

SRA's to Be Integrated Soon



Looking up: Nervous tecker prepares for impending deluge by loading up mini-ark with supplies and then with self. Dumb fellow bases actions on belief in Tech ears. Looking down: Water seems to be rising. Maybe he isn't so dumb, after all.

photos by Coop

by John P. Healy

Caltech is participating in the Black-student revolution. Without agitation or violence, twenty Black SRA's (student research associates) will be joining the campus community in early February. A Ford Foundation grant of \$32,700 to the Research Center is enabling these students from thirteen Southern colleges to work in the Center and participate in experimental Black-orientated courses.

The SRA's are coming from Florida A&M; Tougaloo College, Miss.; Fisk U., Tenn.; Lemoyne College, Tenn.; Willard U., Louisiana; Xavier U., Louisiana; Texas Southern; Lincoln U., Mo.; Howard U., Washington, D.C.; and Morehouse, Spellman, Morris Brown, and Clark colleges in Atlanta, Georgia.

Student Interests Discussed

The students' interests cover the spectrum of Black problems, according to Charlie Creasy, associate chairman of the project. A student from Texas Southern wants to develop and write an English composition text of special relevance to Black students' language problems. Several from Tougaloo are interested in setting up a "liberation school" to "de-brainwash" Black children. They want to work in Watts or the Northwest Pasadena community in order to understand what is different about cultural conditioning in the North. A girl from Dillard will study the psychology of Black leadership — how psychological forces in a community give rise to a certain kind of leader. Another girl wants to study the economic aspects of the Black situation — how effective is the federal government's participation in welfare and the War on Poverty? A Fisk University student wants to evaluate Caltech's tutoring program at the Westside Study Center, find improvements, and form a tutoring system back in Tennessee. There are several groups

interested in the political aspects of the Black revolution.

Creasy has also written a proposal entitled "The Psychology of Ghetto Residents." His interest in this problem is due to his home experience in Beaumont, Texas. The lower political and educational classes are "very sensitive to what's going on, . . . their place in the community and society," says Creasy. He wants to investigate "how this sensitivity can be harnessed and perhaps channeled so that education will become important to these people."

Black Entrepreneurs

Bill Hocker, chairman of the project, likewise proposes three sub-projects: "1. Black Economics . . . an investigation in economics that attempts to find the best means to set up a system of Black corporate enterprise. 2. Mobilization of Black Entrepreneurs . . . determining workable methods of creating a community of information and effort among professional Black people; using these methods. 3. Black Technologists. . . reaching hard-core Black people in all levels of public education with the idea that effectiveness as a Black man may be enhanced by a professional education; establishing supplementary educative programs to enable youth with this idea to get into colleges and universities; establishing college programs that relate technology to Black problems."

When the students get a clear idea of what they want to do, they present their plans to the Research Center Executive Board. The Board decides on the feasibility and soundness of the plan, suggesting modification of procedure or budget. After approval the SRA's are on their own.

In addition to working in the Center, the SRA's will have the option of taking courses in a "free university" organized by a few faculty members and students. This might help satisfy

(Continued on page 3)

Shoemaker Leaves Moon to Run Geology Dept.

Dr. Eugene M. Shoemaker, distinguished authority on the geology of the earth and moon, has arrived on campus to take over as chairman of the Division of Geological Science.

Dr. Shoemaker, 40, who heads the geological field investigations of the Apollo lunar landing program, succeeds Dr. Clarence Allen, professor of geology and geophysics, who has served as acting chairman of the division and who now will devote full time to teaching and research.

President Lee A. DuBridge announced Dr. Shoemaker's appointment a year ago — to become effective Jan. 1, 1969.

Dr. Shoemaker, a Caltech alumnus and faculty member, has been serving as chief scientist of the U.S. Geological Survey's Center of Astrogeology at Flagstaff, Arizona. He organized the USGS Branch of Astrogeology in 1961 and served as its chief until he was named chief scientist of the Astrogeology Center, which he organized in 1965.

In 1963 Dr. Shoemaker organized the Manned Space Sciences Division of the National Aeronautics and Space Administration and established the USGS Observatory at Flagstaff for the study of the geology of the moon and planets.

He was a scientist on the television picture experiment on the series of Ranger spacecraft that photographed the moon and was principal investigator of the Surveyor spacecraft moon television

(Continued on page 2)

Students Organize As CAB Plans to End Youth Fare

by Dave Linker

It all started when two bus companies decided that the airlines were taking a great deal of their business, which was true. National Trailways Bus System and T.C.O. Industries Inc. (also a bus company) complained to the Civil Aeronautics Board and asked them to investigate. They asked Arthur Present, C.A.B. member, to examine the situation.

He found that out of 24 domestic carriers, 11 were for keeping the student fares as 1/2 price without reserved seats, for those between the ages of 12 and 21. The rest were either for a 2/3 fare with reserved seats for the same age group, or for abolishing all reduced fares, including family discounts. American Airlines were perhaps the staunchest supporters, since they originated the reduced fares three years ago. National, Delta, and Continental already have the 2/3 plan and are opposed to the reduced revenue, which they say is discriminatory.

Official Decision

On the basis of the information he gathered, Mr. Present decided that student fares should be done away with. If his decision is unopposed, it will become the official decision of the Board as of 30 days after the meeting (last Wednesday). If it is opposed, the bus companies will file suit on the charges of discrimination.

We come to the crucial question, what can be done to save the student fares? For starters, you can write to the C.A.B., to

an airline, or even your Congressman. This will help to prevent the final decision from being made in 30 days, but the suit still has to be dealt with. This is being thought about by student groups, and the legal plan is to switch the dependence from age to proof of being a student. Two people on campus here who are working on this

(Continued on page 3)

Oxy, Caltech Join Forces For Big Band Concert

by Bod Goddard

The Caltech and Occidental Bands will present a joint concert on Saturday night, February 1, at 8:15 p.m. in Thorne Hall, Occidental College. Admission is one dollar. Tickets are available from band members, the Beckman ticket office, or at the door. Maps of the Occidental campus showing the parking area and the location of Thorne Hall are available from the Beckman ticket office.

The sixty-five piece combined band will perform an ambitious program consisting largely of twentieth-century music, with a few pieces by earlier composers. The program will include Copland's "Fanfare for the Common Man," Frescobaldi's "Tocatta," Gershwin's "An American in Army "March," Rimsky-Korsakov's "Procession of Nobles from "Procession of Nobles" from Mlada, Mennin's "Canzona," Reed's "A Festive Overture,"

Holst's "First Suite in Eb," Grainger's "Irish Tune from County Derry," and Norman Delo Joid's "Variants on a Mediaeval Tune."

This is the first time that these two bands have joined forces, but it will certainly not be the last. In the past, both bands have been handicapped by their small size; a thirty-piece band could never play most of the pieces on this program, because they require complete instrumentation and a full, large-band sound. This year, the two bands complement each other perfectly — Caltech's strengths are Oxy's weaknesses, and vice versa — and both bands contribute a team of excellent musicians. The result of this combination is a band which would rival in quality some of the better college bands in the area. Come and hear the result of intercollegiate cooperation, instead of competition. It will be an evening well spent.

Bradbury to Fly on Mugnaini's Celluloid Wings

by Alan Stein

Icarus will fly tonight in Culbertson Auditorium, at 8 p.m. Joe Mugnaini, artist, illustrator, and filmmaker will present his movie, Icarus, and give a talk on his work. The film, a retelling of the fable of the lad with waxen wings, was filmed by Mugnaini, and the screenplay was written by Ray Bradbury. After the showing, Mugnaini will present a talk dealing with the role of the artist in the film industry.

Joe Mugnaini is an accomplished and well known artist. He has taught at the Otis Art Institute for over 25 years. He has presented numerous one-man shows and has illustrated some of Bradbury's works. Admission to this performance is free. The performance is being supported by the Caltech Art Class and the ASCIT Visiting Artists Committee.

Editorial

Unfare Integration

In principle, we are all for integration. Unfair discrimination, no matter what its cause, is one of the big problems of this country. Certainly, it should never be condoned. But is there such a thing as unfair integration? We think so; it's just been invented by some of the high-flying beaurocrats in Washington, in particular, those who control air travel regulations. They have suddenly decided that student fares should be abolished. Their reasoning is most interesting.

The whole affair began when ground transportation sued air transportation. Their grounds? They claimed that student fares were illegal because they discriminated against older people. Under the Civil Rights Acts the youngsters and the oldsters should be charged the same. Actually, the ground transportation motives were not quite as noble as all that (surprise!). If you have ever ridden in a cramped train or a smelly bus for any long distance, you will know what I mean; ground can't compete with air on the basis of comfort, only on price. Anyway, our aeronautical legislators listened to the complaints and finally decided to table the suit. They also agreed to force the airlines to equalize all fares!

Needless to say, we definitely feel that Washington has twitched badly. Next we can expect the TV producers to sue the movie houses, because they let toddlers in at half price. Now there is a clear-cut case of discrimination; make the kiddies pay the same as adults. Even if they can't afford it (Just as many students will not be able to afford to go home for spring vacation, if fares are increased). After all, we can't let common sense and justice stand in the way of the true democracy.

We can see no good reason for the airline fares to be raised. "Discrimination" is not being practiced for the hell of it; it is an economic benefit to those who would otherwise be unable to afford air travel (and who wants to bus from Caltech to New York?). The airlines find it beneficial; if buses or trains cannot compete, then perhaps they should improve their service. We see no benefit in paying higher prices simply for the sake of making some businessmen a little wealthier. We strongly urge the government to reverse their decision, and retain student fares.

Let's try practicing a little intelligent discrimination!

Alan Stein
Dave Lewin

Get In There And Fight

As the month of February rolls upon us, it brings Valentine's Day, Washington's Birthday, Groundhog Day, and (of course) ASCIT Elections. For once we have a plethora of candidates for the presidency — six as of last count. The three new posts, those of Director of Student Life, Director of Academic Affairs, and Director at Large, are being hotly contended for by a brigade of freshmen.

However, there are eight other offices which are either devoid of candidates, or where someone is running unopposed. Over the past few months we have heard dissatisfaction voiced about ASCIT, and what some people feel is the lack of concern of the present ASCIT Board for the interests of the "average undergrad". It seems clear to us that the only solution to this is for the "average Teckers" to get off their collective asses and get themselves representd on the BOD. After all, if you don't do it, neither will Jack.

David Lewin
Alan Stein

Shoemaker Gets Geo Picked

(Continued from page 1)

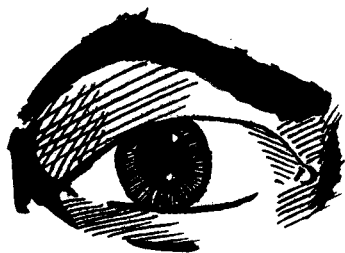
experiment. Earlier in his active career he explored for uranium deposits and salt structures in Colorado and Utah and later studied the geochemistry, volcanology, and geologic structures of the Colorado plateau country.

In 1957 he began studying the mechanism of meteorite impact processes. He co-discovered a high-pressure form of silica — coesite — in natural materials and he established a lunar geological time scale and methods

of geological mapping on the moon.

Dr. Shoemaker was born in Los Angeles and obtained two degrees in geology at Caltech, a B.S. in 1947 and an M.S. in 1948. He obtained his Ph.D. at Princeton in 1960.

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by Jim Cooper

With three excellent productions within a space of seven days, the past week at Beckman Auditorium was undoubtedly one of the finest in terms of talent presented within so short a period in the auditorium's history — at least since Caltech's 75th Anniversary festivities two years ago.

January 18, a combination of three actors and two one-act plays proved to be a delightful mixture.

The actors, Philip Bourneuf, Joan Tompkins, and Karl Swenson, starred in "A Resounding Tinkle," by N.F. Simpson and "A Slight Ache" by Harold Pinter.

Simpson's play involves a domestic scene between husband and wife and later a visit from a relative, a seemingly simple and uninvolved affair. But when discussion centers on the fact that their new pet elephant is "too large," when the relative, Uncle Ted, shows up having been surgically transformed into a female, and when a favorite radio program originates from the "Church of the Hypothetical Imperative," one immediately knows that something strange is going on.

How Absurd!

In fact, things become downright absurd — which is perfectly all right since the play is representative of the so-called School of the Absurd. The fact that Simpson's play is acted with earnestness and not tongue-in-cheek adds immeasurably to the silliness of the whole play.

Indeed, with such Carrollian statements of logic as that if a snake is too short, you can have it lengthened, "but you loose the thickness," the play soon sweeps the audience up into its particu-

Towering Eyeful

lar brand of logic.

The second production is a much more serious effort from the absurdist's school, involving another English couple and an old match-seller who stands outside their country home.

In Pinter's play, the absurdity stems not so much from the seeming illogic of the characters, but more from what he evidently sees as the absurdity of the human condition itself.

A Female Uncle

Overall, the three actors turned in very fine performances; but if the outstanding performer had to be named, it would have to be Karl Swenson, who portrayed "Uncle Ted" in the first play and the husband in the second.

The final few minutes of "A Slight Ache" provide an amazing combination of Swenson's acting ability, fine make-up and excellent theatrical lighting ef-

fects which served to age Swenson's character before the eyes of the audience.

The final blackout of the stage revealed Swenson's head floating in a sea of black, looking exactly like a living skull. Whether or not the effect was intentional, it was one of the most striking theatrical special effects this writer has seen.

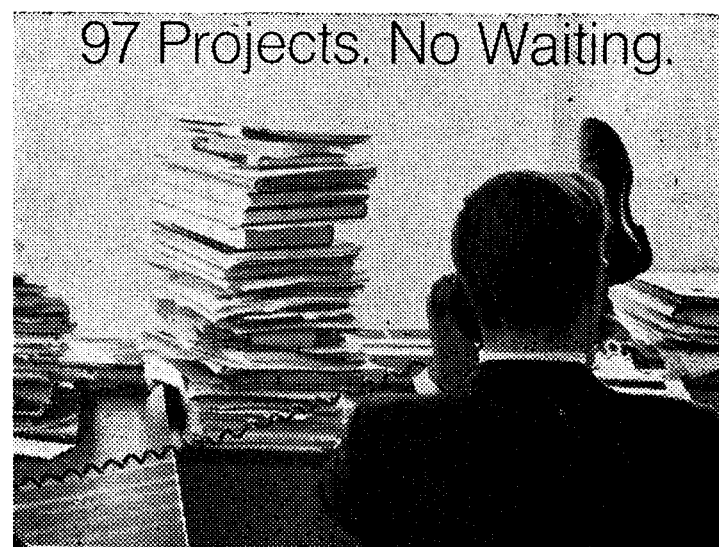
The evening of January 21 brought to the Beckman stage none other than George Bernard Shaw — as portrayed by Max Adrian.

By George!

Evidently similar in concept to Hal Holbrook's presentation of "Mark Twain Tonight," Adrian's presentation entitle "By George" was certainly well-acted, and the make-up was also very good.

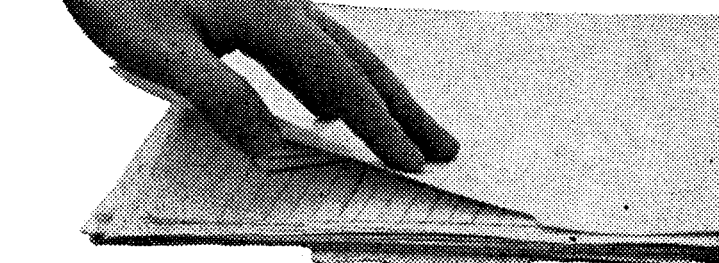
However, the format of the performance, which is divided into three parts between which "Shaw" ages, seemed to somewhat detract rather than add to the effectiveness of the performance. In essence, Adrian was saying "I am Shaw as a young man," then "I am Shaw a little older;" and finally "I am Shaw as an old man." By aging so rapidly, Adrian reminds the audience that they are in reality looking

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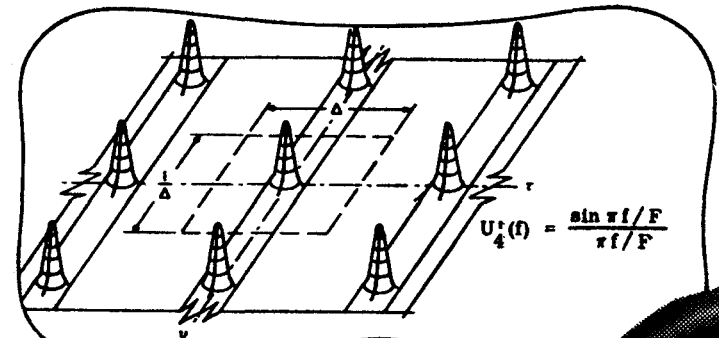


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Published weekly during the school year except during holidays and exams by the Associated Students of the California Institute of Technology. The opinions contained herein are solely those of the newspaper staff.

Editors: Dave Lewin, Alan Stein, Jim Cooper, Editors - in - Chief; Craig Sarazin, Managing; Ira Moskatel, Copy; Dave Dixon, Sports.

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Photographers: Stephen Dashiell, John Bean, Paul Levin.

Business: Jeff Hecht, Manager; Art Selly, Circulation Manager. Bob Curtis, Metin Mangir.

Typist: Flora Boyer

California Tech, Publication Offices: 1201 E. California Blvd., Pasadena, California, 91109. Second-class postage paid at Pasadena, California. Represented nationally by National Educational Advertising Services, Inc. Subscriptions: \$1.50 per term, \$4.00 per year. Life subscription: \$100.00. Printed by Bickley Printing Co., 25 South Fair Oaks Ave., Pasadena, Calif. Volume LXX, Number 15, Thursday, January 30, 1969.



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Goldman Gilds Campus

Dr. Eric F. Goldman, author of "The Tragedy of Lyndon Johnson" and special consultant to President Johnson from 1963 to 1966, will join Caltech's faculty for the spring term as a visiting professor of history.

In making this announcement, acting president Robert F. Bachler disclosed that the former White House aide also will give Caltech's annual Haynes Foundation lectures in early March. Dr. Goldman is Rollins Professor of History at Princeton University.

Dr. Goldman, who will arrive at Caltech on Feb. 21, will give a course in the history of the United States since 1940. He is the author of two books about modern America: "Rendezvous with Destiny," which won the Bancroft Prize in 1952; and "The Crucial Decade—and After: America 1945-1960," published in 1961.

On Feb. 10 Alfred A. Knopf, Inc., will publish Dr. Goldman's book, which is the first one on the Johnson administration by a former aide.

No Comment?

It will be an alternate selection of the Book-of-the-Month Club. Excerpts have already appeared in the New York Times Magazine and the January issue of Harper's Magazine. In connection with the book's publication, Dr. Goldman will appear on such national television shows as "Meet the Press" and "Today."

The publication of his book marks Prof. Goldman's first public comment on the administration. The volume represents his account, analysis, and reflections on this era.

In his book, Dr. Goldman says

of President Johnson that "in periods of triumph and down-sweep, in peace as in war, he stood the tragic figure of an extraordinarily gifted President who was the wrong man from the wrong place at the wrong time in the wrong circumstances."

Unfair Fares

(Continued from page 1)

are John DeVries and Bob Goddard, in Dabney, so see them if you want to help keep student fares, but first write!

Trio Toots In Dabney

The next Sunday evening chamber music concert in Caltech's Dabney Lounge will take place on Sunday, February 2 at 8:15 p.m. Featured will be Louise Di Tullio Dissman (flute), Virginia Di Tullio Royer (piano) and Joseph Di Tullio (cello). They will be performing Tele-mann's Sonata in F major for flute, cello and piano; Hindemith's Sonata for flute and piano; Sonata in A major for cello and piano by Schubert; and Trio for flute, cello and piano by Rorem.

These Sunday evening concerts are free and the public is cordially invited.

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Black Yard

(Continued from page 1)

credit requirements at their colleges. Courses are planned in the modern sciences (physics, biology), economics, literature, and urban problems. Emphasis will be placed on the contribution and role of Black people in society. The final format won't be decided until the students arrive.

How They Were Selected

The SRA's were selected by two teams of recruiters—Creasy and Vicki Vaughn (from I.H.C.), and Hocker and Dick Rubenstein. After calling the student body presidents at the colleges in order to stimulate interest, they went to the campuses to talk collectively and individually with students. There were no specific requirements for applicants regarding grades, sex, school background, etc. Students were accepted on the basis of reactions in personal interviews and their interest in the Black situation — what they see as important in the community. "What we wanted were independent, risk-orientated, intelligent people," says Creasy. They had to be willing to take a chance here. Some had to haggle with their college administration.

The Black students will arrive about February 5 and be here until June, perhaps longer if more money becomes available. They have been allotted \$900 maximum for living expenses. Hopefully at least half of the men will live on campus, while the girls (5 at present) will be off-campus in apartments.

Orientation meetings will occur on February 7 and 8. The first day will consist mostly of factual presentation, while the second will be an all day "emotional" orientation using small discussion groups. Any student interested in participating in the meeting, or planning or taking the experimental courses, should contact Bill Hocker in Blacker House or drop by the ASCIT office.

Project Goals

Creasy lists the goals of the project as: 1. personal development of the SRA's, 2. impact value on the Black community

when the students return to the South, 3. formation of a wider association between Caltech and other schools in the Research Center, 4. possible greater recruitment by Caltech of minority group students on the basis of how the SRA's interact and perform here, and 5. interaction between Teckers and Black people. Hocker adds that the project will explore new methods of teaching. Both are glad to see the Center expanding to deal with Black people's problems.

The Black SRA project is a challenging program. The speed of organization has presented administrative difficulties. There has been some trouble with credit at the other colleges. The "original nut," says Jim Beck, director of the Research Center, "was Joe Rhodes", and developed during discussions between Rhodes and Ford. But as can be seen it will require not only the effort of the Center staff, but of a significant portion of the campus in order to succeed.

Aero Granted

Support for Caltech, home of Guggenheim Aeronautical Laboratory, has been pledged by the Martin Marietta Corporation, a diversified leader in the nation's aerospace industry.

Martin Marietta's \$100,000 gift is for five years membership in Caltech's Industrial Associates, an organization that brings research-oriented businesses into close contact with scientists and engineers at Caltech.

The gift, and a \$1,500 current annual scholarship, are for use in Caltech's \$84.5 million Science for Mankind development program. The program is intended to raise funds for endowment of faculty salaries, construction of new facilities and operation of the Institute.

Caltech's Guggenheim Aeronautical Laboratory, one of the first facilities for advanced flight research in the nation, has been instrumental in making Southern California a center for the aircraft industry. The laboratory has also produced many of the industry's leading scientists, engineers, and executives.

Notices

ICARUS

written by Ray Bradbury and filmed by Joe Mugnaini will be shown tonight at 8 P.M. in Culbertson. Guest lecturer will be Joe Mugnaini, artist, filmmaker, and illustrator, who will discuss his work.

BREAK-IN

For those of you who do not already know it, that great source of income, the Mobil Economy break-in runs will not be available this year. It seems that the Mobil Oil Corp. no longer feels that people are looking for economy in an automobile, so the company is not receiving its promotional value for the funds expended. Try becoming a tour guide instead.

SPEEDY CHARACTERS

Cinematech proudly presents a collection of American Underground Films at 8 P.M. this Saturday, Feb. 1. Take the IRT to Culbertson. Admission is eight bits.

MISSION IMPOSSIBLE LIVES!

February 16, 1969.

SEE THE WORLD

from a DC-10 cockpit. Tour Douglas Aircraft in Long Beach with the Caltech A.S.M.E. Friday afternoon, February 14. Sign up by next Monday outside 102 Thomas.

HABLA ESPANOL, SENOR?

Would anyone interested in establishing courses in Elementary Spanish and Spanish Literature please contact Jack Falk, Dabney House. Such courses could be offered either Spring Term, or first term next year, depending upon the number of students who would consider enrolling.


THE CONTINUING SAGA OF TOTEM, BILL:

Attention! Mother and I want no backtalk! Flash-in-the-pan (and his magic pencil hoo-hah) announce rites of spring. For some reason known but to Allah we have preserved to these many moons, she still will not. **Totem** will. On **Feb. 3** you'd better (last chance before we publish) show your face: **Coffeehaus, 9:30 p.m.** done with all this madness! off! (hello to jimmy & al & joany & dave & all-youbeautifulpeopleoutthere)

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Teckers Regard Corps

This is the second of a series of articles about the Peace Corps. Peace Corps representatives will be on campus the week of Feb. 10.

During the spring of 1969 the Peace Corps will train 1,465 Volunteers for service in 25 of the 59 nations where Volunteers are at work. This represents an increase of 300 more openings than were available during the same training cycle in 1968.

These Volunteers are needed to work in 55 programs in such varied job areas as agriculture, education, health, cooperatives, fisheries and community development. In many cases a portion of the training will take place in the country where the Volunteers are to serve.

Here are examples of the programs:

... In Venezuela single women Volunteers with backgrounds in home economics, social work or liberal arts are needed to work with the Division of Rural Housing to help bring about better sanitation in new communities throughout Brazil. They will work with individual families and community leaders to promote better health through community, home site and house improvement projects.

... In India, some highly skilled Volunteers are needed for a special education program to help supply more and better-trained teachers. These Volunteers will teach TESL (teaching English as a second language) methods and supervise practice teaching in basic training schools and teacher-training colleges throughout Madras state.

Volunteers for this program should have a master's degree, or else have experience in TEFL (teaching English as a foreign language). Or they should have a bachelor's degree in education with some background in linguistics or TEFL.

... In the South Pacific, the Government of Fiji wants Peace Corps Volunteers to help step up the country's food production and help develop some natural economic resources.

Volunteers with farm or ranch backgrounds or with degrees in agriculture or liberal arts will work in animal husbandry (beef, cattle, pigs and dairy farming) or in rice growing projects.

Volunteer foresters are also needed to operate forest stations and train the badly needed personnel to tap Fiji's great forest potential.

Volunteers with geology degrees will help carry out a much-needed systematic geological mapping of Fiji's entire 7,040 square miles. They will also train local personnel for the geological survey department.

... Guinea has requested Volunteer mechanics to help train the 200-300 Guinean mechanics needed within the next 45 years. Volunteers will work in the capital Conakry for government ministries, doing on-the-job training in equipment repair. Men are needed with backgrounds in general mechanics, diesel, heavy equipment, machine, automotive-electrical, industrial-electrical, diesel fuel systems, and rewiring motors and generators.

These programs, and many more, begin training January - May 1969. To find out more about how your skill or background can be used in the Peace Corps, contact your Peace Corps liaison on campus or write to: Peace Corps Information Center, Room 715, Washington, D.C. 20525.

California Representatives:
Pete Montalbano, 309 Eshel-

man Hall, Univer. of California/Berkeley, Berkeley, Calif. 94720. Phone (415) 642-5460.

Doug Byrns, Frank Garcia, Mike Pannwitz, Pete Tabet, 4540 Kingswell Avenue, Los Angeles, Calif. 90027. Phone: (213) 66-8023.

Curt Mekemson, Federal Office Bldg., Room 337, 8th and I Streets, Sacramento, Calif. 95814. Phone: (916) 449-3388.

Bill Neiderberger, 618 Market St., Room 630, San Francisco, Calif. 94105. Phone: (415) 556-8400

Cashing In

Nearly 257,000 students who need financial help to attend college will be assisted by the Federally supported College Work-Study Program during the first six months of 1969.

Secretary of Health, Education, and Welfare Wilbur J. Cohen announced today that approximately \$66.5 million will be made available by the U.S. Office of Education to 1,855 colleges and universities in all 50 States, the District of Columbia, Guam, Puerto Rico and the Virgin Islands to meet 80 percent of student payrolls. A student's college or university, or an approved off-campus agency, will provide 20 percent.

Students may work up to 15 hours a week while in school and up to 40 hours a week during summer or other vacation periods. Employment may be in such on-campus jobs as teacher assistant, library aide, laboratory assistant, maintenance worker, or administrative aid. Off-campus employment may be for public or private nonprofit agencies in such activities as health, welfare, education, and recreation.

Any student unable to enter or to continue in college for lack of funds may apply for a job under the College Work-Study Program to the financial aid officer of a participating college.

"The College Work-Study Program is one of four major Federally supported programs to help American youth attend college," Secretary Cohen said. "Singly or in combination these four programs are moving us closer to our national goal that every capable student shall have the opportunity for a college education regardless of his finances."

GPA's Hailed

The California Beta Chapter of Tau Beta Pi Association held its initiation Sunday afternoon, January 26.

The following new members were initiated in a solemn secret ceremony in which the significance of the bent was explained: Dana Auburn Powers, Jerry Mark Feinberg, Thomas Henry Markert, James Edward Leininger, Dennis Ray Molodowitch, John William Hocker, Daniel Dexter Villani, John Gerald DeVore, Douglas Kent Reece, John Chester Cummings Jr., Gregory Walter Evens, and Tom McGill.

Fourth?

by Robert Geller

North
S 9 8 6
H Q J 3
D A 8 7
C Q J 10 3

West
S Q 7 5
H 10 9 6 5
D K J 5
C K 7 4

East
S 3 2
H K 8 2
D Q 10 9 3
C 9 8 6 2

South
S A K J 10 4
H A 7 4
D 6 4 2
C A 5

Neither vulnerable

The Bidding:
South 1 S
2 D
4 S
West Pass
Pass
Pass
North 2 C
2 S
Pass
East Pass
Pass
Pass

West led the ten of hearts

Most players are familiar with prepared club openings on short suits, made to facilitate a rebid. There are situations similar to this later in the auction, in which it is necessary to bid a three card suit in order to solve rebid problems. Today's hand, played last weekend in the Torrance Sectional, serves to illustrate this point.

After North's response of two clubs, South was too strong to rebid two spades and had no other convenient action to take. Technically South's correct rebid is two hearts. South, although he was quite aware of this, chose to make the deceptive rebid of two diamonds. If his partner was nasty enough to raise him, he would bid three hearts, to request his partner to bid three notrump. However his partner bid two spades, showing a raise to "two and a half" spades. South then jumped to four spades, ending the auction.

It is doubtful that West would have led a diamond in any event, but the two diamonds rebid made it absolutely certain that he would not, since at match-points one cannot give away overtricks in attempts to set contracts.

The heart opening was covered by queen, king and ace. South, in spite of the fact that he was playing match-points, set out to insure his contract at the expense of possible overtricks. He cashed the ace and king of spades, and led ace and another club. West shifted to a diamond when he took his king, but it was too late. South discarded two diamonds on the high clubs, losing one club, one heart, and one spade, making his contract exactly.

BOD Power Seduces Gung-ho Freshmen

As of 12 midnight, January 28, the following people are running for ASCIT office. The election for the offices will be held on February 13.

Running for President are Ed Schroeder, Bill Hocker, Sam Keys, Pete Wilzbach, Stephen Horner, and Alan Beagle.

Pete Szolovits is running opposed for the office of Vice President. Derry Hornbuckle is running for ASCIT Secretary, and Steven Patt for ASCIT Treasurer. Alan Lederman is running for IHC Chairman.

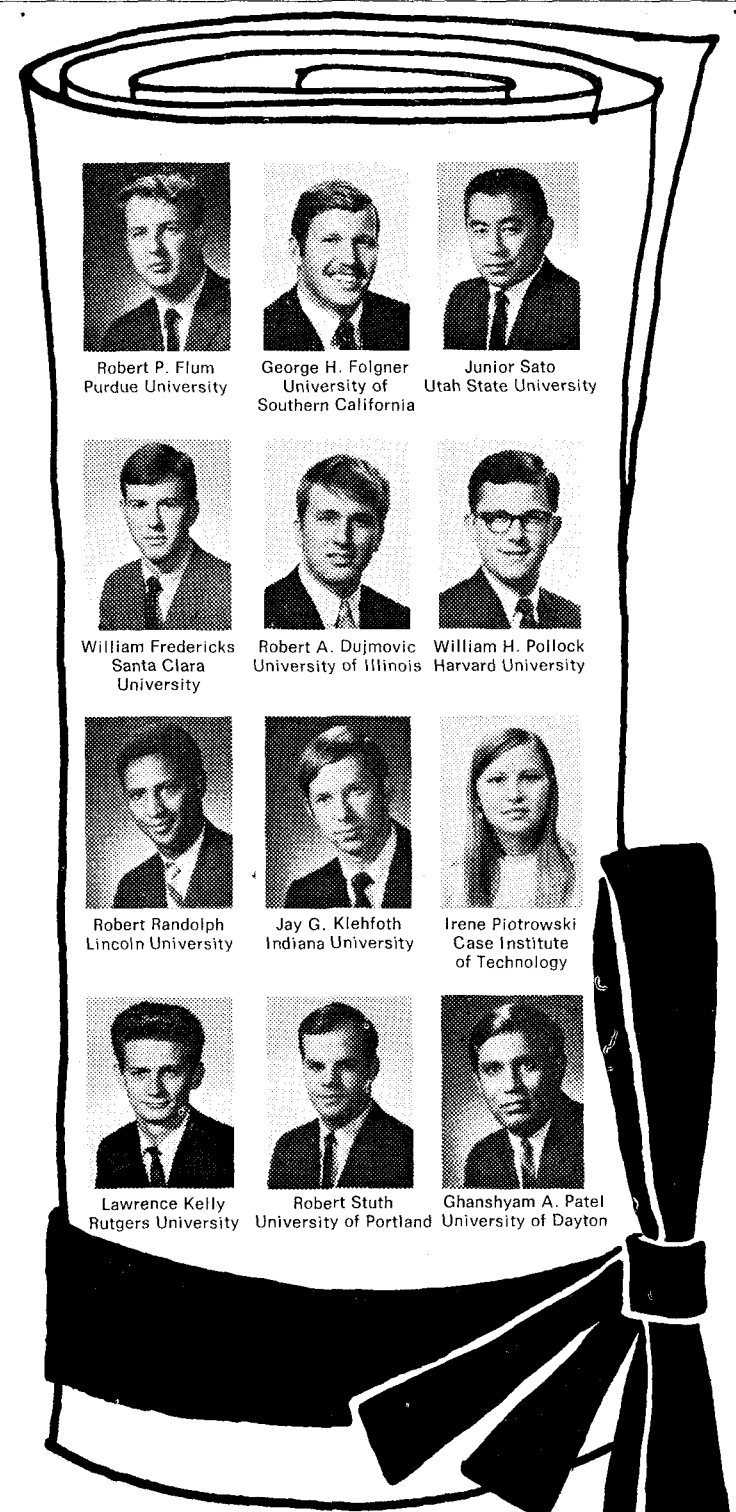
The office of Director of Student Life is being sought by Marc Aaronson and Bob Langill. Berto Kaufman and Jeff Ross are running for Director of Academic Affairs.

Jonathon Post, Alan Breakstone, Gary Stormo, Larry Wes-

terman, and Francis Clark are running for the office of Director at Large. It should be noted that two people will be elected to this office. At least one of these must be a freshman. However, since all the candidates running are freshmen, it appears that both of the positions will be held by freshmen.

Robert Fisher is running for the office of BOC Secretary, and Ira Moskatel and Craig Sarazin are running as a team for Tech Editors.

No one has yet applied for the offices of Social Chairman, Activities Chairman, or Athletic Manager. Nominations close on February 3. The candidates should have campaign statements of about 300 words submitted to the Tech Office for publication by 9 p.m., Monday, February 3.



Robert P. Flum
Purdue University



George H. Folgner
University of Southern California



Junior Sato
Utah State University



William Fredericks
Santa Clara University



Robert A. Dujmovic
University of Illinois



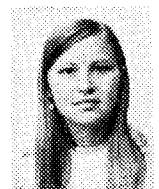
William H. Pollock
Harvard University



Robert Randolph
Lincoln University



Jay G. Klehfoth
Indiana University



Irene Piotrowski
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TECH Sports

Beavers Duck UCR

Caltech's ducks swam to victory over the University of California at Riverside, 76-34. Sheffield led the swimmers as he has for the whole season with three firsts — the 1000 free, 500 free and 200 fly.

The 400 yd. medley relay team of Wright, Stefanko, Hall, and Rude by almost 15 yards while the 400 free relay team of Tyson, Wells, Stefanko, and Hunt also won. Wright also won two events — 133 yd. I.M. (33 yd. pool) and the 200 back.

Mikowicz won the 200 free while Hight was second. Kalisvaart won the 66 free and was

second in the 100 free. Wells won the 200 breast after Hunt was disqualified for a bad turn.

Tyson captured a second in the 133 I.M. while Davis took two thirds — 1000 free and 200 back. Hall took a third in the 200 fly.

Johnson was first in the 1-m diving and was second in the 3-m. dive. Reedy was second in the 1-m. and third in the 3-m. dive.

Coming up this Friday, the Beavers swim against Oxy for second place in the league. This will be a close one as the Beavers expect to win by a point.

Two Swim, Jog in Vegas

Last Saturday, two Teckers braved the weather and ran in the Las Vegas Marathon. After sloshing through rain and then being unable to see in dense fog, Martin Smith took 30th while Dave Hermeyer was 49th. The race was won by Occidental star Bob Deines.

Null, Void

The first Intergalactic Farkling Championships were held yesterday in a secluded room in East Bridge. Twenty contestants, none of whom had ever heard the rules before, were gathered to compete in this nine hour event. The judges were unable to locate a set of rules, and held the tourney to be null and void.

Hoopsters Downed Twice

The Beaver hoop team was doubly trounced over the weekend as they lost to Occidental, 111-61, and to Whittier, 102-50.

The stronger and taller Occidental team outrebounded the Beavers. The Teckers were unable to penetrate Oxy's tight zone and only made a third of their shots. Occidental's team drove on Tech's man-to-man all night as they made half of their shots. However, at the foul line, the Beavers outshot the Oxy team 63%-60%. Heinz led all scorers and rebounders with 17 and 16 respectively while Ault had 12 points.

Tech outrebounder Whittier as Heinz collected 11 and Koenig, 10. However, Tech shot poorly

and had 30 turnovers with 20 in the first half. Whittier was too quick on offense and defense as they hounded on defense and blocked many shots. They also collapsed on the ball player which prevented the good shot and there were at least two Whittier players converging on errant balls. With all of this pressure, the Beavers only made 31% of their shots compared to Whittier's 50%. They also shot poorly from the foul line with only 42% going in. Heinz and Fox led all scorers with 15 points apiece.

The Beaver Babes also were beaten as Occidental and Whittier downed them by the respective scores of 94-54 and 111-71.



Athletic managers are reminded that broad jumping is part of Interhouse track.

Serendipity, Morality, War in Vietnam at Y

The Caltech YMCA has completed plans for the winter term of its traditional Athenaeum Luncheon Forum. Three speakers make up the roster for the Wednesday noon gathering from Feb. 5 through March 5. The luncheons are open to the public.

On Feb. 5, Albert Ravenholt will speak on "America's Dilemma in Vietnam." Ravenholt, a member of the American Universities Field Staff since its founding in 1951, has visited Caltech many times. He specializes in the Far East.

Coed Living

Feb. 12 will bring Dr. William May, dean of the Graduate School of Sociology at USC, talking on "The New Morality: Booby Trap or Pot of Gold?"

Dr. Roger Noll, associate professor of economics at Caltech, will be the speaker Feb. 19. Dr. Noll has been in Washington, D. C., the past 18 months with the Council of Economics Advisors, executive office of the President. His topic will be announced.

Really Quite Dull

"Bigotry and Mysticism in the Protest Movement" will be the topic on Feb. 26 of Jerry Atkin, assistant dean of students, UCLA Counselling Center.

The series will conclude with the appearance March 5 of Dr. Sam Keen. A member of the Louisville Presbyterian Theological Seminary faculty, Dr. Keen will speak on "Education for Serendipity."

Harold Brown took up less space than we expected."

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Caltech-Scripps Exchange



Artist's conception of typical cultural activities pursued by Teckers during visit to Scripps.

Whittier to Hold Draft Confab With Cranston

The draft has become a hot topic across the nation. Locally, a conference on Conscription and the Draft will be held Saturday, February 8 at Whittier College in Arnold Hall, the Music Building. The conference, which is open to men and women, draft age and older, will run from 9:30 a.m. until 5:30 p.m.

U.S. Senator Alan Cranston will deliver the keynote address: "Is It Time to Abolish the Draft?" Three scholars, holding diverse positions, will round out the day's presentations.

Bruce Chapman, author of the book, "Our Unfair and Obsolete Draft," will present the case for a voluntary armed force.

Terrence Cullinan, a former Fulbright scholar now serving as a Manpower Economist with Stanford Research Institute, will argue in favor of a system of "National Service."

Ben Seaver, a peace education secretary for the American Friends Service Committee and a regular commentator on Radio KPFA, San Francisco, will provide "The Case Against."

Conference participants will form small groups to discuss the issues raised by the speakers and consider proposals for action.

Sponsor of the conference is the American Friends Service Committee.

Reservations should be made prior to February 5 and sent to the American Friends Service Committee, P.O. Box 991, Pasadena, Calif. 91102. The registration fee is \$2.50 for students (\$4.00 for others) plus \$1.25 for a luncheon reservation at the Campus Inn. Reservations should include name, address and school affiliation.

While You Are Up, Get Me A Grant, Please?

Edward P. Hanak, a member of the development group at Caltech for three years, has been named to the position of director of development at the Institute.

Hanak, 40, formerly director of foundation relations on the development staff, has assumed responsibility for Caltech's ambitious continuing development effort, which aims at securing funds for endowment of faculty salaries, for construction and modernization of facilities, and for continued operation of research and teaching functions.

Grantsmanship

Hanak served for two years as director of foundation relations, maintaining close contact with those foundations that support higher education and research. He joined Caltech in 1966 as associate director of corporate relations.

A native of Ohio and graduate of Ohio University, Hanak worked with the Greater Cleveland Growth Board, an arm of the Cleveland Chamber of Commerce, before moving to Pasadena to join Caltech's development group. In Cleveland Hanak had helped develop the growth board, which was formed to attract industry to Cleveland.

Hanak will continue to serve as director of foundation relations while he assumes his new duties as director of development.

campus interviews

Individuals majoring in Computer Science, Engineering (Electrical, Mechanical or Industrial), Mathematics, and Physics will be interviewed by Collins Radio Company.

February 4, 1969

Some facts about Collins:

1. Collins pioneered many of today's data techniques and recently announced a computer-controlled design and manufacturing service for customers.
2. The company ranks as the largest independent producer of microwave systems.
3. More than 75% of the commercial airlines use navigation/communication equipment supplied by Collins.
4. The company designs and installs computer systems for the military and for railroads, airlines and many other industrial organizations.
5. Collins serves as the prime contractor on NASA's worldwide Apollo tracking network.
6. The company is recognized as one of the world's leading manufacturers of commercial broadcast equipment.
7. Collins received the first contract awarded to a single company to design, equip and build an earth station for satellite communications.

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NFS Awards Summer Grants

National Science Foundation grants totaling more than \$50,000 have been awarded to Caltech to support summer research projects for 41 Caltech undergraduates.

The program, described as a scientific apprenticeship, allows the students to do independent research under the guidance of senior scientists or to engage in research as the scientists' junior colleagues. The students will do research in engineering and applied science, biology, chemistry and engineering, and geology.

Spokesmen for the National Science Foundation said this practical experience in research helps students develop the patience, persistence, dedication, and independence expected of the professional scientist.

Students are selected for the program by Caltech. In addition to the \$60 per week the students receive for 12 weeks, the Institute receives allowance for operational costs.

NSF is providing support totaling \$4 million for 3,350 undergraduate students at 259 colleges and universities across the nation.

Towering Tinkle Plays On

(Continued from page 2) only at an actor, and not at THE George Bernard Shaw. He thus loses some of the reality which Holbrook's presentation of Twain maintains.

This writer must admit, however, a strong preference for the works of Mark Twain over those of Shaw.

Chorale Corraled

Topping off the week at Beckman last Saturday night was an appearance by the Roger Wagner Chorale. Little needs to be said of the recognized excellence of the group under Wagner's direction, and the program presented — ranging from Georgian chants to "Joshua Fit the Battle of Jericho" — fully justified their reputation.

Generally, the soloists of the group were very good, with the possible exception of soprano soloist Jeannie Wagner who sang a boy's soprano solo in Psalm 23 of Leonard Bernstein's work, Chichester Psalms. One got the uneasy feeling that either Miss Wagner, Bernstein, or the accompanist missed several notes; and the accompanist did an excellent job in each of the other selections, and as for Bernstein,

whether or not he misses a note is often a subject of debate.

The two solos particularly enjoyed by this writer were those of soprano Brenda Fairaday in "Rio Grande," and baritone John Mack Ousley in "Shenandoah."

In any event, a fine evening of entertainment was had by all and the audience kept the group working with several encores, including "Dem Bones," and "Polly Wolly Doodle."

Chris Dede

Get Off Your Ivory Tower

Modern warfare has undergone some great changes since the day of the Red Baron, and even since the Korean War. The role of the scientist in warfare is changing also; science and the military-industrial complex may not be linked as closely as a Dr. Strangelove would suggest, but we have certainly escalated far beyond

the Atomic Bomb Project of World War Two. What roles will Caltech graduates play in the warfare of the future (to say nothing of the present)?

The Caltech Y is planning to sponsor a series of forums on the Role of the Scientist in Modern Warfare. These will focus on such topics as: What are the probable developments in modern weaponry? How much practical control can a scientist exert over what he develops? What is the responsibility of a scientist to his creations?

Speakers who may be invited to discuss their views on these questions include Dr. Edward Teller, the father of the H-bomb; Dr. Harvey Wheeler, co author of *Fail-Safe*; Dr. Nirenberg of the Scripps Institute of Oceanography, an expert on undersea warfare; and Dr. MacDonald of the Institute of Geophysics at UCLA, an expert on geophysical warfare.

Faculty, grads, and undergrads who have speakers they would like to see invited or who are interested in helping to organize the program, see Chris Dede (Ri) or talk to any of the Y officers. There will be an organizational meeting Wednesday, February 5th at 11:00 in the Y Lounge. Be there or be dead?!

Repertory Dance Repeats

On Saturday, February 8, at 8:30 p.m. in Caltech's Beckman Auditorium, the Repertory Dance Theatre based at the University of Utah, returns to Caltech's Beckman Auditorium, Pasadena, for a repeat performance.

Since the company's concert at Caltech a year ago, RDT has achieved national prominence. The eminent critic of the New York Times, Clive Barnes, has seen fit to cover the work of this dynamic, youthful modern dance company in two comprehensive stories. *Dance Magazine* devoted its August cover story to RDT and the *Saturday Review* of November 16 refers to the

dancers as "highly accomplished, faultlessly rehearsed, versatile . . . and as striking as any modern dance soloists . . . you would find on Broadway . . . Add Tim Wengerd to the roster of stellar men dancers."

The company's comprehensive repertoire created by well-known luminaries of the dance world also includes works created by RDT members themselves.

Call 793-7043 for ticket information and a brochure. And if you are a dance teacher or a student of dance, ask for information about the special Friday, February 7 performance for the aficionado.

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"But it isn't funny."

"That doesn't matter — It's space filler."

"We will not accept tomorrow any stories about events that did not happen tomorrow."

"We don't have to understand to plagiarize."

"Go seduce a frosh."

"A nose by any other name would smell."

Put subheads in, dammit.

"Institute releases make marvelous fertilizer."

"Al has to pretend he's editing a newspaper."

"You want to jump the Earthquake?"

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Andy earned his B.S.E.E. in 1966. Today, he’s a Marketing Representative with IBM, involved in the planning, selling and installation of data processing systems.

Plenty of business experience

“Engineering was my first love,” Andy says, “but I still wanted good business experience.” So far, he’s worked with customers involved in many different computer applications, from engineering to business. His contacts go from data processing managers all the way up to the president of his largest account.

“At first I was a little nervous about working at that level,” says Andy. “But then you realize you’re trained to know what he’s trying to

learn. That gives you confidence. You’re helping him solve his problem.”

With his working partner, the data processing Systems Engineer, Andy has helped many customers solve their information handling problems. “I get a broad overview of business because I run into every kind of problem going. Sometimes I know the solutions from experience. Other times I need help from my manager.

“That’s one of the best things. My manager is more of a backup than a boss. He’s there when I need him. Usually, I pretty much call my own shots.”

Andy’s experience isn’t unusual at IBM. There are many Marketing and Sales Representatives who could tell you of similar experiences. And they have many kinds of academic backgrounds: business, engineering, liberal arts, science.

They not only sell data processing equipment as Andy does, but also IBM office products and information records systems. Many of the more technically inclined are data processing Systems Engineers.

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