.

“So you take this incredibly, overwhelmingly rich, detailed surrounding that you’re in, you put all that into your nervous system, and somehow your nervous system manages to create some sort of coherent picture of what reality is.”

Unless, of course, you’re an inexperienced traveler, trying to take in too much, too fast. In that case, a return trip might be just the ticket.

Barry Bergman is a writer for the Public Affairs Office at Berkeley. This article appeared first in the December 7, 2006, issue of the Berkeleyan.



Neuroanatomy grad student Aubrey Gilbert, in lab coat, explained some of the features of the human brain to an appreciative audience in VLSB. Following her whirlwind presentation on the nervous system, the less squeamish in the hall got a chance to hold a brain in their hands.

Deborah Stafford photo

Out of the lab to the top of the world

Berkeley biophysicist relishes first ascents



Richard Isherwood photo

By Arlene Blum

One September evening in 1970, working alone in my chemistry lab in Latimer Hall, I was preparing nucleic acid for my final experiments for my Ph.D. in biophysical chemistry. The lab was quiet except for the repetitive tick of the spinning centrifuge. After finishing the purification, to my horror, I knocked the vial onto the floor, where it shattered, the precious liquid lost.

Needing a break, I headed across campus to the Northside Theater just in time for a late showing of *The Endless Summer*. Watching California surfers frolicking on sunny beaches on every continent searching for the perfect wave, I decided that an ideal reward for completing my Ph.D. would be my own alpine version of their quest: an Endless Winter of climbing around the world in search of the perfect mountain.

I'd transferred from the narrow, sexist corridors of MIT to graduate school at Cal three years earlier. At Berkeley, I discovered an egalitarian atmosphere, great excitement about the new field of nucleic-acid structure, and the

opportunity to join the UC Hiking Club for mountain climbing. Ever since I learned to climb six years earlier in my PE class at Reed College, I had enjoyed the personal challenge and problem solving of mountain ascents. Just as in the lab, mountain climbing required discipline — but with more profound immediate risks.

One of the primary challenges, though, was overcoming the stigma that women couldn't be good mountain climbers, not unlike the stigma women faced in male-dominated biophysics labs. Being told that women lack the strength and skill to climb the toughest mountains provoked me to organize the first all-women's expedition to 20,320-foot-high Denali (Mt. McKinley), the highest point in North America. The high-Arctic challenge and camaraderie of our Denali ascent was still vivid in my mind that autumn evening at the Northside Theater, and it helped inspire my dream of an Endless Winter.

Returning from the movie to the chemistry library, I happened upon a world globe. Spinning the globe, I realized that by traveling north and south across the equator for a year and a half, I could climb in the world's highest mountain ranges during the best climbing weather.

Nacho Tinoco, my Ph.D. advisor, was skeptical. I said I needed a break. I promised to return with renewed energy. I would even fly a flag saying "tRNA" on each summit to remind me of my research.

December 10, 1971, the day after I handed in my Ph.D. thesis, I boarded a Pan Am jet with ice axe in hand, climbing rope over my shoulder, and heavy mountaineering boots on my feet. I was on my way to the high Semien Mountains of Ethiopia.

For the next 16 months, I followed my vision from that moment of spinning the globe in the chemistry library. I climbed dozens of mountains higher than 15,000 feet. Focusing on taking one more step to bring me closer to the summit had similarities with the problem solving, diligent labor, and focus of scientific research.

Along the way, in Afghanistan, another dream was born. Only 14 mountains in the world soar above 8,000 meters (26,247 feet). At that time, all the 8,000-meter peaks had been climbed by men; no woman had reached that altitude. On our trip, several women were attempting Noshag, a 24,581-foot-high Afghan mountain. As I labored up to our 23,000-foot-high camp in lightly falling snow, I met Wanda Rutkiewicz, a strong and beautiful Polish climber, triumphantly descending from the summit. Wanda hugged me and said, "We have reached 7,500 meters. Now we must climb to 8,000 meters, together, all women."

Her words stayed with me as I completed the Endless Winter. Suddenly I was catapulted into the world of leading high-altitude expeditions, an unusual place for a young woman in the 1970s. After a postdoc at Stanford and a teaching stint at Wellesley, I returned to the Berkeley biochemistry department, where I taught a course on the causes of cancer and did research that led to the ban on chemical flame-retardants in children's sleepwear. In 1978, while at Berkeley, I realized Wanda's and my dream when I led a team of women in making the first American ascent of Annapurna I, the world's tenth-highest and probably most dangerous peak.

Many other ripples have come from my Berkeley procrastination nearly 36 years ago. For example,

my experience of climbing in Afghanistan led to my helping found the Association for the Protection of Afghan Archaeology, which currently strives to help preserve the archaeological and cultural heritage of that war-ravaged country.

My advisor Nacho wasn't surprised when I eventually did leave my job as chemistry professor for a life of exploration and adventure. But during my various careers and explorations, I have been guided by knowledge I gained from living out the dream of the Endless Winter.

Lately, I have begun to dream about returning to campus to resume my research on the regulation of toxic chemicals to protect our health and environment. Climbing this new mountain will be a challenge, but at least the peak is near my own backyard.

This article is reprinted with permission from the September-October 2006 issue of California magazine.

Arlene Blum, Ph.D. '71, biophysical chemistry, is one of the world's preeminent mountain climbers. She is also the author of *Annapurna: A Woman's Place* and most recently, *Breaking Trail: A Climbing Life*.



“The most beautiful thing in the world is freedom of speech.”

—Diogenes of Sinope (4th c BC)

Tour de Berkeley

By Lisa Harrington

Lance Armstrong may break records cycling, but Michael Colvin sets them on foot, one step backward at a time.

As crowds follow closely on his toes, he begins at the West Campus Gate and journeys past towering forests of eucalyptus, live oak, and redwood trees, along the banks and footbridges of Strawberry Creek, up to the Valley Life Sciences Building, over to the Library, beyond to the Campanile, and, 90 minutes later, ends his journey in Sproul Plaza. For the past six years, Colvin has served as a campus tour guide and walked 500 miles for UC, give or take. “I actually know this campus backwards better than forwards,” says Colvin, grinning, “In fact when I’m trying to figure out where something is, I have to turn around now!”

On a crystal clear spring day, Colvin backs slowly up the majestic staircase of Sproul Hall as a group of mothers, fathers, and teenagers follow. It’s April, high tide for prospective student tours. “During the peak admission times we can get 500-plus visitors a day,” says Colvin. “This is when students are trying to decide whether to accept their admission, so we talk about why we chose Berkeley and hope they’ll be able to feel as passionate about this campus as we do. For a lot of kids, this is their first time on a college campus. They’re the first generation in their family to go to college, so we want to build positive connotations and show them what a university can be like.”

Colvin, who also provides colorful commentary on Cal’s history and landmarks, stops near a plaque dedicated to Mario Savio, who, as a student in 1964, delivered an impassioned speech on these steps, becoming one of the heroes of the Free Speech Movement. Colvin knows that on almost any day of the week Sproul Plaza makes a superb finale for tours. Political candidates, human rights activists, rally groups, and international song and dance troupes regularly use the terraced steps to draw a crowd. Bordered by shops and cafes, the plaza is a hub of campus life and well traveled by students, faculty, and staff.

On this day students at one end are assembling tents for “Camp Darfur” — writing messages of hope on the canvas. Across the plaza, other students are campaigning for ASUC elections, positioning themselves at the crossroads of pedestrian traffic as three men on unicycles, with the words “Democratize Now” painted on their bare chests, spin through the crowd. Missing are the Grandmothers for Peace and a couple



of street philosophers known as “The Hate Man” and his polar opposite, “The Happy Happy Happy Man.”

General campus tours are as individual as a day on the plaza, says

Colvin. “No two are alike. When we train our guides we try to ensure that we won’t have a bumper-car set of tours where they have to go here and then there in an A-B-C order. There are always things that you have to hit, like the Library, but the order and the way that you do it is up to you.”

Visitor Services is directed by LaDawn Duvall, who employs more than 60 students to lead tours. Continually expanding and professionalizing the services, Duvall turned to Colvin to produce a podcast Berkeley tour, the first of its kind in the country. “Michael made it happen,” says Duvall. “He’s



Michael Colvin and LaDawn Duvall of Visitor Services welcome you to Berkeley.

brilliant as a guide and also behind the scenes.” Duvall persuaded Colvin to stay on after he graduated, proposing projects that would be a better fit with his graduate schedule, including orientations for student staff.

“We draw our students from as wide a net as possible so we can offer specialists,” says Colvin. Guides tend to be enthusiastic individuals like Colvin who can talk about their college experience and make guests see themselves at Berkeley. “Yes, we are definitely high energy,” he admits. “When I do a tour, I have two and half hours worth of information that I feel is absolutely necessary — but I only have 90 minutes.”

Selection and training of guides is rigorous. If they make it through the interview, they must learn about University facts



Peg Skopinaki photo

Sproul Plaza on Cal Day: To see what Berkeley is all about, 35,000 people attended Cal Day on April 21, when classrooms, labs, museums, performance halls, and sports facilities were open to the public. They attended lectures on climate change, energy initiatives, biomedical advances, seismic safety, and other research conducted at Berkeley. Many sampled musical and dance performances stopped by information tables for take-home materials, and took campus tours on foot and by trolley. "On Cal Day I'm up by 4 a.m., here by 5 a.m., and don't leave until the end of the day," says tour guide Michael Colvin. "It's a long day, and a lot of fun."

and traditions and then pass a written test. Finally, they must do a dry-run of their tour for more experienced guides. Their training manual warns, "Remember to keep the tour as interesting as it is accurate. It makes no difference how much you know if no one is really listening..."

In addition to general tours, Visitor Services also offers tours for campus donors, foundations, corporate partners, and other special guests of the university. "We do a number of tours for international guests, especially during the summer when we get so many visitors from outside the U.S.," says Colvin. "Those are really interesting because Berkeley is the model for so many other institutions around the world."

A third-generation Cal grad, Colvin grew up just across the Bay in San Francisco. He earned his undergraduate degree in the College of Natural Resources and was invited to join the CNR advisory board when he graduated. As an undergrad he served on ASUC committees, including one for the Bancroft Library redesign. "This was really important for me," says Colvin, "because the Bancroft is one of the treasures of our campus and I wanted to make it more visitor-friendly."

Currently a second-year graduate student in public policy, he focuses his policy studies on climate change and renewable energy. "The Goldman School of Public Policy is ranked number one around the country, and the faculty here is absolutely on the cutting edge," says Colvin. "In my particular policy areas — not to get too much into the weave — there are environmental problems that are going to require social changes and technological solutions. So it's all about how to use the power of government and the idea of the public good and apply it to a problem. There are faculty members here who do that, and whenever you apply to grad programs, you're applying to work with the faculty, to be part of the conversation."

One of the requirements of his master's program is a professional internship, so last summer Colvin got a taste of government when he worked for the Public Utilities Commission in strategic planning. He was assigned to the California Solar Initiative "learning more about solar energy than I thought possible."

When Colvin encounters other graduate students on his tours, he

MORE WAYS THAN ONE TO DISCOVER BERKELEY

Countless numbers visit Berkeley's 178-acre campus each year — prospective students, faculty recruits, visiting scholars, alumni, and many others. Around 40,000 or so make their way to Visitor Services for student-led tours. "UC Berkeley is an amazing place," says LaDawn Duvall, director of Visitor Services. "Seeing the campus through the eyes of a student is an experience one should not pass up."

Take a free campus tour

Held daily, seven days a week, the 90-minute walking tours are led by trained student guides who are knowledgeable about the Berkeley campus and student life at Cal. No reservations are required for fewer than ten people.

Book a group tour

You can schedule a group tour Monday through Friday during the academic year, excluding some University holidays and break periods. Reservation requests must be submitted **at least two weeks** before the desired tour date. Tours are free to California middle school, high school, and college groups. For private, nonprofit, and out-of-state school groups, fees will be assessed.

Tour the campus by podcast

Berkeley launched the first podcast campus tour in the nation last year, thanks to graduate student Michael Colvin, Educational Technology Services, the Scholar's Workstation, and Apple, Inc. The podcast (pod for iPod, cast for broadcast) is essentially downloadable radio. You can borrow an iPod and a campus map from Visitor Services to tour the campus solo, or "if you're sitting in your bedroom in Iowa," says Colvin, "you just go to **Berkeley on iTunes U** and click on the link."

Take a virtual tour

Preview the campus via the award-winning, online campus tour that highlights the places, people, and principles that define UC Berkeley. Check out live webcam views and use the handy interactive map to get around. You'll also find features on faculty, Cal traditions, and student life. Virtual tours often help prospective students decide on which campuses to visit.

For more details, consult the Visitor Services website (<http://www.berkeley.edu/visitors/>).

emphasizes interdisciplinary research on campus. "I tell them about all the colloquia and events that happen here — how important it is to get out of your department from time to time and explore all that this campus and community has to offer."

One of his fondest tours occurred impromptu, when his graduation just happened to coincide with his grandmother's 65th reunion at Cal. "I took her around the campus and we had lunch and the Chancellor came and then I took her up to the top of the Campanile," recalls Colvin. "She hadn't been up there in probably 40 years, and she pointed out places where she took classes and was in clubs. It was a hoot and a half. There was something so special about seeing the campus and its buildings again. Even though the joke is that UC stands for 'Under Construction,' there's a lot of history here. That's one of my favorite things about this campus, that it honors its roots so well."

Rich Newton engineered the future

By Dick Cortén

FEW ON CAMPUS even knew Richard Newton was sick. Then, suddenly, he was gone.

On the second day of 2007, only six weeks after he was diagnosed with pancreatic cancer, he died at UC San Francisco Medical Center. He was 55 — far too young, as would be said many times in the coming days.

He took over as dean of UC Berkeley's College of Engineering in 2000, and modernized its outlook as well as its facilities, extended its outreach to the underrepresented as well as its value to the wider society, and upgraded its élan as well as its national rankings. But he wasn't done yet. Far from resting on his laurels, he seemed rarely to rest at all. His far-reaching plans weren't all realized yet, which may frustrate him if such things are possible on the next plane, but the legacy he left is monumental.

THOUGH NEITHER HE nor anyone there would have wished for it to be happening at all, the January 6 memorial service for Rich Newton, in the largest auditorium on the Berkeley campus, suited him to a T.

It came together quickly, began promptly, fit within the planned time window, revealed the person behind the big job, and exceeded expectations. As Chancellor Robert Birgeneau said, "Had we been able to invite every person whose life Rich touched, we most certainly would have filled Memorial Stadium." Earlier, telling staff and the public of the death, Birgeneau offered this nutshell description: "Rich Newton was a man of incomparable vision. Dynamic and entrepreneurial, he understood the power of engineering and technology in entirely new ways, and he connected them to addressing society's toughest problems. He had an unrelenting commitment to engineering for the betterment of society."

ARTHUR RICHARD NEWTON was a "honeymoon baby," born July 1, 1951, in Melbourne, Australia, the first of four children.

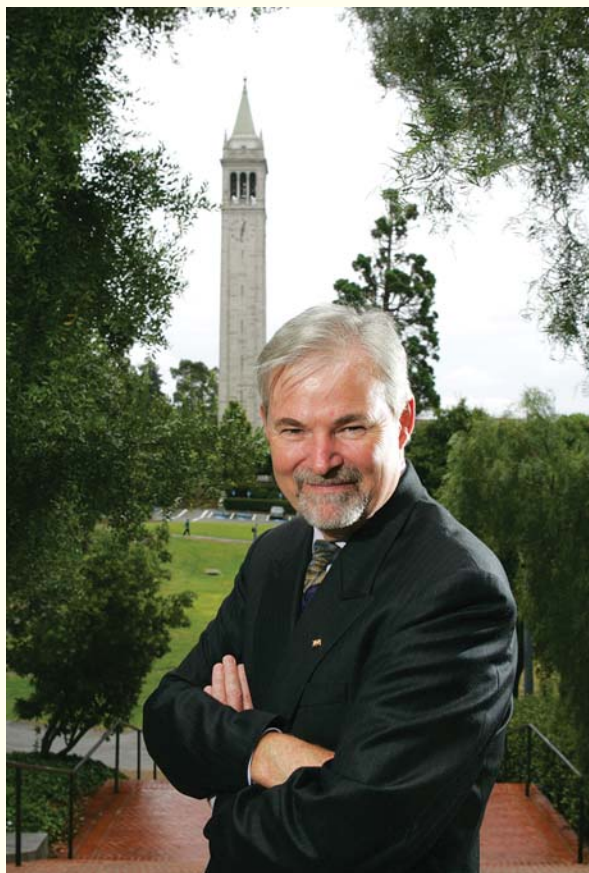
Very athletic in his youth, he could throw a boomerang and still held, as of 2003, the Victoria state triple-jump record for high school students under the age of 17. He

played the very rough Australian-rule football semi-professionally, but eventually "had to make a trade-off between my studies and my sports injuries. Most Sundays, I'd be flat on my back recovering." He also played basketball, as what we in the U.S. would call a forward, for the University of Melbourne.

There, in the early 1970s and by a fluke, some recalcitrant computer punch cards brought him into contact with a visiting American scholar, for whom they were not behaving. Young Newton helped him tame the cards, launching an acquaintanceship that blossomed into an apprenticeship and then a friendship of many years. The American was Don Pederson from UC Berkeley, already a revered engineering pioneer and a sharp-eyed talent-spotter.

Within two years Newton found himself half a world away, on the Berkeley campus as what was then called a foreign student, in graduate school, on the ground floor of a revolution in integrated circuit design.

FORMER PROVOST PAUL GRAY, Newton's predecessor as engineering dean, was also one of his professors. "To get a picture of what that was like, picture the articulate energetic Rich Newton you all knew as dean, and translate that back 30 years to an even more energetic graduate student sitting in a class that you were teaching. Imagine what that might be like. It was exhilarating, it was challenging, it was a little scary at times. But it was very memorable."



Nick Lammers photo

Newton earned his Ph.D. in electrical engineering and computer science in 1978, and was appointed to the engineering faculty that same year. “It’s rare for a research university to hire its own grad students immediately following their graduate work,” said Gray, “but Rich was such a brilliant guy, we knew we couldn’t let him get away to one of the institutions we compete with.”

Gray characterized some of Newton’s impact on his field. “Through the subsequent years, the semiconductor industry was fundamentally transformed by the pioneering work that Rich and his colleagues did, both as a graduate student and during the succeeding years as a faculty member.”

“We really wouldn’t have a semiconductor industry or a Silicon Valley, at least in its present form,” Gray continued, “without the array of electronic design automation programs and companies that sprang out of that early and basic work on computer-aided design. It’s one of the foundations of the semiconductor industry. And, in fact, building foundations is a theme that runs throughout Rich’s career.”

More recently, Gray said, as the new century dawned, “the state of California planned to build three science institutes on UC campuses. But the initial concepts for those institutes did not include anything like the CITRIS institute that you’re all familiar with. Rich pretty much singlehandedly developed the vision for CITRIS and then articulated it so passionately and so effectively that he and the campus and the Office of the President administration were able to convince the governor and the legislature to add a fourth institute. And that institute became CITRIS.”

Governor Arnold Schwarzenegger, in a letter of condolence, elaborated on that theme, saying that Newton “believed that technology had an almost unmatched capacity to help all

people reach their full potential. And this unique vision led him to create the Center for Information Technology and Research in the Interest of Society — CITRIS — in 2001. This innovative public-private partnership has harnessed information technology to tackle some of society’s most critical needs. More recently, Dr. Newton used his forward-looking vision to help launch the UC Berkeley



Peg Skorpinski photo

Connecting with students, formally or informally: the “benevolent tornado of a dean” congratulates new graduate Heena Patel at last year’s College of Engineering commencement.

Center for Synthetic Biology, an effect that is shaping an entirely new scientific discipline, one that carries with it the promise of transforming life as we know it.” (Synthetic biology projects are underway at the Berkeley Center to, among other things, convert bacteria into chemical factories that will produce anti-malaria treatments for pennies, instead of dollars.)

“Despite having one of the most demanding jobs — as dean — he always made students his priority.”

—Omar Bakr, Computer Science Ph.D. Student

“He certainly wasn’t the first to be concerned about the huge inequities in quality of life in the world,” said professor Fiona Doyle, now acting engineering dean. “But most proposals to address this focus on leveling the playing field, which would lower the standard of living for most of us. But Rich’s genius was to recognize that so-called luxuries in the form of technology could be the very tools needed to raise the standard of living for all global inhabitants, without destroying the environment. In other words, rather than everybody becoming a have-not, everybody can become a have.”

WAS IT ALL ROSES? No. A retired engineering professor, Bob Brodersen, recalled in a news story on Newton’s death that there were more changes during the five years he worked under Newton than in the previous 25 years he was in his department. “There’d never been such revolutionary change in how the college does business than happened during the time he was here. It was painful — changing anything inside the university is not easy.” At about the same time,

a note from another retired professor, George Leitmann, was posted on the College of Engineering's online memory book: "I want everyone to know that Rich was the best dean I have encountered in my 49 years on the faculty. I shall miss him terribly." Another posting, from engineering assistant dean Michele de Coteau, extolled Newton's "longstanding commitment to excellence and inclusion for engineering scholars from all backgrounds. He was engaged and accessible, making time to phone prospective freshmen and graduate students, eating dinner in the dormitories with incoming freshmen, and injecting his formidable energy wherever and whenever he could." (A strong advocate for promoting women in the field, Newton was proud that the number of women on the engineering faculty nearly doubled during his time as dean, from 15 in 2000 to 27 today, and that, as he stated four years ago, "we have more women enrolled at the undergraduate and graduate levels combined than ever before in the history of the College of Engineering.")

Students also wrote in the memory book. Engineering physics senior Michelle Yong, the current president of the Engineers Joint Council, recalled being in a half-hour meeting with Newton and two ASUC senators and "feeling so inspired by his words, it was like being shot with adrenaline. It made your heart beat faster to get out into the world and serve. He had so much advice to share with us young leaders, but he wasn't at all the image of an elderly wise man. Dynamic and passionate, he was this almost youthful fountain of ideas, and we just kind of sat there and drank it all in." Computer science Ph.D. student Omar Bakr had Newton as an advisor. "Despite having one of the most demanding jobs — as dean — he always made students his priority. He would meet with his students more

often than most advisors would, to the point that we were the envy of our fellow graduate students."

AT THE MEMORIAL, Provost George Breslauer talked about his personal reaction to the man. "Rich, to me, was a force of nature in the best sense. He was a benevolent tornado of a dean. My staff always said that Rich didn't enter a room, he swept into it. He accomplished more good things in a week than most of us accomplish in a year, if ever. For me, he was a role model, although one who was very difficult to emulate. You could exhaust yourself just by making the effort. You could demoralize yourself by comparing your accomplishments too often to his. And yet because Rich was so friendly, so optimistic, so well intended, so decent and so charitable, you could not possibly feel threatened by the gap between your own accomplishments and his.

"Rich was ecumenical. He wanted everyone to succeed. He wanted everyone to pool their intelligence, their expertise, and their perspectives, in order to devise ways of enhancing the greater good."

"There are a lot of visionaries out there, but when you have a visionary technologist, you understand how technologies can be applied to solve the right problems. Newton was a visionary technologist."

—Dado Banatao, Managing Partner, Tallwood Venture Capital and Chair of the College of Engineering's Advisory Board

NEWTON LOVED TEACHING and missed it whenever other duties kept him from it. But his urge to make change while the iron was hot, coupled with an entrepreneurial streak, tempted him beyond the confines of campus in various ways. He advised so many colleagues and former students on startup businesses, and understood venture capital so well, that he went from consulting to helping found a number of design technology companies, including SDA Systems (now Cadence Design Systems), Synopsys, PIE Design Systems (now part of Cadence), Simplex Solutions, and Crossbow. For one relatively short period, he was president and CEO of Silicon Light Machines, which was later sold to Cypress Semiconductor.

"Newton had an astute business mind, something you wouldn't necessarily expect from an academic," said Dado Banatao, managing partner of Tallwood Venture Capital and chair of the College of Engineering's advisory board. "There are a lot of visionaries out there, but when you have a visionary technologist, you understand how technologies can be applied to solve the right problems. Newton was a visionary technologist."

"He had an unmatched capability of marrying technical insights with industrial needs," said his close engineering faculty colleague Alberto Sangiovanni-Vincentelli, who also helped found Synopsys and Cadence, the two largest suppliers of tools for computer-aided manufacturing. "He articulated the electronic design automation roadmap 30 years ago — and almost all he said actually happened."

Aart de Gues, the chairman and CEO of Synopsys, writing to the design

automation community of Newton's passing, characterized his collaborative approach to problem-solving as "a hallmark of Rich's style — over and over, he managed to be the catalyst in bringing together the right ideas at the right time, proposing a bold plan, aligning funding, and motivating outstanding people to try — and succeed at — the impossible." Newton enjoyed his financially-rewarding sojourn in industry, but, according to de Gues, it didn't satisfy him, and he became "intellectually restless." The appointment as engineering dean, however, "began one of the most fruitful phases of his life. Almost overnight, everything in his life came together — his love for education and technology, his entrepreneurial skills and experience, his talent for management, his deeply held belief in the power of diversity, his irresistible fundraising pitches for big ideas to serve even bigger ideals, and his spiritual desire to align technology with a deeper purpose."

JOURNALISM DEAN Orville Schell, a good friend of Newton's and a self-indicted academic "co-conspirator," said in an op-ed piece in the *San Francisco Chronicle*, "Rich was the sort of person who found good ideas irresistible. He was someone you turned to when you knew that an idea, project or initiative 'should' be done, but that at the same time, in the context of the university bureaucracy it would be difficult, if not impossible, to bring off. I never heard Rich naysay a good idea, no matter how far-fetched it might seem at first. He was the patron saint of difficult, but worthwhile, causes."

"Somehow, his exuberance managed to root new and imaginative ideas, coax expensive buildings to rise from the ground, make new programs become incarnate, and, perhaps most important, magnetized the best and most talented people in the world to the university's call."

GERSON SMOGER (J.D. '77), Newton's grad school roommate and three-decade best friend, recalled their starving-student days and their dreams. To Newton's daughters, Neris and Amrita, he said, "from the day that I first knew your dad, what he wanted most in the world was to have children, and everything that you have heard today, however great,



Always exuberant: Newton after an alumni gathering, with wife Petra Michel

pales next to how he felt about the two of you." He told their mother, Petra Michel, "one of the things that made Richard amazing was how he was always present, he was always there. He showed exuberance and caring no matter who he was talking to, where he was, what he was doing. When I talked to him, I always knew he was there with me, except for one time — and that was when he fell in love with you."

"Sadly," concluded Chancellor Birgeneau at the memorial, "Rich Newton lived for only 55 years. However, he lived life at lightning speed, about five times the rate of the rest of us. So we should really think about having had Rich for 275 years, not 55."

IN 2003, NEWTON was honored with the Phil Kaufman Award, the highest recognition given for research and entrepreneurial

contributions to the electronic design automation industry, sometimes called the Nobel Prize of EDA.

Also in 2003, he cheerfully took part in a lengthy telephone interview for this magazine (which does go to all Berkeley graduate students, a respectable circulation, but hardly that of *Fortune*), and followed up by email, fixing the inevitable errors in many pages of transcription, despite the fact that he was 6,000 miles away, on sabbatical in Germany.

As with so many things, he didn't have to do that. But he did. That's who he was.

Donations in Richard Newton's memory will support the study of synthetic biology at Berkeley and graduate students in that field, through an endowed fund to be named for Newton.

More about Richard Newton

News release on Newton's death:

http://www.berkeley.edu/news/media/releases/2007/01/04_newton.shtml

Remembrances by students, colleagues, and friends:

<http://www.coe.berkeley.edu/newsroom/newton/memories.html>

Interview with Newton about the College of Engineering in The Graduate (pages 10–15):

<http://www.grad.berkeley.edu/publications/thegraduate/2003.pdf>

The Graduate

University of California, Berkeley
Graduate Division
325 Sproul Hall #5900
Berkeley, CA 94720-5900

THE GRADUATE COUNCIL LECTURES:

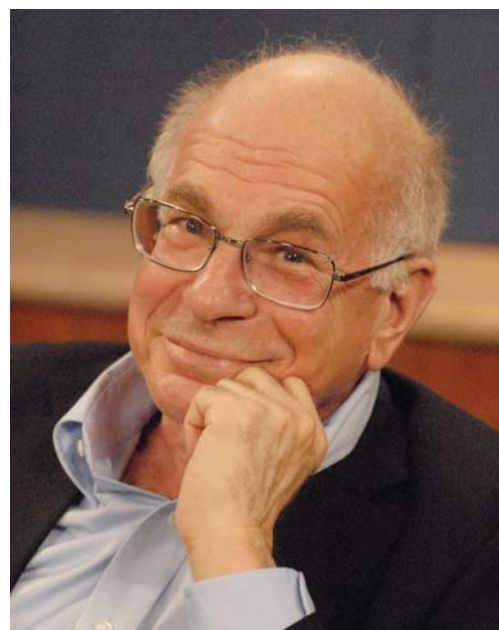
A veritable Who's Who in the world of knowledge —
in person visiting Berkeley and now online

THEY'VE COME TO BERKELEY SINCE 1901, generally without the pomp and publicity of commencements or special convocations — they were just here to deliver lectures. But what lectures they gave! Some were merely extremely interesting to people in their various fields, but many have been buzz-creators and wish-I'd-been-there events.

Their general name, the umbrella, is the Graduate Council Lectures. The Graduate Division puts them on, at the behest of the council, a committee of the Academic Senate. (Ellen Gobler, the Graduate Division's events manager, rides herd on the myriad details, large and small, of producing each year's lectures.)

The names they've attracted belong to some of the best known in their many fields over many eras. Here's a quick sampling of the 400-plus to date: Mathematician **Benoit Mandelbrot**, of fractal fame. **Stephen Hawking**, cosmologist and author of *A Brief History of Time*. Anthropologist **Claude Levi-Strauss**. Chemist **Linus Pauling**, unique for winning the Nobel Prize in his field and for Peace. **George Gaylord Simpson**, the most influential paleontologist of the 20th century. Astronomer **Edwin Hubble**. Wide-ranging writer **Aldous Huxley** (probably best known for his novel *Brave New World*). Theologian-philosopher **Paul Tillich**. Consumer advocate **Ralph Nader**. Author and neurologist **Oliver Sachs** (he wrote *Awakenings*, which was made into a movie, and *The Man Who Mistook His Wife for a Hat*, which wasn't, but it did become an opera). Linguistics professor and public intellectual **Noam Chomsky**. Philosophers **Michel Foucault** and **Elizabeth Anscombe**. Watergate special prosecutor **Archibald Cox**. Architecture critic **Ada Louise Huxtable**. Sociologist **Nathan Glazer**. U.S. ambassador to the U.N. **Jeane Kirkpatrick**. Nuclear physicists **Robert Oppenheimer**, **Niels Bohr**, **Hans Bethe**, **Max Born**, and **Enrico Fermi**. The list also includes senators, congressmen, ambassadors, Nobel Laureates, and university presidents.

Their topics have ranged from the unabashedly specialized ("On Deviations From 2:2 Segregation in Tetrads of Monohybrid Yeasts") to the more intriguing ("Is Civilization a Disease?" and "Sexual Function in the Toad"). The seven separate lecture series all are memorials in one way or another, as their names reflect. Two of them bear the names of faculty members (Bernard Moses, Berkeley's first professor of history, and Carl O. Sauer, professor of geography). The others are



Peg Skorpinski photo

February 2007 Hitchcock Lecturer DANIEL KAHNEMAN earned his Ph.D. in psychology at Berkeley in 1961, taught here (1986–1994), and went on to win the 2002 Nobel Prize in Economics. He is currently a faculty member at Princeton.

named for benefactors, except one, which honors Thomas Jefferson. Full descriptions of the lecture programs and upcoming presentations are available online (<http://www.grad.berkeley.edu/lectures/>).

As technology and budgets have allowed, more and more of the lectures have been recorded, and many of the lecturers have been interviewed by Harry Kreisler for his "Conversations with History" series. Links to the lectures and interviews may be found on the lectures' multimedia page (<http://www.grad.berkeley.edu/lectures/multimedia/uctv.shtml>). They are also becoming available through UC Berkeley's recent partnership with Google Video.