A booklet, "Women at Oxford," caught my eye. Of 100 women from around the world, the only American mentioned is Muriel Beadle, along with her book, *These Ruins Are Inhabited*.... Oxford still remembers the brouhaha Muriel's book caused.

As Oxford's Eastman Professor, Harry automatically became a Fellow of Balliol College and lived in the Eastman House.

In the spring of 1997, my husband, Harry, Caltech's Beckman Professor of Chemistry, was named Oxford University's Eastman Professor by the Rhodes Scholarship Trust. Eastman Professorships run for one year and can be selected from any field. At Columbia in the '60s, we had been friends with two Eastman Professors, Lionel Trilling and Garrett Mattingly (both, alas, now dead). Trilling, who lived in the apartment next to us, was already New York's leading literary critic. He often entertained a young, barefoot student named Allen Ginsberg. Mattingly, who was writing the definitive history of the Spanish Armada, lived upstairs. Only four chemists had ever previously been named Eastman Professors—Harold Urey, Melvin Calvin, Clyde Hutchison, and our own Linus Pauling. Moreover, George Eastman, the founder of Eastman Kodak and the donor of the Eastman Professorship, was a chemist! We were most flattered to be invited. Besides Pauling, only two other Caltech faculty had been so honored—George Beadle and James Bonner, both biologists.

Since the Middle Ages, Oxford's colleges and their Fellows, i.e., the faculty, have offered the finest education in the English-speaking world. As innocent students, future kings, queens, heads of state, and distinguished scholars have all taken an oath in Latin to swear to scholarship, honesty, integrity, and persistence in attaining worthy academic values. The colleges began as rooming houses, says one authority, "with a master in charge to see that the young scholars behaved themselves and got enough to eat. From those halls they went out to lectures given under the auspices of the university. If a boy had a bit of trouble with his Latin, nothing could have been more natural than to ask help from the house master; and so a teaching function was added to the colleges. They are still the basic social and instructional units at Oxford.... Given close fellowship with brilliant minds in an elegant

THESE RUINS ARE *STILL* INHABITED
Caltech at Oxford, 40 Years On

by Shirley I. B. Gray

and civilized setting, it is not surprising that the Oxonian's loyalty and affection go first to the company of people with whom he has lived. (That's all 'collegium' means, anyway—a company of like-minded people.) The American university graduate identifies himself as a Yale man, but the graduate of Oxford is likely to tell you that he was at Balliol."

The ceremonial installation of a proctor includes a procession from the Sheldonian Theatre (the building in the top picture), down the Turl (one of the principal streets of Oxford), and off to who knows where—the faculty club, one supposes.

Caltech's undergraduate houses are based on the Oxonian model, so we were not entirely unfamiliar with the system. As Eastman Professor, Harry was automatically a Fellow of Balliol College.

Oxford has a Disneyland quality, replete with costumes, pageantry, and a background of splendid, but authentic, architecture. Robes are worn to all official university functions, from tutorials to faculty meetings. (Imagine Caltech professors wearing academic dress to a Watson lecture or to a dinner at the Athenaeum!) Harry and I found we were wearing academic dress at least once a week—but, being forewarned, we had fortunately brought the proper attire with us. The mere installation of a new proctor, the lowest rung on the academic ladder, is sufficient cause for a procession through the streets by faculty in full academic regalia, led by three officials carrying enormous silver maces. Bobbies and barricades cordon off the side streets while mounted policemen and motorcycle cops clear the way.

Most of these parades begin or end at the legendary Sheldonian Theatre, designed by Sir Christopher Wren. The Sheldonian is an academic assembly hall for investitures, faculty meetings, and the like. But it's also a real theater, at which concerts are presented. It has become a major tourist attraction, complete with the inevitable gift shop in the foyer, where a booklet, "Women at Oxford," caught my eye. Of 100 women from around the world, the only American mentioned is Muriel Beadle, along with her book, *These Ruins Are Inhabited*.

Above: Redmond and Muriel aboard the Cunard Line's *R.M.S. Britannic* in September, 1958. With no VCRs, video games, or personal stereos, there was plenty of time to read the ship's daily paper, the *Ocean Times*, from cover to cover.

Right: The wide selection of game available in Oxford's Covered Market is quite a novelty to an American accustomed to shrink-wrapped steaks on styrofoam trays.

(The passage two paragraphs above was excerpted from *These Ruins*, which is also for sale in the gift shop.) Muriel's husband, George, a Caltech geneticist and soon-to-be Nobel laureate, was the Eastman Professor for the 1958-59 academic year. She and their teenage son Redmond spent the year at Oxford with him, and Muriel, a professional journalist, wrote the book upon their return home.

Oxford still remembers the brouhaha Muriel's book caused. Some readers took her gentle teasing as criticism and failed to smile. Others found her outsider's insights to be accurate. The townsfolk, in general, were a bit offended. Oxford's founding, 40 years ago, of the highly successful newcomer's welcoming group is a direct result of Muriel's comments in *These Ruins*, and Cambridge has since followed suit. I had read *These Ruins* when we first moved to Caltech. I reread the book twice before departing for Oxford.

The Beadles had sailed from New York to Southampton with enough winter and summer clothing to last the year. No returning home for Christmas on frequent-flier miles for them! Since it no longer takes eight days by steamship and eight hours by airplane to travel from Oxford to the West Coast, Harry and I returned to Pasadena three times. We used e-mail on a daily basis, and we called the U.S. with impunity. (Placing a transatlantic telephone call in the Beadles' day was a major affair, and, of course, e-mail did not exist.) Clearly, travel to Europe has changed, and life in Oxford has changed as well. I thought that I owed it to the tradition of Caltech women visiting Oxford to offer an update on Muriel's observations.

Food. In defiance of stereotype, British food is frequently wonderful. This was not always the case in Muriel's day:

> I quit worrying about [Redmond] altogether the day he said, "Birkett and I tried lunch at the Muni"—the Municipal Restaurant, a cafeteria not far from the school—"and it wasn't bad. Only a shilling, too."
>
> "Only a shilling. *Fourteen cents?* At that price, what on earth did they give you?"
>
> "The daily special. I don't know what was in it."
>
> "A meat dish?"
>
> "I guess so. With potatoes and bread and Jell-O."
>
> "Well, what did the meat look like? What shape was it?"
>
> "Lumps."
>
> "What color was it?"
>
> "Sort of gray."
>
> "What texture?"
>
> "Soft."
>
> "Good grief, Red!"
>
> "But it was nice and hot, Mom."

The British have always been worldly, and setting a good table is now a matter of honor. The BBC televises cooking competitions, and food is earnestly discussed as a conversational topic. And yes, British cuisine even includes spicy foods nowadays—what with the population influx from the subcontinent, Indian food competes with pizza and spaghetti as daily fare. (These latter, being fast and easy, appear to have become the most common food on Earth. We have eaten them from New Zealand to Israel.) In fact, I would say the average Englishwoman knows her curries better than the average Angelena knows her dim sum. And the British sandwich has evolved from yesteryear's simple tomato on bread with butter to encompass ciabatta (which resembles French bread) stuffed with curried chicken, Thai salad, or hummus.

TESCO, a major supermarket outside of Oxford, has 23 checkout lanes and is larger than any store in Pasadena. Variety exists in the three states of matter: frozen, fresh, and "heat and eat." With the global market, anything in season anywhere is for sale. In Oxford, the gentry favor the Covered Market—a farmer's market where, one fall weekend, I found fresh grouse, pheasant, deer (both

red- and white-tailed), duck, hare, and rabbit all displayed in one shop. I went home to fetch my camera. At the university, dinner in hall—and not even special dinners!—has included plaice and lobster. Here I was one up on Muriel, as women weren't allowed to dine in hall during term in her day. But she heard all about those meals from George, so we know that "an elegant English dinner menu, such as the colleges serve, has a Victorian flavor: soup course, fish course, joint of beef or lamb and three vegetables, a pudding or pastry of some sort (never cake or ice cream), fresh fruit, and cheese with crackers.… Coffee—strong and bitter-black—is served demitasse. In order to kill the taste it's customary to pour in sugar and hot milk. Liqueurs or port may follow. (Also, some hours later, a need for bicarbonate of soda.)" Harry declines the snuff horn that is passed with the port. Cigars after dinner are still common.

The British breakfast, however, is in a state of decline. One finds the traditional full breakfast, with its kippers, black pudding, and broiled tomatoes only in tourist hotels or being eaten at 10:30 a.m. by pensioners in the lunchroom at Littlewoods, a department-store chain.

The midday meal is still serious. An Oxford chemistry wife decided to entertain newcomers from Japan by preparing a "typical British lunch"

At the university, dinner in hall—and not even special dinners!—has included plaice and lobster. Here I was one up on Muriel, as women weren't allowed to dine in hall during term in her day.

in her home. She served orange and carrot soup, lamb with apricots, vegetables *en casserole*, rhubarb crumble, banana mallow with raspberries, and a choice of Stilton, blue Shropshire, or cheddar cheese. I was ashamed that earlier I had served a sandwich to a fellow math professor after *her* lecture. (Yes, Oxford now has female faculty, and they dine with the men.)

The Role of Women at Oxford. Muriel, as a Caltech faculty wife, was accustomed to being included at collegiate functions, and was shocked and infuriated to find the Oxford faculty and all its doings to be an exclusively male preserve. Faculty wives were expected to stay home, or entertain themselves by attending bird-watching lectures at the public library or joining women's clubs. In one respect, however, Muriel's Oxford was light-years ahead of Caltech. Oxford had been admitting women as undergraduates for 40 years; Caltech's first female frosh wouldn't arrive until 1970.

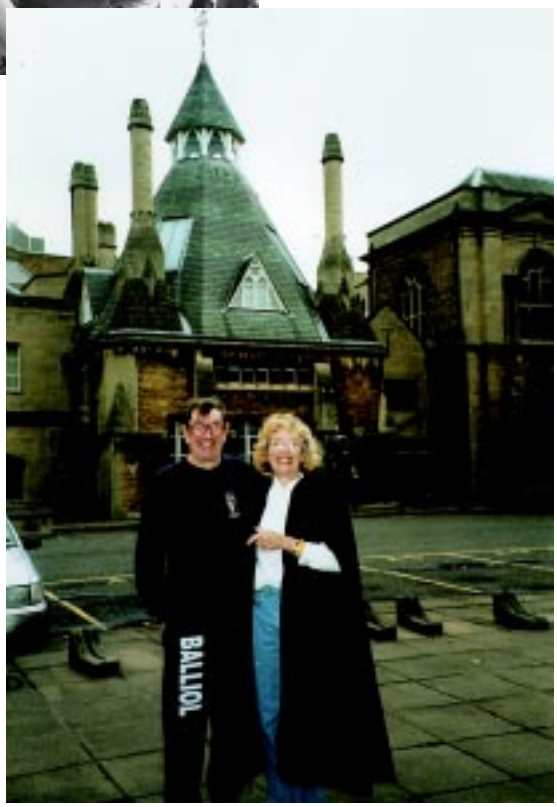
Nowadays, most Oxford colleges have at least one female tutor in every department. This is partly in response to the changing demographics of academia in general, and partly precautionary. As Muriel explains Oxford's instructional practices, "Whereas the American student 'majors' in a subject, the Oxford undergraduate 'reads' it. Literally. His work is directed from his college by one or two tutors who are experts in his chosen field. For three or four years, in weekly private session, he presents an essay based on his reading, hears his mentor discuss and criticize it, may be forced to defend it, is finally sent on his way with a new reading assignment and a new essay topic. That's all there is to the academic side of an Oxford education: Mark Hopkins on one end of a log and a student on the other. It's the best possible method of teaching, and also the most expensive. The cost can be justified only if teacher and pupil are of top intellectual caliber." But if the teacher and pupil are of opposite sexes, and instruction takes place behind closed doors in the tutor's rooms, as is traditionally the case, the potential for scandal and lawsuit in this day and age is enormous.

Hats. Muriel wrote, "English academic society puts on full dress much more often than its American equivalent. If a dinner invitation does not specify 'informal,' guests assume that black ties will be worn. Young ladies then wear short formals, and old ladies wear floor-length dinner dresses. If the invitation specifies 'orders and decorations,' men climb into white-tie-and-tails, young ladies shift to ball gowns, and old ladies add white kid gloves and tiaras to their floor-length dinner dresses." A black-tie dinner still occurs at least every week or two in most colleges, but it is the hat that truly distinguishes the British from Americans. From the porter's bowler to the cricketer's cap, from the hunter's helmet to the fisherman's sou'wester, it is the pleasure of wearing a hat that makes one truly British. Queen Elizabeth is in complete harmony with her public by always wearing a hat. It is simply something one does. An invitation to a garden party at Oxford often includes the request from the host, "He hopes that some Ladies will wear Hats."

News, Pop Culture, and Mail. In Muriel's day, many expatriate Americans read every single word, including the classifieds, of the *International Herald Tribune*. The *Herald Trib* is still a good paper, but its news now is global, and more likely to cover a financial crisis in Asia than an art-show opening on the Continent. Television is now the main source of information. At lunch in college, the conversation often deplores the unhealthy alliance between Prime Minister Tony Blair and media mogul Rupert Murdoch, or bemoans Murdoch's "making a killing" with Sky TV, his version of CNN.

The late-night shortwave BBC newscasts of Muriel's day have been supplemented (but, fortunately, not entirely supplanted) by talk-radio shows that capitalize on the time change between Britain and the United States. BBC researchers track down funny stories in the States, and set up interviews with the parties involved. So while it's the middle of the night in Europe, wide-awake

Left: The Beadles at home in their Oxford living room. Below: The Grays in front of the Abbot's Kitchen, an Oxford laboratory where seminars in inorganic chemistry are held. Harry gave several there.



callers in the U.S. chat with British hosts. The American accent attracts attention, and the BBC has a knack for the oddball. One example I recall is the owner of a newspaper in a small Virginia town (population some 1,500) being sued by *The Times* of London for the use of the same name. On a more somber note, the BBC also talks to American callers about American tragedies, such as the schoolyard shootings in Oregon and Texas. There's a definite tabloid mentality to these segments—the more horrific the story, the better. But in every case, from the silly to the serious, the Americans were articulate and well-spoken. I was very proud of them.

American pop culture is highly influential—much more so than in Muriel's day. But unlike in the U.S., there's no free TV. The BBC collects a "license fee" of 100 pounds sterling (minimum!) per year per television set. Satellite TV is even pricier, but is as ubiquitous as cable TV is here. The 49ers vs. Dallas, the Super Bowl, and the Breeders Cup were on live television. The World Series was on radio. Boathouse audio systems spill Aerosmith, Van Halen, and other hard rockers across the Thames on Bumps Week—a series of intercollegiate boat races held every spring. The sound is not unlike the opening of a Chicago Bulls game.

As in Muriel's day, timely mail delivery is still taken seriously. Junk mail and superfluous catalogs do not burden the postman.

Majors, Fees, and the Oxford Degree. Students at Oxford read a single subject, which they declare upon matriculation. Of some 3,000 freshmen, as many as 200 (about 7 percent) may be reading chemistry and 150 (5 percent) the classics. In contrast, the class of 1998 at Harvard—the only proper university in the United States, as far as Oxford is concerned—numbered 1,654, of whom 38 (2 percent) were chemists and nine (0.5 percent) were classicists. Oxford clearly has a far greater percentage of chemists and classicists. Why is this?

Chemistry at Oxford offers a four-year BSc degree, with the final year devoted to a research project. An Oxford education remains largely free to British citizens, although just this year the university began charging a nominal annual tuition on the order of $1,600. (Contrast that with the $30,000 or so, including room and board, that a year at Caltech costs!) With tuition

Cindy Quezada, a grad student of Harry's who came with us for the year, once attended a masquerade ball in this room. Strobe lights flashed above the dancers, animating the paintings. She told me later that she felt as if she was being haunted by the Ghosts of Success.

South American students, even though these students pay tuitions comparable to American rates.

Muriel quoted George Bernard Shaw as saying, "'If Oxford is not highbrow, what on Earth *is* Oxford?' An undergraduate may be the son of a Birmingham collier and his speech may still be faintly tinged with Black Country dialect, but the college porter will address him as 'Mr.' He and his fellows are always referred to as 'gentlemen.' And his tutor will offer him a choice of sherries as gravely as if he were a connoisseur. Thus he begins to become one. There isn't much doubt that life as lived in the Oxford colleges stretches the mind, sharpens the wit, and refines the taste."

An Oxford degree will continue to be a golden key for the foreseeable future. When one dines for three years in halls decorated with the portraits of prime ministers and presidents, why not dream big? I sought out the portrait of Lewis Carroll for my mathematics students. He hangs in hall at Christ Church with William Penn, Robert Boyle, John Locke, Elizabeth I, Henry VIII, Cardinal Wolsey, and 13 prime ministers. Cindy Quezada, a grad student of Harry's who came with us for the year, once attended a masquerade ball in this room. Strobe lights flashed above the dancers, animating the paintings. She told me later that she felt as if she was being haunted by the Ghosts of Success.

(Cindy also attended the Royal Ascot horse race in June. When the Queen is in attendance, getting in is slightly more complicated than just buying a ticket at the front gate. One has to be invited, which, in this case, meant that Harry had to write her a letter of introduction to the American embassy, attesting to her good character. She also had to buy a hat for the occasion.)

Above: Cindy and Harry in the doorway of the Hall at Balliol College. Below: Lewis Carroll, aka Charles Lutwidge Dodgson, mathematician and creator of *Alice in Wonderland*.

and fees unimportant, many students prefer the four-year degree to the three-year baccalaureate typical of the humanities. One also hears that the best job offers from London—those in government and finance—are going to degrees that emphasize applied math and computer skills as well as writing skills. And chemists *do* learn to write—Oxford tutors proofread lab reports and grade them for grammar and style as well as content. Thus one studies chemistry not so much for chemistry's sake as for the peripheral skills. In Muriel's day, students took a lab science for the subject matter—one was learning a trade, as it were. Margaret Thatcher is an example of a chemistry student whose career went awry.

On the other hand, the classics have always been the means to acquire the trivium—writing, logical, and rhetorical skills. Oxford has traditionally prepared the ruling class for government service, and knowing antiquity and its literature was not nearly so important as learning to communicate with one's future colleagues and constituents.

In Muriel's day, admission to Oxford was largely limited to applicants from the Commonwealth. Nowadays, however, Oxford truly wants to become an international university, and is trying very hard to recruit foreigners. The effort is paying off, and an Oxford degree has become quite popular abroad. One now meets many German, Italian, Greek, Spanish, Portuguese, Mexican, and

When they put a book "on reserve" at Oxford, they really mean it. Some books still retain the medieval chains that once secured them to the shelves.

Libraries. Oxford has the oldest and largest libraries in the English-speaking world. The Bodleian Library, founded in 1602, is the university's main library. It is also a copyright repository—the British equivalent of the Library of Congress—and, as such, holds copies of every book that's been printed in the United Kingdom since 1610. (A friend of Muriel's gleefully reported finding *The Life and Times of Mickey Mouse* there.) For 400 years, "Readers" (patrons with research privileges) at the Bodleian, with hand held high, have made a declaration not "to bring into the Library or kindle therein any fire or flame," nor to "mark, deface, or injure in any way, any volume, document, or object belonging to it."

In an American university library, the photocopier and the computer are vital equipment. They're also essential at Oxford, but in far different proportions. The Bodleian's books don't circulate. Readers don't even have access to the stacks—you fill out an order slip, and a member of the staff fetches your book and brings it to your seat. The staff also does all the photocopying. If the book was published before 1800, the page is photographed instead, so as not to injure the binding. This, of course, is much more expensive and takes longer—especially as the attendant first checks to see if there's a negative already on file. The negative-storage area takes up the entire attic floor of the library, and is a seemingly endless warren of corridors piled high with dusty boxes. If you just want to take notes, you may do so in pencil. Pens are strictly forbidden, for fear of marring some priceless volume. Thus the laptop computer has become the optimum way to take knowledge home. The Duke Humphrey Collection in particular, some of whose books still retain their medieval chains, attracts "laptop Readers."

Muriel noted that it was sometimes more efficient for George to have journals airmailed to him from Pasadena than to try to find them in the Oxford libraries:

> There are over fifty libraries at Oxford, some maintained by the university, some by the colleges, some by departments. Cataloging systems vary from library to library, and sometimes even within them. There is no central catalogue that lists what's supposed to be in all, and such lists as are available are often out of date. In trying to run down one periodical, listed at two department libraries, George had found that one of the two had stopped subscribing to the magazine in question in 1933, and the other had sold its back copies during a period of economic pinch. He still talks about the fact that to locate all reference material pertinent to a survey of evolution required visits to seventeen libraries.
>
> This sort of thing doesn't bother a lot of people at Oxford. Some have more fun sampling their way through the Bodleian than women at what the English call a jumble sale.

Well, this sort of thing has apparently begun to bother people since then. The university *still* doesn't have a comprehensive central catalog, but many colleges are beginning to set up on-line catalogs of their own holdings. Balliol College, where we were, is well on its way.

College vs. College; Oxford vs. Cambridge. Since medieval times, says Muriel, nobody has "remembered the university with special affection. It was only cold lecture halls and colder-eyed examiners. Therefore, the rents from a bit of property or some fine silver plate passed from a fond graduate to Merton or Exeter or Queens, or to whatever college was his ancient English equivalent of good old Kappa Sig. Hence, over the years, the colleges grew wealthy, developed into wholly autonomous institutions, became more important and more powerful than the university. Although they have now been forced to yield ground to the university for the maintenance of the modern science labs that no individual college can afford, they are still far more than the administrative subdivisions that the word 'college' connotes to Americans when it occurs within the context of university organization here." The colleges still go their own way, financially, and conversations at the faculty dinner table often focus on which colleges seem to have the funds to provide a good life for their members.

George collected anecdotes illustrating college rivalries, and how jealously each one guarded its prerogatives: "I don't see how this can be true, even at Oxford, but here's how I heard it. The Botanical Garden—you know, the buildings and grounds along the Cherwell just below Magdalen Bridge—is owned by Magdalen College, and they lease it to the university. Somewhere in the deed or lease there's a provision forbidding vehicles to drive on the property. And for a solid week during

Unlike Pasadena, Oxford has four distinct seasons. Left: In spring, the Caltech orange of California poppies brightens the front garden of the vice chancellor's house. Right: Redmond's grandmother, who paid the Beadles a Christmas visit, thaws the birdbath in their backyard.

one cold winter, while the supply of coal to heat the greenhouses dwindled away to nothing, Magdalen refused to let the university deliver coal—because it had to come by truck!"

At the level of Oxford vs. Cambridge there is tremendous respect and seemingly little rivalry. Muriel says, "The fundamental similarity of the two great British universities… is recognized by the English in common reference to them as one entity called 'Oxbridge.' They have equal prestige, and jointly are the mecca for the best young brains in the commonwealth." (Unlike in the U.S., where a prospective student with a high tolerance for paperwork could conceivably apply to every school in the Ivy League, in Britain one can apply to either Oxford or Cambridge, but not both. This is a concession to the faculty, as all successful applicants to both universities are interviewed by three faculty members.) The term "Oxbridge" notwithstanding, there are major differences between the two universities. For example, at Oxford, faculty must retire at age 65 and move out of their college. At Cambridge, faculty never have to retire, nor vacate their college-owned offices and flats. In an era of increased longevity, Cambridge's administration is becoming concerned about this policy. Oxford is standing by the very expensive tutorial system, while Cambridge is moving toward lectures and sections taught by graduate students.

In both universities, a faculty member's time is split between his responsibilities at his college and his research career, which is housed at a separate institute. Most feel pressure to do double duty, although sooner or later, one is forced to choose where to spend one's time.

During our stay, a popular tutor received a permanent post, i.e., tenure, though other candidates had far better research and publication records. He had chosen the college instead of the institute, and put in huge amounts of time serving on every committee imaginable, from gardening to admissions to wine. So, unlike research universities in the U.S., where advancement is based on publications and scholarship, in the U.K. it is possible to advance by being a good teacher and a good member of one's college.

On the other hand, a fellow we know who became head of his laboratory had to leave his college, to his great regret—it was like being booted out of his fraternity. There is lots of camaraderie and little competition among a college's faculty—for example, Balliol has only a few chemists, so there isn't much jockeying for lab space or students. And you aren't competing with the math or philosophy professors at all, so it's very easy for them to be supportive of you. But the institutes are very focused, so you may be vying with, say, eight other inorganic chemists.

Living. While the winter's rains are irritating, nothing is more wonderful than a spring day in the northern latitudes. If the early light does not awaken you, a symphony of birds will. The smog-free skies are a reminder that Pasadena does have some faults. The most depressing aspect of life in Oxford is its traffic. The city is scaled to walking and bicycles, and public transportation is highly developed, but Oxford is moving to the family automobile. A parking space is highly prized. If any one thing threatens downtown Oxford it is the demands put upon the city by the automobile, coupled with the university's need to find the space to expand, especially for new science buildings, while remaining a place where one walks and interacts with friends and colleagues.

Muriel thought that the traffic was bad in 1958, what with the surge in car ownership as Britain's economy finally recovered from World War II. She describes their first drive into Oxford:

> The street, wide up to this point, suddenly narrowed; and as suddenly filled. Cars and busses seemed to spew into it from a series of side streets, and we inched along until a bend brought us face to face with

Left: Traffic in England wasn't always horrific. Here George gets his bearings while touring the Cotswolds, some 20 miles from Oxford. Right: The only thing worse than a narrow two-lane road is a narrow two-lane road under construction. There's a reason why bicycles remain popular!

a roundabout (a traffic circle; the British prefer them to intersections controlled by traffic lights [which is still true today!—ed.]). It resembled a runaway carousel, and I caught my breath. But George, thanks to his drive from London the previous day, was a veteran, and he tackled the maelstrom ahead of us with cheer and confidence.

"There's no right of way at these," he explained, his head swiveling and his foot ready on the gas pedal. "The trick is to cut in front of the first driver who hesitates. A good time to catch 'em is when they're shifting gears… So!" He shot into the stream like a salmon in springtime.… [W]e had made the mistake of tackling the town during the morning rush hour, and vehicles were approaching… in a spirit of no quarter given, none expected. The street was raucous with the roar of motors, and a bluish haze born of exhaust smoke eddied about the patient queues of people at the bus stops. No sleepy university town, this; it was like traveling on a cross-town street in Manhattan at high noon.

That and a drive through the Oxford countryside the next day scared her—a battle-hardened veteran of rush hour on the L.A. freeways!—so badly that she refused to drive for the duration of their stay. (Fortunately for their touring plans, George had nerves of steel.) But she hadn't seen anything, compared to what it's like now.

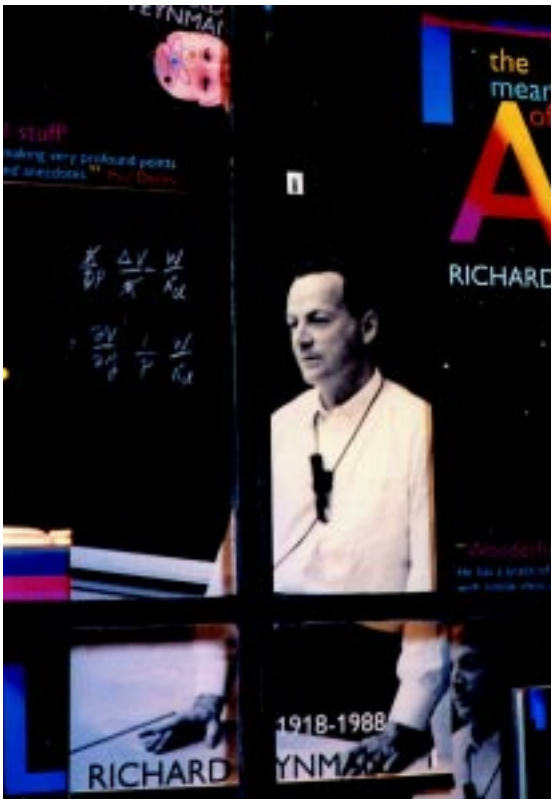
Precollegiate Education. Muriel, with a son in a British grammar school, became keenly interested in educational issues. Her first parent-teacher meeting, however, disabused her of the notion that the British educational system wanted her input, or that teachers were held accountable to parents. Teachers were revered and left pretty much alone—as professionals, they were expected to know best how to do their job. "[Parents] believed that it is as bad form to express opinions on the content and methods of education as to tell a physician how to prescribe for a patient." The American system of having the community, through the vehicle of the school board, dictate to the faculty was unheard-of. Nowadays, being scrutinized is accepted as part of the system. Schools are rated by the government, and the ratings appear in the newspapers. At university, individual departments are rated, and even declared redundant if not performing at a reasonable level of expectation. Faculty have found themselves in the awkward position of having tenure in a department that has ceased to exist.

But although British parents are more vocal now, they still show far more respect for teachers than we do. It is considered the family's responsibility to civilize its children—you don't just dump them into the school system and expect the teachers to raise them for you. Consequently, British teachers spend far more time teaching and far less time baby-sitting than ours do.

While concerned American parents have rammed every educational fad of the last 50 years down our schools' throats, British teachers stuck to the three Rs. Muriel noted that, "It is characteristic of the English, who never discard anything that still works, to have supplemented existing facilities rather than to have created entire new systems, as the Americans would have done.… They like cautious experiment, rather than radical change, and if this predilection sometimes muddles them up, costs them money, and slows them down, at least it spares them the disillusionment that can follow the collapse of some grandiose but untried scheme."

On the positive side, we give far more second chances than the Brits do. Their system of three national, standardized exams taken at ages 11+, 16, and 17 or 18 is very unforgiving of slow starters or children with other disadvantages.

Tourism. Tourists have found Oxford, an undiscovered treasure in Muriel's day. The daily



Caltech is remembered in Oxford's windows. The magnificent sepia window at right is in the chapel at Magdalen College, and was restored as a gift from Caltech Professor of Organic Chemistry John Richards and his wife, Minnie. The photograph of Caltech Nobelist Richard Feynman at far right is part of a window display at Blackwell's, a famous Oxford bookstore.

scene at the Sheldonian reminds one of the crowds at the Duomo in Florence. The tourists include world leaders—King Hussein of Jordan and Empress Michiko of Japan headed the list last spring. Empress Michiko's son was at Merton and her daughter-in-law was at Holywell Manor, a 200-year-old dorm for graduate students. Cindy Quezada hosted a Tokyo TV-news crew on its tour of the colleges while the empress was having lunch in the Master's Lodgings at Balliol. It is a setting worthy of royalty, as every college has, over the centuries, accumulated a priceless trove of antiques for the private use of its faculty. The Master's dining-room table and chairs are original mahogany Chippendale, a gift of Jane Austen's uncle, himself a Master of Balliol. This is not atypical—the furniture, art, china, and silver are commensurate with the architecture.

In Parting. Caltech has left its mark on Oxford. We found a brass plaque near a large sepia window in the Chapel at Magdalen that reads:

> THE WEST WINDOW
> was originally installed in the 1630s
> and restored in 1996
> in gratitude for a marriage
> on Midsummer's Day 1975
>
> John Hall Richards — California and Magdalen
> Minnie McMillan — Somerville

Jack took his BSc degree at Oxford, and has been a chemistry professor at Caltech since 1957. In addition to Jack and Minnie, the porters, college heads, and Fellows remember John Bercaw, Chris Brennen, Marshall Cohen, Peter Fay, Roy Gould, Bob Grubbs, Morgan Kousser, Aron Kuppermann, Rudy Marcus, and, of course, George and Muriel. People also remember that Rhodes Scholars Norman Davidson and Nelson Leonard were returned to the United States in 1940 because of the "Gathering Storm."

For our parting gifts to our English friends, we followed in the path of the Beadles, who were very keen gardeners. The year we were there, the Chelsea Flower Show featured a pale pink trailing fuschia named "Harry Gray." We left Harry Gray in gardens all over the city. □

PICTURE CREDITS:
28, 30, 32–35, 37 – Shirley Gray; 29, 33, 36 – Doug Smith; 30 – George Beadle; 32 – Eugene Kammerman; 35, 36 – Muriel Beadle

Shirley Gray is a professor of mathematics at Cal State L.A. Harry Gray, the Beckman Professor of Chemistry and director of the Beckman Institute, has been a Caltech fixture since 1966. An article on his work on solar photochemistry can be found in E&S, Volume LX, Number 3, 1997.

George Beadle was chairman of Caltech's Division of Biology in 1958, and won the Nobel Prize two days after he arrived at Oxford. He subsequently became a Caltech trustee, and president of the University of Chicago. In addition to being a professional journalist and writer, Muriel served the Caltech community in many ways, such as being president of the Women's Club.

And the Beadles' story continues—Nobel Laureate Paul Berg and Maxine Singer are frequent campus visitors, interviewing close friends of the Beadles and combing the archives in preparation for writing a scientific biography that will, we daresay, once again put Caltech in Blackwell's window.