CALTECH NEWS

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New Course Gives Students Broad View of Problems of Environment

"It's an un-Caltech-like course," said Norman Brooks, professor of civil engineering, describing the new Engineering 20 *(Engineering Problems of Man's Environment)*, which is being offered for the first time this spring. Sheldon Friedlander, professor of chemical and environmental health engineering, and James Morgan, associate professor of environmental health engineering, were joint organizers with Brooks of the new course, which moved with almost unprecedented speed from planning, to Faculty Board approval (in March), to its first lecture on April 1.

Engineering 20, to be offered during one term each year, is set up to describe broad areas of environmental problems and to maximize use of Caltech's interdisciplinary approach to understanding them. Each lecturer, according to the course description, uses case studies to explore "ways in which man is adversely changing his environment, ways in which these alterations are affecting him and other forms of life, and methods of engineering control." A large number of academic disciplines turn out to be applicable to each of the problems.

Brooks feels that a few engineering courses, such as this one, should be a kind of crossroads between science and society. Engineers, he says, should use their talents and training to "preserve the quality of the environment while still fulfilling man's needs to utilize the many resources of the environment."

Originally E 20 was planned as an introductory course in engineering for freshmen and sophomores. It differs from other introductory courses because of the breadth of its outlook in place of emphasis on detailed discipline-oriented subjects or laboratories.

The course is also different in its combining of lectures and seminars. The whole class, which consists this first term of 29 undergraduates, meets together for the 14 lectures. The 29 are divided into three groups of about ten students each for the six seminars, which are interspersed with the lectures and led by Brooks, Friedlander, or Morgan.

The first session on April 1 was a round table discussion conducted by the three originators and dealt with the concept of

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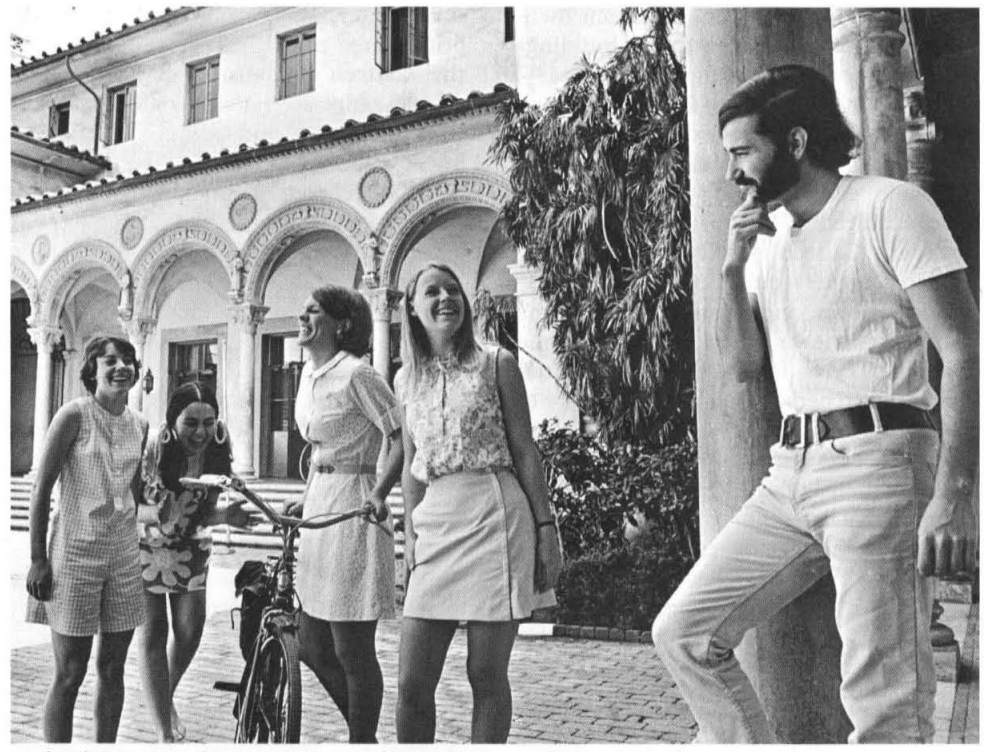

Paul White '70, Dabney House president, puts on a show of mock seriousness for his ebullient audience—new house residents Betsy Oliver, Flora Boyer, Barbara Holland, and Jan Streiff.

Giggles in Dabney House

Coeducational living at Caltech is now a reality, although temporary. On April 2, four women—on campus as ASCIT student research associates—moved into Alley Two of Dabney House for third term. Their rooms are near the apartment of John and Sandra Webb, the house's Resident Associates.

Students in Dabney initiated the request that the women be allowed to live in the house. President Harold Brown, after careful consideration and discussion with a number of trustees, granted permission. "We're very much interested in this program," he said, "as an experiment in a different living pattern in the student houses and as a useful test of one of a number of possible ways of integrating women students in the future."

Brown stipulated that prospective women residents under 21 must present written parental authorization, that Sandy Webb must agree to serve as the women's counsellor, and that the arrangement would be for the third term only.

The new residents are Barbara Holland from Elmira University, Betsy Oliver from the University of Massachusetts, and Jan Streiff from Grinnell College, who are working on the ASCIT Research Center's educational project; the fourth is Flora Boyer, an ex-Occidental College student who is coordinator of the student smog project.

For some time students have expressed concern that future women's housing might be relegated to a campus Outer Siberia. However, Lyman Bonner, Director of Student Relations, says that the administration—looking toward Caltech's admission of women undergraduates possibly as early as 1970—will look on the Dabney experiment, as well as other housing arrangements, with an eye to making the women an integral part of campus life.

Meanwhile, the four girls agree that their new life is great.

"We really feel we belong here," says Barbara Holland. "Life is pretty hectic right now, but we think things will simmer down when the novelty wears off."

The Dabney men initiated the girls by auctioning them off for a 24-hour period.

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INSIDE

National Academies Choose Four Caltech Faculty

The prestigious National Academies of Engineering and of Sciences elected four Caltech faculty to membership in April.

On April 2 the National Academy of Engineering announced the election of Jack McKee, professor of environmental health engineering. McKee, at Caltech since 1949, received his BS in chemical engineering from Carnegie Institute of Technology in 1936, and a ScD from Harvard in sanitary engineering in 1941. He was cited for pioneering research in environmental engineering related to water quality and waste treatment. He joins eight other Caltech faculty and trustees in the NAE.

The NAE also elected a Caltech alumnus to membership. Richard DeLauer, who has a 1940 BS from Stanford and a 1953 PhD from Caltech, was cited for design of spacecraft and ballistic missile weapons systems; and application of systems engineering in methodology in defense, space, and civil systems. DeLauer is currently vice president, TRW Inc., and group manager, TRW Systems Group. He brings to 20 the number of Caltech alumni among the 280 members of the NAE.

On April 29 the National Academy of Sciences announced election of three Caltech faculty members—Thomas Lauritsen, Norman Horowitz, and Dean Wooldridge. With their election, Caltech now has 34 faculty members in the NAS. All three men are also Caltech alumni; names of other new alumni members, unavailable at press time, will be printed in a later *Caltech News*.

Lauritsen, professor of physics, got two degrees from the Institute—a BS in 1936 and a PhD in 1939. He joined the faculty in 1945. He was born in Copenhagen, Denmark, the son of famous physicist C. C. Lauritsen. His current research concerns nuclear reactions involving the light atomic nuclei.

Horowitz, professor of biology and head of the bioscience section at JPL, got his BS from the University of Pittsburgh in 1936 and his PhD from Caltech in 1939. He has been on the Caltech faculty since 1940. His current work includes study of microorganisms found in extreme environments such as might be encountered on other planets.

Wooldridge, research associate in engineering, got his BS from the University of Oklahoma in 1932 and his PhD from Caltech in 1936. He was a co-founder—with Simon Ramo—of the Ramo-Wooldridge Corp., which merged with Thompson Products Co. in 1958 to form Thompson Ramo Wooldridge. He was president of the company, now known as TRW Inc., until 1962, when he resigned to work on scientific pursuits. □

CALTECH: LOCAL LANDLORD

Caltech is described in Pasadena tourist literature as "a pleasant campus surrounded by an attractive residential neighborhood." What is not generally known is that Caltech owns a great number of the residences in that neighborhood.

Twelve years ago, when the handwriting of future expansion was on the wall, the Institute started to buy as much property as possible inside the perimeter of California Blvd., Wilson Ave., Del Mar Blvd., and Hill Ave. Today Caltech owns 70 houses and three apartment buildings out of some 125 buildings in the area.

The man whose job it is to acquire properties for campus expansion is Caltech treasurer Ivan Betts. He is also responsible for managing the properties, once acquired. Very early in the game, he says, Caltech wrote letters to the property owners outlining its future expansion needs and offering to buy the homes whenever they might become available. Betts followed up the initial moves with personal calls to sound out the owners' inclinations and to present Caltech's case as positively as possible.

Consequently, acquisition of surrounding property has been a relatively friendly procedure. Caltech offers a fair market price, and the sellers have been glad to have a cash buyer at hand when their plans called for a move. Betts has also been gratified to find generally benign feelings toward the Institute; many sellers have been "neighbors" for a long time and feel good about being able to assist in Caltech's development.

Even in the few cases of holdouts, extended bargaining sessions have eventually resulted in prices satisfactory to the property owners. In one instance, when Caltech needed an area for a parking lot, a group of five owners didn't mind selling, but each waited for another to set the first price. Caltech's and Betts' diplomacy got through the stalemate smoothly. If this had not been possible, Caltech could have—in the last resort—condemned the property by eminent domain.

The houses range from modest cottages renting for as little as $90 a month to a six-bedroom beauty going for $400. Not surprisingly, the few at the top of the price range are rented to people outside the Caltech community. Those in the middle range are rented to a sprinkling of Caltech faculty and administrators. The lower rentals, averaging about $120 a month, are usually snapped up by married graduate students, who have priority according to Institute policy.

Homes are rented on one-year leases, except for locations in the paths of scheduled construction. Those are rented month-to-month. Mrs. Ellen Cummings of the campus housing office reports that the more modest houses are never vacant more than a day or two, because there is always a long waiting list.

The houses are supposedly unfurnished, but this varies from case to case. Sometimes the people moving out want to leave a major appliance behind, so the Institute usually buys it and leaves it in the house. When several graduate students arrived from Africa and rented one of the units, they were given the use of furniture from Caltech's warehouse on Waverly Street. These articles—odds and ends left in houses purchased, discarded by the Student Houses, or acquired as part of bequests—are not a decorator's dream, but they are utilitarian.

Eventually, of course, houses do get razed. The most recent ones gave way to a new parking lot on Wilson Ave. And parking space is Caltech's current headache, says Royal Tyson, the campus architect. Baxter Hall and the new Beckman Laboratory of Behavioral Biology are next on the construction agenda. Neither will displace any of the 70 houses, but they will take over some existing parking space.

"We're certainly going to need additional parking in the next three years," says Tyson, "and we're trying to decide whether it will be on the surface or in structures." □

Goldman: Further Thoughts on LBJ

A few month's distance from working in the White House and publication of a book about the experience have lent perspective rather than enchantment to Eric Goldman's view of the Johnson administration. Speaking to the Caltech YMCA's Athenaeum Luncheon Forum on April 16, Visiting Professor Goldman expressed his feeling that we are now at a crossroads, where we must either hold to the path we have been on for the last 30 to 40 years or opt for something startlingly different.

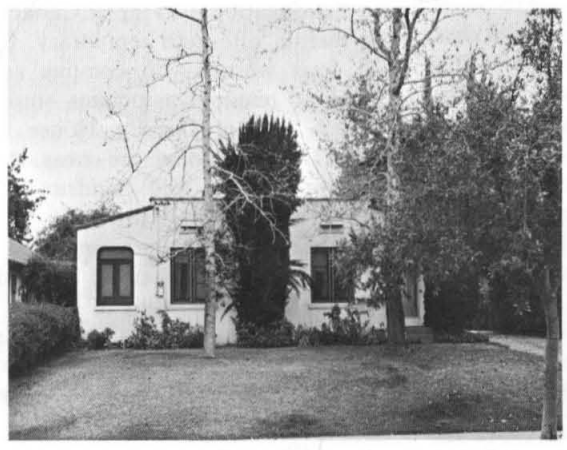
LBJ, he said, felt a great need to carry out the New Deal thrust of Roosevelt in domestic policy and to continue the Truman-Eisenhower doctrine of relentless vigilance against aggression in foreign affairs. In Goldman's opinion, Johnson's domestic policy wasn't enough, and his foreign policy was incorrect.

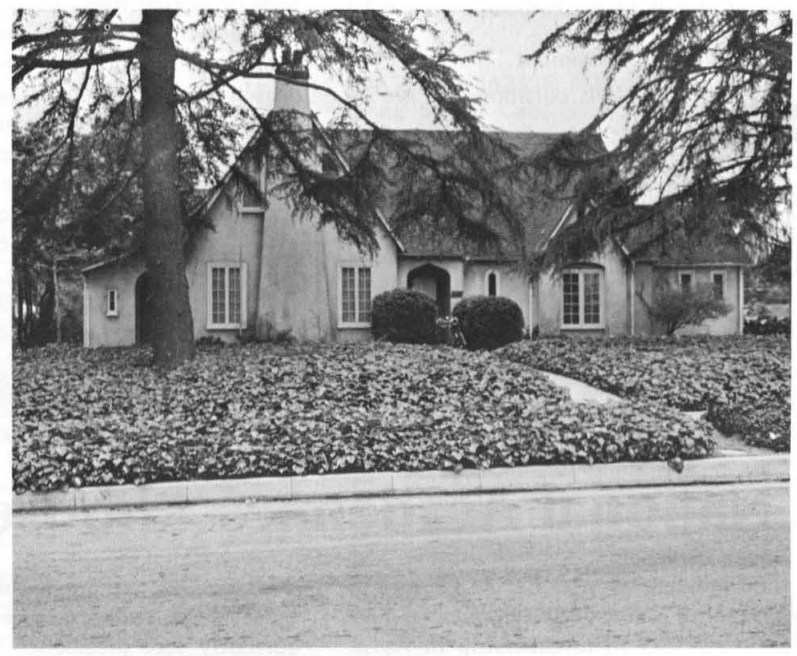
In summing up the effect of the Johnsonian attitude on the country's domestic and foreign affairs, Goldman pointed out that Johnson was preeminently a man of his generation committed to the use of reason to solve problems. In the matter of civil rights he believed the Negro could move into the mainstream of American life just as other minority groups had in the past. Foreign policy under LBJ assumed both the need for and the determination to continue endless containment of Communism in the world.

An important part of the American population, during LBJ's administration, began to question the reign of reason as the only way of solving human and national problems. Much of the revolt has trickled down from the intellectuals to the ranks of the bright young people, many of whom feel that such questions as that of our involvement in Vietnam can be resolved only on moral and emotional grounds. Goldman believes we may be entering a period similar to that of the romanticism of the 19th century.

One reason Johnson became alienated from a large segment of the American body politic was that he assumed that men always act from practical motives. He was unable to comprehend that men sometimes have mixed motives. This blind spot cut him off from the intellectuals and from the great number of Americans who are affluent enough now to afford to be impractical.

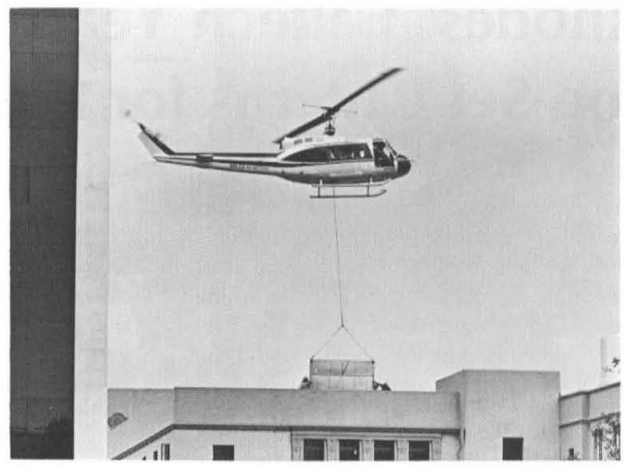
In response to a question about whether President Nixon is a "different" man from candidate Nixon, Goldman answered with an emphatic "Yes." Any occupant of that oval office becomes a changed man, he said, first because he realizes that he now represents 200,000,000 people, and second because he knows that his actions must face the judgment of history. □





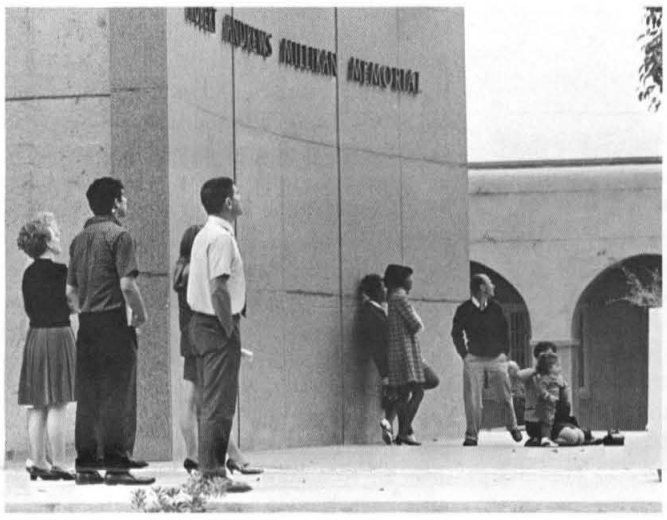
CALTECH HOUSES

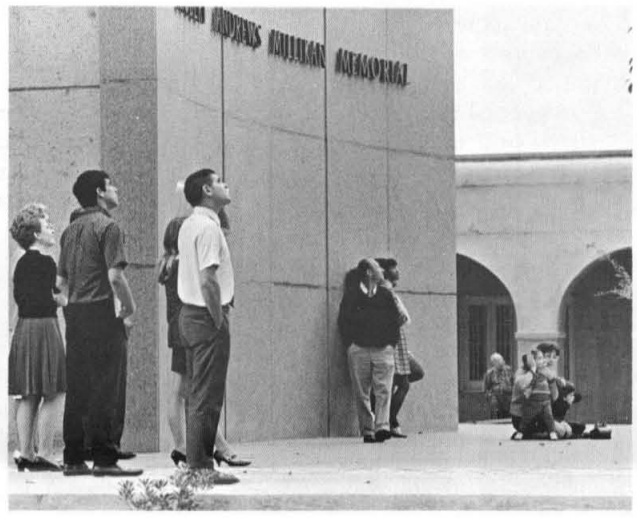
Institute-owned houses in the campus area range from a modest cottage (below, left) to a stately abode (below, middle) not far from the President's house. One older house (below, right) is occupied at minimal rent by a widow and her family, who lost their previous home in a fire. Other houses have Caltech-oriented uses, such as the offices (above, left) adjacent to Beckman Auditorium, a house (above, middle) in which five women from black southern colleges who are working in the ASCIT Research Center live, and Caltech's unofficial women's dormitory (above, right), the home of five women graduate students. □

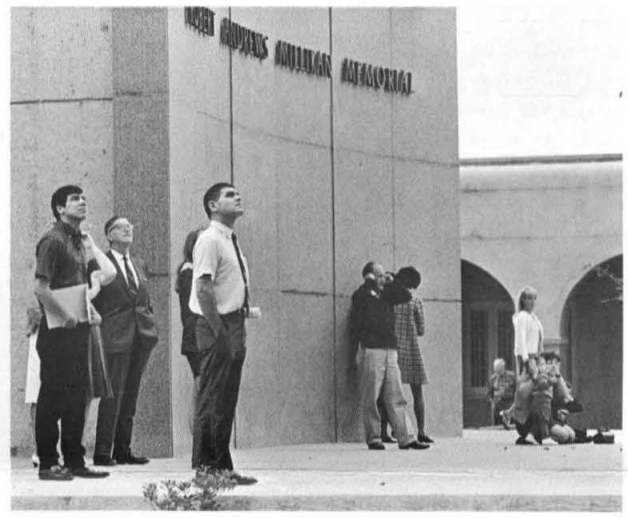


KERCKHOFF AIRLIFT

There's nothing like a helicopter buzzing the campus at 8:00 in the morning to bring out spectators. What they heard—and caught glimpses of—were about a dozen trips from a truck near the gym to the roof of Kerckhoff Laboratory of Biological Sciences to get parts for a new air conditioning unit in place. The 41-year-old building will be cooled in stages, with one-third of it taken care of by this installation. The flights lasted about 30 minutes, and were faster and cheaper than using a crane. Noisier and more fun too. □







Neo-Nazi Strength Hard to Assess

Nagging questions about the strength of political extremism in West Germany may be answered in national elections for the Bundestag this year, reported Eberhard K. Jobst at the April 21 Beckman Lecture.

"It's hard yet to assess how the National Democratic Party will do in the federal elections, but some observers feel the neo-Nazi party may win enough votes to gain representation in the Bundestag, the West German parliament. This would be a great embarrassment for most Germans," he said.

Jobst, assistant professor of German at Caltech, said that the extremist NPD is led mostly by people who held high positions, militarily or politically, in the former Nazi Party.

"This tendency toward neo-Nazi extremism is as true for the party's 30,000 members as it is for the leaders. It is said that such a radical fringe exists in most nations, but in Germany such a minority was once able to become a majority. Thus the new strength of the NPD is alarming both to Germans and to people in neighboring nations," Jobst said.

He explained that the NPD entered the political spotlight in 1965 through gains in local and state elections in which it was able to get from six to ten percent of the vote.

"The NPD hasn't yet shown any strength in a federal election," Jobst added, "and it is hard to assess now how they'll do next September in nationwide elections for the Bundestag.

"Currently, the federal government is faced with the problem of whether the NPD should be banned as unconstitutional. In 1956 the Constitutional Court outlawed the German Communist Party, so this idea is not altogether new. The legal aspects of such a decision aren't exactly clear, however, and the political wisdom of such a step is still in dispute."

Jobst said the party's main appeal is to German nationalism and to the emotions rather than the intellect.

"The party really doesn't have a program, so they offer something for everyone and are often vague and contradictory. Their program consists largely of anti-slogans, although they are careful to avoid any hint of anti-semitism," he added, "and they favor elevation of an elite class to run the country for the people."

Discussing the other side of the political spectrum, Jobst said, "There is no meaningful party of any importance on the left. Most leftist groupings are without much appeal to the German electorate. A new communist party, however, was founded last September and has not yet been banned.

"Most of the leftist opposition is outside the Bundestag, and the backbone of this opposition is the German Socialist Student Federation—SDS. This group," Jobst explained, "has a lot in common with the Students for a Democratic Society in America—SDS—and their goal is to fight the established system.

"Although they are Marxists, they despise Soviet Communism because of its bureaucratic and imperialistic ideology, and they also despise Western democracy

Eberhard Jobst

because they believe the current parliamentary system offers no opportunity for change. They say the current form of Western civilization perpetuates social, political, and economic inequities."

Jobst said the tactics of the West German SDS include civil disobedience, disruption of established procedures, and confrontation.

"There is only a small minority of these activist students," Jobst said, "but they are very successful because of the apathy and political indifference of most German students. They hold top positions in most student governments at German universities, but much of their success must be attributed to serious legitimate grievances that arise from the crowded universities, which are not meeting the students' needs." □

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Girls in Dabney House

Continued from page 1

The student who "bought" Barbara ordered her to do his laundry. She did, but promptly lost it. A "corporation" of six bought Jan Streiff and treated her better: They took her sailing.

"It's a good feeling," Jan says. "We're members of the house and vote at the meetings, and we seem to be totally accepted. We're making some good friends —they like the chance to talk to girls in this kind of a situation."

The girls find that there are more members of other houses dropping in now, and they are beginning to receive dinner invitations from other houses.

John and Sandy Webb like the new arrangement. They say the girls are among the most active of the residents, in all phases of house life. But the warmest feature, they add, is seeing some of the quietest members come visiting Alley Two after dinner, attracted by the fun and laughter. □

Rhodes' Caltech Years End; Has Joe Set Patterns for the Future?

Several generations of evolution in Caltech student activities have been compressed into the time since the spring of 1966 when a bubbly, enthusiastic freshman named Joseph Rhodes Jr. promoted an undergraduate talent show in Beckman Auditorium. The event was a success, and, characteristically, it was others who took the reins after the first gallop by Joe. In the two succeeding years the simple show became two original musicals, written and produced by Caltech students who had, apparently, been waiting in the wings for someone to warm up the audience.

Joe and his friends established their trademark in that first theatrical venture: unbounded ambition, accompanied by unquenchable optimism, and generally rewarded with improbable success.

Joe is undeniably a politician—he has the ability to convince and inspire others to do things. He thinks part of that skill might derive from a family activity in his teen-age years—door-to-door proselytizing for Jehovah's Witnesses. But whatever the origin of his characteristics, he wasted no time putting them to work at Caltech.

His power base was Caltech's student government, which soon was indistinguishable from Joe Rhodes

As a freshman he was elected ASCIT Activities Chairman—he was the only candidate. He took the job to heart, and in addition to organizing the talent show, he managed to get Caltech and the students together to open a long-desired coffeehouse on campus.

Within a year he had built up such a following that the by-laws of the student body were changed so that he, a sophomore, could run for ASCIT president. One might expect that as the first sophomore ever to hold the job he would have been awed by the traditions and responsibilities and defer to them. Not so Joe.

Invited to a meeting of the Caltech Alumni Association Board of Directors a few weeks after his election he explained to the alumni that he and his other officers were planning to get away from campus for at least a day to do some long-range planning for the coming year. He also hinted that some unusual student government activities might result—one of the few times in memory when Joe made an understatement.

That point in time—March 1967—marked some kind of milestone in Joe's career, when he began his rapid rise as an Establishment-accepted expert and spokesman on college students. His power base was Caltech's student government, which soon became indistinguishable from Joe Rhodes.

Joe's driving interest was the general topic of education—how to make it relevant to those people (like himself) who didn't think it already was. A few weeks into his first term in office he organized a massive student meeting to discuss and present to the Institute some proposals concerning education. They indicated a desire for fewer required courses and more freedom to choose courses of study, student representation on faculty committees and on the Board of Trustees, and some kind of go-ahead for the students to organize educational innovations of their own.

The ideas expressed, certainly not revolutionary in light of student affairs at other schools, were accepted by most of the faculty. To be sure, they had reservations about some proposals, but they were obviously pleased to discover such widespread student interest in the mechanics of academia.

There were also varying degrees of grumbling from more contented students and faculty, and even from some people who surmised that the Rhodes' group was part of an SDS conspiracy that would ultimately turn Caltech into another Berkeley.

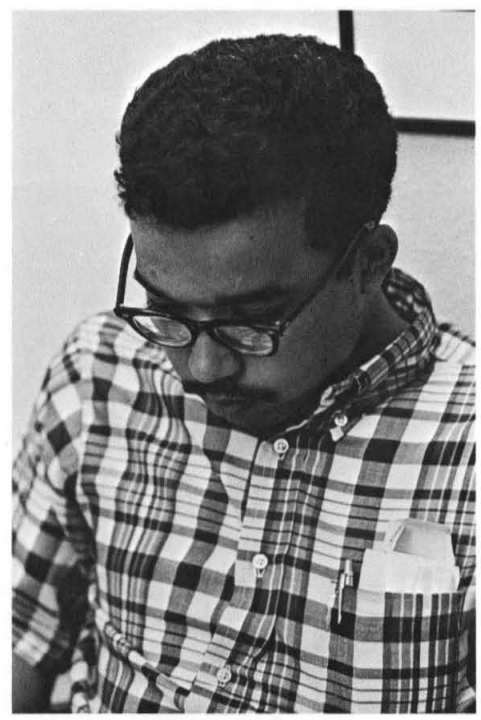
Now, in 1969, students *do* sit on several faculty committees, they *do not* sit on the board of trustees (nor do the faculty), and required courses are still the prerogatives of the individual divisions.

But the last issue—educational innovation—is where Joe saw some golden opportunities. He envisioned a student-directed research project on some social-technical problem of general interest that would involve Caltech students with students from other—preferably nonscientific—schools. In the fall of 1967 he and his associates set up a project that they thought had more Institute approval than it did, so there was some understandable administration concern that things were getting out of hand. But the problems were ironed out, more or less, and eventually a few students from other colleges came to work on the project for a term.

The big hassle, though, was over a proposal for something like $100,000 to finance a large summer research project in 1968. A good many Caltech faculty and administration didn't know quite how to react to that. First, it was obviously unusual for undergraduates to write a proposal for that kind of research project. Second, the proposal as written was naive in the scope of research it committed the students to. Consequently, some faculty maintained that the proposal's scientific weaknesses should disqualify it from bearing Caltech's name. In the end it was accepted and approved as a program that might provide the students with some self-education in the ways of organizing research. Nobody, except the students, figured it had any chance of getting funded. Still, in the spring of 1968 (Remember Columbia University that spring?) many people at Caltech were starting to appreciate the positive manner in which its students were treating their complaints with education.

There were whispers that the only reason that he "got away with all that" was because he was black

Throughout 1967-68 Joe had been traveling all over the country. First it was to recruit for the fledgling ASCIT project; later it was to try to get funds for the summer work. But in light of his limited early success in getting things off the ground, some other students began complaining about money being spent by Joe on travel and telephone calls. (Joe later said that the bulk of the money spent was his own, that it had cost him about



Joe Rhodes

Caltech was starting to appreciate the positive way its students were treating their complaints about education

$1500 to be ASCIT President.) Joe was taking on the attributes of an "operator," they said, seeking personal glory and fame. There were also some over-the-fence whispers that the only reason he "got away with all that" was because he was black.

But the upshot was that Joe, after visiting with air pollution officials at the Department of Health, Education, and Welfare, was left holding a very full bag—enough, with Caltech's help, to support a summer research project.

The summer project, as reported in many places, did not produce much in the way of useful research about smog, but no one seemed too disappointed. It was a fine summer for the participants (some of whom went so far as to judge it to be the most exciting educational activity they had yet participated in) and a growing feather in Caltech's cap to have such a healthy form of student activism. The researchers produced a 375-page report that had a professional look (and heft) to it. It indicated that they were becoming quite accomplished in the ways of the jungle of government grants and reports.

Some people, of course, concluded that the students were given the grant as a kind of payoff for taking an "Establishment" approach to their complaints about education. That may well have been an element in HEW's decision, but probably more significant was the unshakable faith the students themselves had in their project, as well as Joe's ability to transmit that enthusiasm to government officials.

Joe worked on the summer project along with 50 other people, but he was not a leader of it, having turned the administrative functions over to other students long before. Hardly anyone claims that Joe is much of an administrator. He provides the impetus and inspiration for programs, then moves on to something else.

His senior year has been a kind of Joseph in Wonderland. As an accepted "responsible student leader" he was appointed a consultant to the Department of Health, Education, and Welfare. He and students from other schools were to provide ideas and observations to Secretary Wilbur Cohen. When the Nixon administration took over, Joe kept his job and reported to Robert Finch. He has also been consulting for the U.S. Office of Education, the Rockefeller Foundation, the University of Massachusetts School of Education, and the White House Fellows.

A major activity this year has been attending conferences. At one, for example, following the inauguration of the new president of the University of Oklahoma, he was the only student participating among the ranking academic and governmental officials. He spoke at the Western Fulbright Scholars Conference and at the 1968 JPL Science Seminar. Joe also spends a good deal of time meeting with student body officers of other schools, trying to get at least some kind of loose organization of more "responsible" student leaders.

Where did Caltech's own responsible student leader come from?

He was graduated near the top of his high school class of 700 (Pittsburgh's Westinghouse High School); he is also an excellent violinist and was concertmaster of the All-Pittsburgh High School Symphony. His father, a steelworker, is black; his mother is oriental, a war bride from the Philippines. The Rhodes children seem to be abundantly talented. His older brother, Edwardo, was graduated *cum laude* from Princeton last year; a younger brother, Manuel, is a freshman at Harvard; the 12-year-old youngest brother, Ernesto, shows great promise in mathematics; and 9-year-old sister Teresita is highly artistic, already teaching ballet to younger children.

Joe's serious interest in science waned in his sophomore year, and he turned to history. His academic record is certainly not exemplary, or even average, but he is probably the world's most accomplished doer of extracurricular activities.

This year some people --including Joe--wonder if he'll graduate

In fact, those activities have all but won him a prestigious three-year Junior Fellowship at Harvard University. (In May the Board of Overseers will go through the formality of confirming the new appointees.) The number of Junior Fellows never exceeds 24, and only four to six new ones are chosen each year. They are generally scholars who already have or are about to get PhD's, and Joe will be one of the few undergraduates ever to get the award.

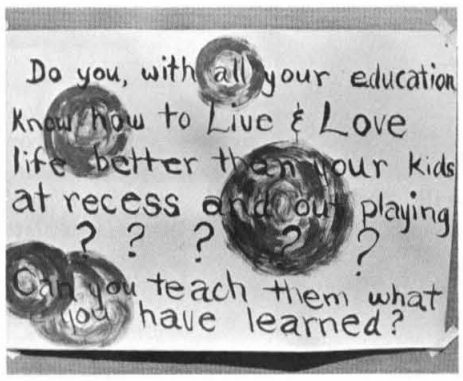
As a Junior Fellow he'll get $5,000 per year, room and board (in one of Harvard's student houses), equipment, books, and supplies. His time is to be "devoted to productive scholarship and preparation therefor, free from academic regulations for degrees."

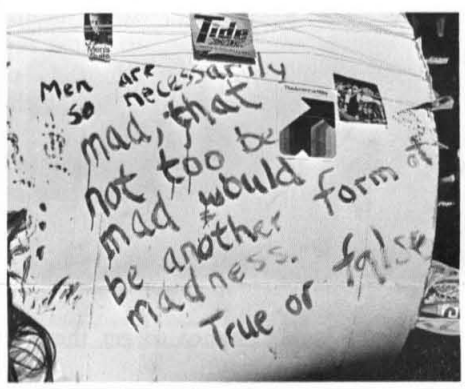
So, until 1973, Joe will be free at last to pursue his extracurricular activities full time. He'll spend next year working on education innovations with three schools—University of Massachusetts, University of Southern California, and Federal City College in Washington, D.C. He understands that he'll be expected to produce something comparable to a publishable book each year of the program, and says he has the first one outlined and is ready to start writing soon.

If a faculty member traveled as much as Joe does, he would be accused—and justly so—by students of ignoring his responsibilities as a teacher. Some faculty take a similar view of Joe's attitude as a student. For example, his calendar for the month of April 1969 looks like this:

EDUCATIONAL WEEKEND

Members of ASCIT's educational research project staged a colorful conference on educational change, Saturday, April 19. Several hundred southern California teachers and students collaborated in making a large collage on Beckman Mall before prowling a campus spiked and postered with jaunty and thought-provoking signs. The guests sampled more than 40 workshops on innovative education methods, which included such diverse topics as youngsters demonstrating Montessori methods and somewhat older students illustrating nonverbal communication. Saturday's gusts of enthusiasm blew 150 conferees back on Sunday to help plan a proposed ASCIT summer education project. □





April 1. Ford Foundation meeting in New York to discuss his plans for next year under the Harvard Junior Fellowship.

Then three days in Washington, D.C., with HEW and other government organizations on ways to mobilize students to deal with problems on a state level. His current mobilization project concerns combatting hunger in the Southern states.

He will also meet with the More Effective School Personnel Utilization (MESPU) Leadership Institute in Washington, D.C.

Back to Ford Foundation to meet with representatives of the three schools he'll be working with next year.

Then to Harvard Library to work on his history paper for Caltech. Title is "Racial Attitudes in Prominent Victorian Englishmen."

April 10-11. To Armonk, N.Y., to give a paper at IBM on "The Corporate Role in the Community as Seen by Students."

April 12. Return to Caltech for four days.

April 16. Go to Notre Dame to give a paper on "Student Autonomy in the University Community" at a conference in the school's International Studies Center. The paper will be presented at a similar conference in Milan this summer, but not by Joe.

Back to Caltech.

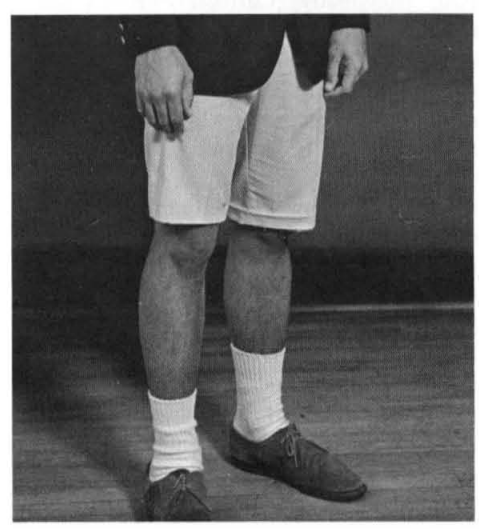
April 23-24. Attend a MESPU panel in Denver.

When does he have time for his studies? Not nearly as often as his teachers would like. A lively topic of conversation each spring has been whether he'll make it through finals and return the following year. This year some people—including Joe—are wondering if he'll graduate.

Joe *wants* to graduate, but not enough to set aside his other interests in favor of giving the Institute's requirements top

Joe the politician has increasingly dominated . . .

. . . Joe the Caltech student.



priority. He claims that a student's "performance is measured not in his history papers alone but in his involvement, experiences, and relationships and other expressions of his interests and concerns. In most of these cases the student himself is the only person really capable of judging whether he spends his time wisely. In the end his impact on his world will measure him more accurately than a seminar or oral review."

Joe knows that his attitude and consequent performance are at odds with Caltech, but he feels helpless to do much about it.

He was getting set to buckle down and write a paper during second term when he got a call from the office of Robert Finch, Secretary of HEW, which wanted to know when Joe's report on what to do about college problems would be ready. Joe, who isn't really absentminded, just a little cavalier with regard to commitments he has made, vaguely remembered having promised something. When reminded it was to be a lengthy position paper, he started calling his student leader friends at other schools for inputs. Enthusiasm turned on, he set aside his course work and wrote about "HEW and the Student Community," later following up with a phone call directly to Finch to underline some of the points he made. Finch himself released Joe's intact report a few weeks later, explaining to the press that the number of typos and misspelled words assured that it was Joe Rhodes' own work.

In another instance, Joe was furiously typing up a progress report on his thesis for submittal the next day when he got a call from a White House official. Would Joe please come down to San Clemente, where Secretary Finch was, and help them draft a statement on student violence for the President? He weighed the alternatives: Risk a failing grade in a Caltech course for being late with a paper, or help to make an important policy statement a little more tolerant of students. He went to San Clemente.

For his trouble he got a D in history (he never bothered to tell his advisor why the paper was late) but saw his influence reflected in an important statement by the President. Not, he hastens to add, that he approved of the statement as a whole. Only that it was a little more liberal than it *might* have been.

That kind of activity seems a long way from water fights, food riots, and even having Richard Feynman play the bongos at that 1966 talent show. It is tempting to observe the Rhodes-led Caltech activists and conclude that they represent Caltech students. But close attention to the participants in many campus activities reveals the same familiar faces again and again. The majority of the students may still comprise the naturally quiet studiers and the temporarily intimidated hell-raisers. Nonetheless, the basic nature of Caltech's undergraduate conventions *is* different now than it was a few years ago.

It is ironic that Caltech, with its atypical student environment, should produce —or at least harbor—such an "authority" on universal problems in education as Joe. The really intriguing question these days is whether Joe was only a once-in-a-long-time phenomenon, or if Caltech can expect more like him from now on. □

Caltech Now Recruiting Athletes; A Smile, a Lunch, and a Catalog

"Participation in intercollegiate athletics should be educational as well as fun, but it can't be either unless it's competitive," says Warren Emery, director of athletics. Consequently, the athletic department has instituted a two-pronged attack on the Institute's general frustration in sports.

Part one is simple. Caltech will attempt to schedule junior varsity opponents in those sports where varsity competition has consistently been too strong. After all, Caltech's lone football victory in the last four years was against a young team playing its first season of football, and the victory was in no way tarnished. It reminded the team and spectators how exhilarating close competition—where each team has a chance to win—can be.

But even more important is a new "recruiting" program intended to make Caltech athletics as good as they can be within the Institute's educational framework. To do less, says Emery, is to cheat those students who ordinarily participate.

There are problems when it comes to encouraging athletes to come to school here. For one thing, all students are admitted on an equal basis by the faculty admissions committee, and Caltech is still reckoned the toughest school in the country to get into. And, of course, it offers no financial aid or other inducements to promising athletes—only what is given out in the normal admissions process.

But what Caltech can offer is valuable —the highest quality education in a small school environment, and a chance to participate (*play*, not sit on the bench) in a broad range of sports. For the most part, recruiting consists of getting that message to high school athletes.

Until the spring of 1968 Caltech, following a Southern California Intercollegiate Athletic Conference code, did no recruiting of any kind.

"But," says Emery, "all of the other schools in the conference recruited aggressively. And to make things even rougher, we're one of the few schools that has never offered a physical education major. That means most of our competitors have their alumni coaching in various high schools and sending athletes to their alma maters. And no one has more influence on where a high school athlete goes to college than his coach.

"So in 1967 we and Pomona—which no longer offers the phys ed major—asked the conference to take a new look at the 'no recruiting' policy. Now we have some realistic guidelines that say, among other things, that while no athletic scholarships are permitted in the SCIAC, we *can* make a point of telling athletes who are prospective students about the kinds of legitimate aid available to all students.

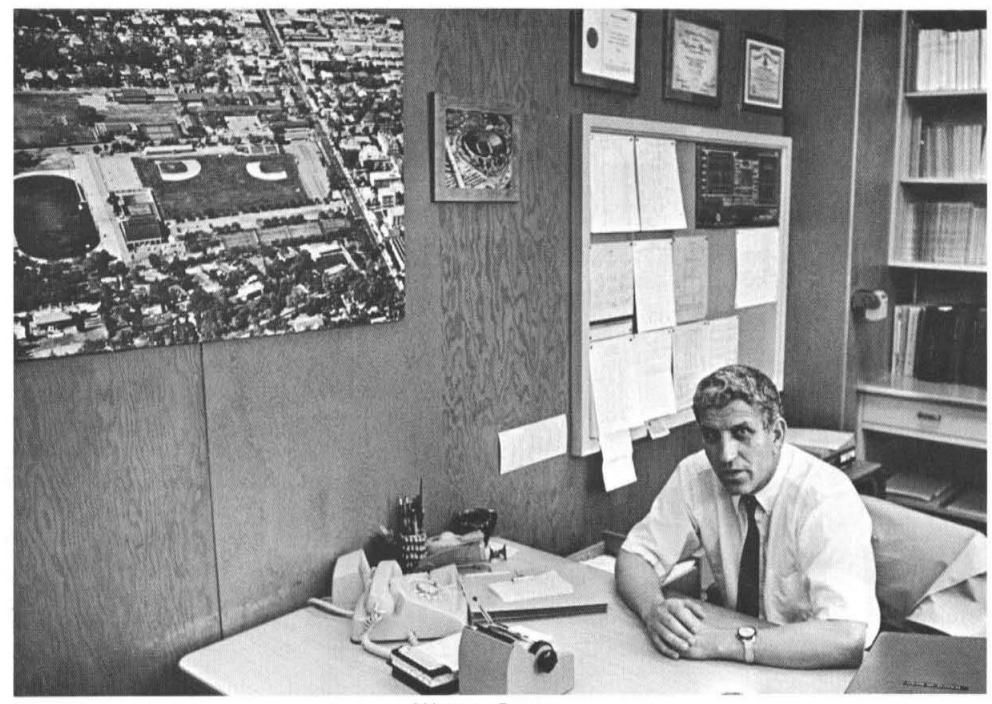
"We don't go out to high schools to observe or talk to athletes, but we can communicate with the coaches to find out who the bright, science-inclined athletes are."

Emery quickly adds that the recruiting program has been developed in conjunction with the faculty admissions committee, which follows up with those students who indicate an interest in Caltech.

It *is* OK to invite students to Caltech for a visit—provided it lasts only one day and provided the student has his own transportation. Caltech's contribution consists of a lunch in the student houses; a chance to talk to a coach, some students, and a faculty member; and perhaps a chance to see a team in action. That, of course, is what *any* prospective student is entitled to.

The core of the recruiting program is the letters sent by Caltech's coaches to their high school counterparts. In it they describe the existing program, note that a good athlete is sure to see plenty of action, point out the advantage of a Caltech education, remind the coach how hard the Institute is to get into, and finally ask for the names of students he thinks might be interested and qualified.

"We sent out our first letters last fall, but it's obvious that, because of the College Board tests the Caltech applicants have to take, that was too late in many cases. Now we're going to do our correspondence in the spring and concentrate on high school juniors."



Warren Emery

After the athletic department has the names from the high school coaches, it sends an Admissions-Office-approved letter directly to the students, explaining the program and the school. Each one is requested, if interested, to send an information card back to the coach. At that point the Admissions Office sends an application and more or less takes over from there. However, if the boy's SAT-Math score is over 650, the coach sends him an encouraging letter to ensure that he takes the next step and submits an application. If the score is below 650, the coach sends a discouraging letter, letting him know that he should back up his application to Caltech with applications to other schools too.

"But now we find that the 650 score is too low. Many of those we thought would be admitted didn't make it. We'll have to pick a higher cutoff score next year.

"The letters go out in March, April, and May. If his scores look good, we send him a reminder in the fall to apply for admission. We also send him the application deadlines, a schedule of the sport he is interested in, and a general invitation to come and visit us."

This year is an experimental one for recruiting. Even so, it looks like there has been some success, although it's hard to separate the "recruited" athletes from those who would have come anyway. But four football players who were contacted have been accepted by Caltech and will probably attend, and two good swimmers will probably also matriculate.

Only five sports are recruiting now—swimming and water polo (coach Lawlor Reck), football and wrestling (coach Tom Gutman), and tennis (coach John Lamb). Of the five, football, with its demand for a lot of participants, will probably be the most difficult to benefit. But just a few additional good swimmers, wrestlers, or tennis players each year would justify the effort being expended.

Recruiting has got the coaches enthusiastic, because they believe that some good scholar-athletes have gone to other schools simply because they were unaware of Caltech's extensive program in intercollegiate athletics. Now the Institute has a better chance to get them as students.

Emery suggests that alumni can be part of the recruiting program. If they know of a high school athlete who they think might qualify for admission, the athletic department will be delighted to receive the prospect's name. But, he warns, an alumnus more than a few years out of the Institute better be prepared to relearn what some of the coaches are now learning firsthand: It's harder than ever to get into Caltech. □

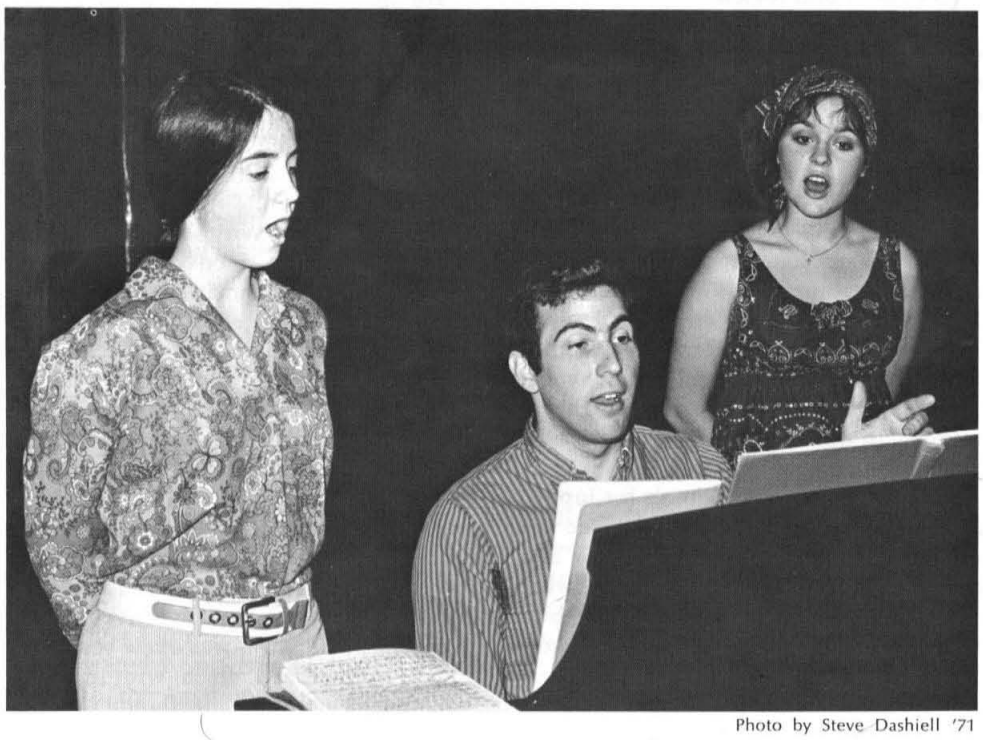


Photo by Steve Dashiell '71

ASCIT MUSICAL

Vocal director Dan Nemzer '69 rehearses Margaret Agnew and Hedy Cortese, pointing for the May 23 and 24 performances of "The Threepenny Opera" in Beckman Auditorium. This fourth annual ASCIT musical, in production for nearly a year, is the students' most ambitious yet, with two dozen musical numbers, a cast of nearly 40, and a production staff of 26. □

New Engineering Course Draws on Many Experts

Continued from page 1

the whole environment of air, water, and land. The next five lectures concentrated on the air environment. In addition to Friedlander's two meetings on characteristics of air environment and air pollution control, Arie Haagen-Smit, professor of bio-organic chemistry, spoke on smog; Paul McCready, Caltech PhD in aeronautics and president of Meteorology Research, Inc., discussed weather modification; and Clair Patterson, senior research fellow in geochemistry, talked about lead in the environment.

Four lectures focused on the water environment; two were given by Brooks, the first on the hydrologic cycle and man's effects, and the second on water pollution control especially in the ocean. Morgan spoke on chemistry problems of the water environment. The next session, on May 12, will be led by Wheeler North, professor of environmental health engineering, and will deal with ecological changes in the ocean caused by waste disposal.

The part of the course dealing specifically with the land environment will be covered by Jack McKee, professor of environmental health engineering, with a lecture on solid waste disposal.

The final three lectures will deal with comprehensive problems calling for consideration of the interrelations of air, water, and land environment. Brooks will talk on thermal pollution and control; Morgan, on DDT and other pesticides; and McKee, on nuclear wastes.

The distribution of the enrollment of the class shows a wide spread over both classes and options. There are five freshmen, fourteen sophomores, six juniors, and four seniors. Except for the five freshmen, who have not yet committed themselves, the rest of the class represents most of the options. There are thirteen from engineering, two from geology, three from physics, two from math, and one each from biology, chemistry, chemical engineering, and economics. In addition the class has so far had five or six auditors each time it has met. □

New ASCIT Officers for Academic, Student Life

Revisions have been and are being made in the ASCIT by-laws to reflect some new student concerns. The changes bring into being a director of academic affairs and a director of student life. They also move the social chairman, activities chairman, and athletic manager(s) off the ASCIT board onto the Interhouse Committee.

The ASCIT academic affairs post—to which Jerry Feinberg, a junior mathematics major, has been elected—was set up because of continuing ASCIT movement into academic concerns. Feinberg says. it is felt that the division of functions between the educational policies and academic reforms committees has not been successful. He is writing a resolution combining the two into a committee of about 15 members, including at least one member from each house.

Students on these committees and on the faculty committee on academic policies are at present discussing things like a limited program for expanding research among undergraduates, expanded opportunities for some undergraduates to be admitted to graduate seminars, and the possibilities of teaching by undergraduates. With faculty approval, Feinberg and two other mathematics juniors are already teaching one section of freshman math on an experimental basis.

The director of student life oversees the work of the social chairman and activities chairman, and heads up any special student events that don't fall into their purview. Marc Aaronson, a freshman, was elected to this office. Under his leadership the traditional Wednesday morning assemblies will return. Also, the student-faculty monthly coffee hours are coming back, with slightly more structure than before so that students and faculty will not just stand looking at each other. Aaronson is working on a super-exchange between 50 Caltech men and Scripps women, where each would live on the others' campus for the best part of a week and participate in both academic and extracurricular life. Aaronson's plan was set for earlier in the spring, but it hit a snag when Scripps authorities asked for more time to work out the possibilities of Caltech men living in the women's dormitories.

Members of last year's ASCIT board, who made the by-laws changes, decided that the social chairman and activities chairman, and athletic manager(s) were engaged in such specialized activities that they weren't involved enough in general board concerns to warrant attendance at meetings. The transfer to IHC, the board felt, was logical because these chairmen generally worked with the student houses anyway. Under the new system the athletic manager will take care of Interhouse as well as varsity sports. □

Alumni Association Membership Statistics

March 1969	
Annual members ($10/year)	3,699
Life members	1,516
Total	5,215
March 1968	
Annual members ($5/year)	4,382
Life members	1,001
Total	5,383

MILLIKAN GALLERIES

The latest student outdoor art exhibit opened and quickly closed in early April. While the artist displayed a great daring in his mode of presentation, as well as enviable graphic technique, most of the gallery browsers admitted some confusion as to what the artist was trying to say. A flashy dietary hint? A sexy commercial message? A subtle protest about student house food? Unfortunately, exhibit catalogs were apparently forgotten in the last-minute haste to get ready for the opening. It is hoped the management will correct such oversights in future presentations. □

ALUMNI BARN DANCE

About 100 people accepted the Alumni Association's invitation to relive the golden days by attending a barn dance on April 12 in Duarte. Fourteen brave men volunteered for and managed to survive a crew race (beer-drinking relay); the winning time was not memorable. Another courageous alumnus, Jim LaFleur '52, demonstrated, without mishap, a flamer (burning vodka poured into his mouth). Additional entertainment was provided by square dance caller Pappy Benedict and by a group of Caltech freshmen known as the 5-2-1 combo, led by Steve Watkins.

The barn dance was planned by a committee that included Frank Bumb '51, Bill Freed '50, John Gee '53, Bill Haeflinger '50, Earl Hefner '51, Floyd Humphrey '50, Doug Josephson '65, Bob Perpall '52, and Chuck Ray '61. □

Alumni Dinners in San Francisco, San Diego

More than 100 alumni couples turned out for dinners in San Diego and San Francisco in late March. In both cases Caltech helped the local chairmen fill out the program—with 60 members of the Glee Club in San Diego and with geologist Clarence Allen in San Francisco.

On March 21 Bill Harris, '49, president of the San Francisco chapter of the Alumni Association, greeted 160 people at the Engineers' Club. Allen's talk dealt with earthquakes, a popular topic in the Bay Area this spring. The dinner was one of two major events sponsored each year by the chapter.

The San Diego meeting was designed to help reactivate the local chapter, and nearly 20 percent of the 272 alumni in San Diego County attended. Dave Wilford, '48, was in charge of the event; he is also chairman of a new committee of local alumni who are planning some future activities. They are now working on an affair to coincide with the football rematch there on October 25 between Caltech and the University of California at San Diego, the one team Caltech beat in the last four years.

If the chapter does become official, San Diego would be the seventh, joining New York, Boston, Washington, D.C., Chicago, San Francisco, and Sacramento. □

Travel Award to Jassby

Kenneth Jassby, a Caltech graduate student in materials science, has won the 1969 Guinier Fellowship for travel in France. Jassby, 25, is a native of Montreal, Canada, and received his bachelor's and master's degrees in engineering at McGill University. He expects to get his PhD at Caltech this June.

The memorial fellowship was established by the parents and friends of Daniel Guinier, Caltech graduate student killed in a mountain-climbing accident in southern California in 1959. His father, Andre Guinier, is a professor of physics at the University of Paris. The purpose of the fund is to help an American or Canadian graduate student at Caltech become acquainted with France, its people, and its culture, by helping him with his travel expenses for a summer stay.

Jassby, whose second language is French, will use the $800 prize money to visit France's music and art festivals next summer. At the end of his stay in France in mid-September, he will visit central Africa and Asia. Jassby returns to Caltech in 1970 to do further research in dislocation dynamics in metals with Thad Vreeland, professor of materials science. □

Placement Assistance
To Caltech Alumni

The Caltech Placement Service may be of assistance to you in one of the following ways:

(1) Help you when you become unemployed or need to change employment.
(2) Inform you of possible opportunities from time to time.

This service is provided to alumni by the Institute. A fee or charge is not involved.

If you wish to avail yourself of this service, fill in and mail the following form:

To: Caltech Placement Service
California Institute of Technology
Pasadena, California 91109

Please send me: (Check one)

☐ An application for placement assistance
☐ A form indicating a desire to keep watch of opportunities although I am not contemplating a change.

Name.....
Degree(s).... Year(s)....
Address .....
.....

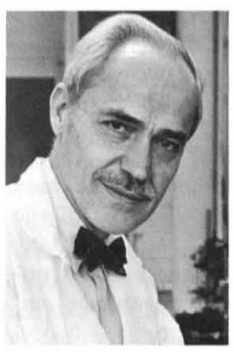
RETURN ENGAGEMENT

Philosopher Abraham Kaplan, a smash hit when he visited Caltech in 1967, returned for a second time on April 14 and drew capacity crowds for each of his two appearances. In the first, an informal seminar sponsored by the YMCA in Winnett Lounge (above), there was a lively exchange of ideas on such topics as teaching ("Students are not experienced enough to choose or evaluate faculty."), stereotyping ("The amount that goes on today among people who should know better staggers me."), freedom ("The world is beset with 'romantic Marxism' and Che Guevara is Lord Byron."), and drug use ("Drugs don't expand the mind—they limit it because they don't help one to face reality."). His evening lecture in Beckman was on "The Meaning of Loneliness." □

PERSONALS

1925
ROBERT J. DALTON, PhD '28, has been selected to receive the 1969 Eugene C. Sullivan Award, presented by the Corning Section of the American Chemical Society. Dalton retired as associate director of chemical research at Corning Glass Works in 1967 after 37 years with the company.

1930
ROLLIN ECKIS, MS, executive vice president of Atlantic Richfield, has been named vice chairman of the company's board of directors. Eckis has been head of the company's Los Angeles-based international division since January 1966, when Richfield Oil Corp., of which he was president, merged with Atlantic. He was also recently elected a director of the Chubb Corp. of Los Angeles.


Warner '35


Dalton '25

1933
E. BRIGHT WILSON, PhD, is the recipient of the Gilbert Newton Lewis Award, the highest award for contributions to chemistry offered by the American Chemical Society's California Section. He is being recognized for his unique contributions to physical chemistry, particularly for his work in microwave spectroscopy, infrared spectroscopy, and molecular quantum mechanics. Wilson is Theodore Richards Professor of Chemistry at Harvard University.

1935
ROBERT C. WARNER, professor of biochemistry at the New York University School of Medicine, is one of three professors recently named NYU's Great Teachers for 1969. Warner began teaching at the University in 1935, and, except for five years with the U.S. Department of Agriculture, has been there since. He became a full professor in 1960.

1941
ELDRED W. HOUGH, MS, PhD '43, assistant dean and professor of engineering at Southern Illinois University in Carbondale, has been named dean of the College of Technology and professor of chemical engineering at the University of Maine in Orono. Hough will assume his new duties July 1.

1945
WILLIAM E. FRADY JR. is the new manager of engineering for Raytheon Company's Computer Operation in Santa Ana, Calif. He was formerly manager of Raytheon Computer's Federal Aviation Agency program.

ROBERT J. KIECKHEFER JR. was recently elected president of Litho-Strip Corp., an operating unit of Amsted Industries, Inc., of Chicago.

MERRITT A. WILLIAMSON, MS, is president-elect of the American Society for Engineering Education. He is Orrin Henry Ingram Distinguished Professor of Engineering Management and director of studies in engineering management at Vanderbilt University, and visiting professor in engineering management at Tennessee A & I University. Williamson will take office as ASEE president in June.

1946
EARNEST H. CLARK JR., MS '47, president and chief executive officer of Baker Oil Tools Inc., has been elected chairman of the company's board of directors. He has been with Baker since 1947.

1947
WILLIAM F. BALLHAUS, president of Beckman Instruments, Inc., Fullerton, Calif., has been named to membership on the National Council of the National Planning Association. This is a non-profit organization made up of representatives from agriculture, business, labor, and the professions to study methods of coordinating the major economic groups in the country to find solutions to domestic and international problems.

1949
ROBERT B. FUNK, MS '50, has been promoted to assistant director of Fibers Research and Development, Dow Badische Co., Williamsburg, Va. Formerly section manager of this department, Funk joined The Dow Chemical Co. in 1950.

JOHN HEATH JR. is the new director of market planning for the American Appraisal Company, Milwaukee. He was previously manager of business development for the Pacific region. His new duties will include delivery of professional presentations, assisting regional and district managers in developing key accounts, and conducting market research.

1950
WILLIAM D. WARTERS, MS, PhD '53, has been named executive director of the Technical Staff Employment, Education, and Salary Administration Division of the Bell Telephone Laboratories, Murray Hill, N.J. Warters joined Bell Laboratories in 1953, was named head of the repeater research department in 1961, and became director of the transmission systems research center in 1967.

1953
WALTER J. EAGER JR., a commander in the U.S. Navy, has been awarded the Navy Commendation Medal for meritorious service as head of the Man-in-the-Sea Section of the Ocean Engineering Branch of SEALAB III. Eager is in the Navy's Civil Engineering Corps.

1955
SAUL FELDMAN, PhD, has joined the acquisitions staff of KMS Industries, Inc., Ann Arbor. He is the founder and former president of Heliodyne Corporation, now a division of KMS Industries. Feldman will be located in Studio City, Calif.


Warters '50


Feldman '55

1957
FRANK BORMAN, colonel in the U.S. Army, was awarded an honorary doctorate from the South Dakota School of Mines and Technology, Rapid City, in March.

T. NEIL DAVIS, MS, assistant director of the University of Alaska's Geophysical Institute, has opened a new rocket range for high latitude sounding rockets near Fairbanks, with the help of Ed Gauss '54, head of the University's Computer Center.

JOSEPH NEUSTEIN, PhD, general manager of Electro-Optical Systems in Pasadena, Cal., has been elected president. EOS is a division of the Xerox Corp. operating largely in advanced technology fields related to aerospace and tactical military needs. Neustein joined EOS in 1960.


Efron '60


Jacobs '60

GLENN A. SAVAGE, AE, a retired lieutenant commander in the U.S. Navy, has joined the staff of the Naval Radiological Defense Laboratory in San Francisco as an operations research analyst. Savage retired from the Navy in 1966 and has been working as a research specialist at the Lockheed Missiles and Space Company in Sunnyvale, Calif.

1959
MICHAEL T. GRAY is currently vice president in charge of research and development of Cybercom Corp., Sunnyvale, Calif., a company which he helped found last August.

1960
BRADLEY EFRON, associate professor of statistics at Stanford University, Stanford, Calif., is one of four faculty members recently elected as Fellows of the University. These men will be relieved of normal departmental assignments for the next three years, and each Fellow will devote half-time to University service and half-time to his own development as a teacher and scholar.

DELBERT H. JACOBS, MS, AE '61, a major in the U.S. Air Force, was recently presented the Air Force Association Citation of Honor for advancing U.S. combat capability. Jacobs initiated and directed the development of an electro-optical system for improving combat effectiveness of fighter aircraft through advanced air-to-air recognition techniques. He is currently stationed at Nellis AFB, Nev., as an operational test pilot and projects officer for the Tactical Air Command.

MAURICE MIRANDE (formerly Mizrahi), MS, is a senior engineer with Engins Matra in Velizy, France, and living in Palaiseau.

1962
R. GARY BURKE is currently a project manager for IBM in New York. He and his family recently moved from Wappingers Falls to Poughkeepsie.

1963
DAVID L. BARKER recently completed his PhD in biochemistry at Brandeis University, Waltham, Mass., and has received a two-year National Institutes of Health fellowship for postdoctoral research in the neurobiology department at Harvard University Medical School.

ROBERT J. SCHMULIAN, PhD '68, was married in October to Jacki Holloway of Glendale, Calif. They are now living in San Jose, Calif., where Schmulian is a staff programmer for IBM in their systems development division.

1964
FRED WILLIAM DORR JR. has joined the staff of the Los Alamos Scientific Laboratory, Los Alamos, N.M., in the computer science and services division.

1965
ROBERT JAMES MACEK recently joined the medium energy physics division at the Los Alamos Scientific Laboratory in New Mexico.

KENNETH L. SERVIS, PhD, associate professor of chemistry at the University of Southern California, has been awarded a two-year Alfred P. Sloan Research Fellowship. Servis has been on the USC faculty since 1965.

1966
THOMAS C. WILLIAMS, airman first class in the U.S. Air Force, has been assigned temporary duty with the 4133rd Bomb Wing stationed in the Western Pacific. His permanent assignment is with the 509th Bomb Wing at Pease AFB, N.H.

New Alumni Books

The Laser Literature. An annotated guide, Kiyo Tomiyasu ('40), Ed. Plenum Press, New York, 1968. $15.00

Statistical Theory of Signal Detection, Carl W. Helstrom (MS '49, PhD '51). Pergammon Press, Oxford, England, 1968. $12.00

Genetic Variations of Drosophila melanogaster, Dan L. Lindsley (PhD '52) and E. H. Grell (PhD '58). Carnegie Institution of Washington, Washington, D.C., 1968. $3.00

Principles of Stellar Evolution and Nucleosynthesis, Donald D. Clayton (MS '59, PhD '62). McGraw Hill, New York, 1968. $22.50. □

OBITUARIES

1918
SAMUEL J. BROADWELL, PhD '35, died in February in Wickenburg, Arizona. Before going to Arizona, Broadwell had served with the Los Angeles County Air Pollution Control District.

1923
L. DEAN FOWLER died March 21. He was district manager of General Electric for 39 years prior to his retirement. He is survived by his wife, three daughters, and five grandchildren.

1926
ROYAL E. FOWLE, Ex, died January 2 in Santa Barbara, Calif. He was city engineer in Watsonville, Calif., for a number of years.

1946
DAVID H. JARVIS, ME, died in October in Long Beach, Calif. He had been an aerospace engineer in the Naval Plant Representative Office at McDonnell Douglas in Long Beach. He is survived by his wife.