run, that will have a greater impact."

Given the emphasis on recruiting and retaining scientists, and the past problem of achieving diversity in those departments (see "Harvard by the Numbers," page 73), it may be useful that both Hammonds and Martin have pertinent backgrounds. Hammonds acquired bachelor's and master's degrees in physics, and another degree in electrical engineering, before completing her doctorate in the history of science at Harvard. She founded MIT's Center for Diversity in Science, Technology, and Medicine.

Martin, who studied biology as an undergraduate at Cal Tech, said she now perceives that "one reason I didn't stick with biology was that I found the lab environment so unpleasant," with a subtext of "men doing the glamorous stuff and women killing the mice." That experience plus her years as a junior professor at Harvard (1992-1996) and more recently as a single mother "have made me much more sensitive to the way Harvard's practices make it hard" to balance scholarly and family needs and to progress up the faculty ranks. Scheduling academic work well into the evening, for example, is a particular difficulty for "colleagues in Braintree and Framingham" who have arduous commutes through the area's choked traffic. At the same time, she said, expansion of the life-sciences faculty within FAS is "good for women," who today earn half the doctorates in the relevant fields.

Martin cited as "the hardest problem" the issue of improving diversity for members of underrepresented racial and ethnic groups. There is not even a framework for understanding the problems of hiring and retention in relation to race, and the "pool problem"—the number of academically qualified candidates for searchesis "much different" and more constrained than for women. "I think the issues of gender and diversity are linked," said Hammonds. In absolute numbers, she said, the population of underrepresented minority scholars at Harvard is small, but not substantially smaller than at peer institutions. She hopes to maintain data on the "pool of outstanding scholars of color that we choose from"-data not now readily available-and also emphasized the importance of making a concerted effort to enlarge those pools by enrolling more qualified minority applicants in graduate school.

As Hammonds reaches out for her colleagues' expertise, she may make use of a new paper by GSE associate professor of education and economics Bridget Terry Long (with Eric P. Bettinger at Case Western Reserve University). "Do Faculty Serve as Role Models? The Impact of Instructor Gender on Female Students," published this spring in the *American Economic Review*, examines 54,000 students' choice of subjects for further study, and of field of concentration, based on their initial exposure to same-gender faculty members. Women teachers, they found,

A Sensitive Census

The revelation last autumn that the Faculty of Arts and Sciences (FAS) had made offers of tenured professorships to only four women during academic year 2003-

2004—fewer than in any year save one during the preceding decade—set off the debate about the composition of the faculty that rocked Harvard for much of the past winter and spring (see "Tenure and Gender," January-February, page 64, and coverage in subsequent issues). How has FAS fared since? It is too early to calculate the yield—the percentage of acceptances—for offers extended during the academic year ended June 30, but the number of offers extended to women at both the tenured and junior-faculty levels did increase, as shown in these data from FAS's faculty-development office.



positively affected female students' interest in pursuing work in geology, mathematics, and statistics, among quantitative subjects. The opposite effect occurred in biology and physics. No statistically significant effects appeared in certain fields where women have been underrepresented, such as engineering and computer science-at least in part, apparently, because there are so few female faculty members in such fields now. Results were mixed in various humanities and social sciences courses. In all, the authors found, "The results suggest that female faculty members do have the potential to increase student interest in a subject as measured by course election and major choice."

Allston Options — and Actions

WITH A NEAR-TERM GOAL of establishing an expanded campus footprint across the Charles River during the next decade, Harvard released on June 2 a report outlining options for long-term development in Allston. New York planning firm Cooper, Robertson & Partners prepared the "interim" report, which proposes possible sites for new undergraduate Houses, for laboratories to house novel interdisciplinary science initiatives, and for academic buildings to meet the needs of the graduate schools of education and of public health—all priorities outlined by President Lawrence H. Summers in 2003. The report, which stresses the need for improved transportation among Cambridge, Allston, and the Longwood Medical Area,

> was intended to serve as a jumping-off point for public discussions that will continue into the fall. In a conference call on the day it was released, Summers, Graduate School of Design dean Alan Altshuler (a member of the University's Master Planning Advisory Committee), chief University planner Kathy Spiegelman, and David McGregor, managing director for Cooper, Robertson & Partners, answered questions about the report and Harvard's plans for Allston.

Summers was hesitant to single out any one idea in the consultants' report, but said he was impressed by the imagination brought to bear on the question of transportation improvements, which he noted would benefit both the wider community and the University.

McGregor elaborated further on that point: "If there is to be science in Allston," he said, "those scientists need to be able to get between Cambridge and Allston and over to the Longwood Medical Area...as quickly as possible." To that end, the report suggests a number of publicworks-type improvements that would reduce travel time between Cambridge and Allston. For example, "[One] can do a lot of things in the Larz Anderson [Bridge] corridor to improve the flow of traffic, pedestrians, and bicycles," he said.

Dean Altshuler noted that there are "two ways of dealing with the transportation issue. The first is to make the



Harvard's Allston holdings. Areas shaded in yellow represent existing campus and potential sites available within five years. Areas in gray are constrained for five or more years.

JARVARD REAL ESTATE AND PLANNING

trip as quick as possible. The second is to make it a much more...pleasant experience. As people walk, ride their bicycles, and take shuttle buses between Barry's Corner [at the intersection of North Harvard Street and Western Avenue] and Harvard Square, what are they experiencing?" One can make the trip "a much

HARVARD PORTRAIT



Catherine Dulac

"THE SENSE OF SMELL was very poorly understood," says professor of molecular and cellular biology Catherine Dulac, until a seminal 1991 paper on odorant receptor genes by Linda Buck and Richard Axel (who later shared a Nobel Prize) opened up a huge field for research. In 1992, Dulac earned her doctorate in developmental biology, and the next year left her native France to work with Axel at Columbia University. "Humans and animals can detect hundreds of thousands of ambient chemicals," Dulac says. "Smell is closely connected with the emotional brain, with pleasure and aversion. And nothing is more evocative of memories than smell-the cookies that grandmother made, or the perfume of someone you just met." Dulac comes from an academic family in Montpellier (both parents are literature scholars) and graduated from the École Normale Supérieure in Paris. She studies pheromones, chemicals that animals sense (but don't necessarily smell) that are vehicles for social communication-defining, for example, potential mates and rivals. So far, evidence doesn't back "love potion" perfumes containing alleged pheromones, she says. But Senomyx, a company that applies research to improving flavors of foods and medicines, uses scientists like Dulac as advisers. She came to Harvard in 1996, when her department had two tenured women; today there are three. Dulac herself won tenure in only four years. She has run four Boston Marathons, and enjoys travel to places as remote as Patagonia and Easter Island. But conceptual voyages-like extrapolating from mice to humans-are trickier. "Humans are very complex," she explains. "And, especially concerning sex, they lie."

JOHN HARVARD'S JOURNAL



From lower left: View of Barry's Corner at the intersection of North Harvard Street and Western Avenue; the Harvard stadium is on the river at left, with the Business School to the right of that. A concept for the addition of pedestrian walkways beside Larz Anderson Bridge. Construction of a canal and pond system would improve drainage of low-lying areas and allow winter recreational activities.

Institute, and Stanford have all recently built science facilities on this model (see "Parallel Universities," March-April, page 54).

The Cooper report has three themes that will guide the team working on the first science building, Spiegelman noted in a separate interview. "The first building should be transformative," she said; it should connect science in Cambridge and at the Longwood Medical Area to science in Allston, and should be a flexible laboratory building that could evolve over time.

At a retreat held for the scientists who will work in the new building, participants agreed that they wanted every member of their community to be involved in teaching undergraduates, Hyman reported. That had been a concern about locating science space away from existing Cambridge departments. Stem-cell scientist and Cabot professor of the natural sciences Douglas Melton, who has suggested that the teaching labs in Cambridge are not always ideal for pedagogy, argues that there ought to be a teaching lab in the new building set up to facilitate open-ended research, like a real working laboratory.

University officials reviewed architects' qualifications for the first science building in June, and narrowed the list to four firms during the summer. If all goes well with reviews by the City of Boston and the Allston neighborhood, planners hope to select the architect and site by December.

higher-amenity experience," he said. "It can be green, it can be attractive. There can be interesting retail and other sightseeing opportunities along the way."

In addition to improvements to the Larz Anderson Bridge, planners looked at improvements to the Weeks footbridge, construction of a new bridge from between the two halls of Winthrop House to the Business School, or construction of a tunnel extension from the bus and subway station in Harvard Square under the river to Allston.

Asked about the timeframe for all this, Summers answered, "By no means is this the project of a single decade, or, I suspect, a single generation. None of us will probably ever have a chance to see the completed development." But he added that he hopes to establish a presence in Allston in the next 10 years. Might a science building be the first to rise as part of an Allston campus? Summers indicated that he would not be surprised if science led the way there.

The reason for locating science in Allston is not only that Harvard is "at or close to the end of its developable space in Cambridge and Longwood," said University provost Steven E. Hyman in a

late July interview, but also because "clearly, some of the most important intellectual problems of our day can't be addressed in the way we have [traditionally] been configured." The first new building, for which a site has not yet been chosen, will contain the Harvard Stem Cell Institute, as well as researchers involved in chemical biology and systems biology, elements of which are already well established in departments in Cambridge and at the Longwood Medical Area campus. Fifty or 60 faculty members will be housed in a single huge facility that is not particularly tall, but has a large footprint. "You want to create horizontal spaces" that will bring people together and encourage collaboration, Hyman explained. The University of California, San Francisco, the Howard Hughes Medical

A task-force report released Three options (top last year had indicated that Harvard might eventually increase the size of the undergraduate student body by building as many as eight Houses in Allston (and then, perhaps, converting the current Quad Houses into graduate-student housing). But although the report released June 2 shows four potential sites that could accommodate as many as 12 to 16 Houses, it discusses just four new undergraduate residences. "The priority for Harvard College now has to be increasing the faculty-student ratio," said Summers. "We've never contemplated the possibility of growing the College over the horizon of the next decade."

Those Houses could be built between the Stadium and the river, where they would replace existing College athletic facilities

such as Blodgett Pool, Briggs Cage, and Palmer-Dixon Courts, which would be relocated nearby; on the river at the Business School, replacing the student dormitories on either side of the lawn fronting the school's Baker Library; or at two adjacent sites at the eastern edge of the school's campus, where they would replace or take over existing graduate-student housing. "No definitive decision has been made that undergraduate housing will be built," Altshuler emphasized in a July interview. He characterized it as a "very expensive" and "not an urgent" decision. Doing so, however, would contribute enormously to making Allston a fully integrated part of the campus. If such housing were built, said Speigelman, it would go up all at once, as a complex, so that undergraduates would not feel isolated.

The report indicated that the other new academic buildings and the science facilities could rise south of the Business School, either on Ohiri Field and south to Western Avenue, or even across Western Avenue.

None of the options have been combined yet, Spiegelman said, so the potential consequences are not explored in the interim report. Noted McGregor, "If this is going to [work] three decades out, you

strip) for siting various professional schools. The latter two scenarios

would require the acquisition of an affordablehousing complex in the wedge of land formed by the intersection of North Harvard Street and Western Avenue. Undergraduate housing (center strip) could replace athletic facilities north of the Stadium, Business School housing to either side of the lawn fronting Baker Library, or graduate-student housing east of the Business School. (A fourth option combining elements of the second and third is not shown.) Science facilities (bottom strip) might be built south of Western Avenue, north of Western Avenue, or diagonally across it at a new intersection that would be formed by a proposed road running north to the Harvard stadium.

have to have a

plan that, while it sets the public framework and makes an attractive campus, leaves flexibility for different kinds of uses as we go ahead."

The next steps, said Spiegelman, are "conversations with all the stakeholders,

A Robust Decade at the Business School

KIM B. CLARK'S move from Allston to Idaho-he became president of Brigham Young University-Idaho on August 1, in

response to a call from the Church of Jesus Christ of Latterday Saints-concluded his nearly 10-year deanship at Harvard Business School (HBS). That decade, during which business became far more global and technologically enabled, with abundant opportunities for entrepreneurship, proved fruitful for HBS's brand of $_{d}$ business education as well. Returning to the West (he grew up in eastern Washington and Utah) severs Clark from his nearly continuous academic and profes- §











internal and external" at Harvard, in Allston, and in Boston. The fruit of those discussions will be incorporated into Cooper, Robertson's next draft report, scheduled to be completed this coming spring.

sional home since he enrolled in Harvard College in 1967. In an interview a week before his departure, Clark '74, Ph.D. '78, outlined a series of initiatives the school had undertaken during his tenure. Most seem likely to be sustained under his interim and ultimate successors (see next page); a

