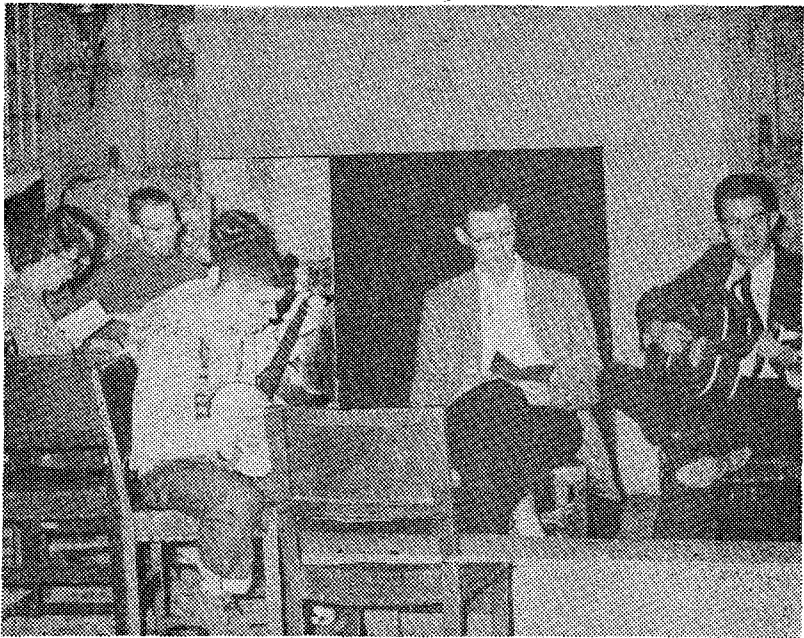


# The California Tech

Associated Students of the California Institute of Technology

Volume LXI Pasadena, California, Thursday, January 28, 1960 Number 15



John Soule, John Crossman, Pastor Neil Richardson, Pete Lippman and unidentifiable others star in Y Folk Singing Group.

## Search for Instruments

By PETE LIPPMAN

All folk-music enthusiasts are invited to the third gathering of the YMCA's informal singing group, which plans to meet every Thursday at 7:30 p.m. in Dabney hall Lounge.

No talent is required, but guitarists, banjo-pickers, ukuleleists, mandolinists, accordionists and even bongo-drummers (in reasonable numbers) are particularly welcome.

The group has no officers, rules, nor dues. The Y supplies song books.

Present at the first meeting were approximately fifteen undergraduates and four musical instruments. The agenda began with group finger-snapping palm-rubbing and tongue-clacking, and worked its way through a large number of more conventional forms, among which were a few currently popular ballads, several "old favorites," and one or two honest-to-goodness Obscure Folk Songs.

## Past Seismo Director Dies

Dr. Beno Gutenberg, geophysicist and retired director of Caltech's Seismology laboratory, died Monday night after a short illness. He was 70 years old.

Gutenberg was best known for his studies of the earth's interior. At the age of 23, while a graduate student at the University of Goettingen in Germany, he made what is believed to be the first correct determination of the composition and size of the earth's central core.

He also contributed to the understanding of seismic waves, the magnitude of earthquakes and the temperature of the stratosphere, and the nature of microseisms (small shocks that keep the earth's crust in a constant state of motion.)

Gutenberg served on the Caltech faculty for 30 years, including 11 years as director of the Seismology laboratory, before his retirement in 1958. He was past president of the Seismological Society of America and a member of the National Academy of Arts and Sciences.

## Frosh Run-Off To Be Tuesday

Two freshman class offices were filled, and three more were referred to a run-off next week, as frosh voted Tuesday for their second and third term leaders. Running uncontested were Warren White for secretary, and Jim Sagawa for treasurer.

Offices to be contested in next Tuesday's run-off are president, with Henry Abadbanel, Ron Krischke, and Wendell Mendell running; vice president, with candidates Raymond Plaut and Arthur Robinson, and two Board of Control posts being contested by Steve Joseph, John Kessler, Kenneth Manly, Larry Rabinowitz, and Lee Samuelson.

The class officers, when they are elected (probably after two run-offs) will be in office until the end of third term. Their replacements will be elected sometime during the middle of third term.

### Big T's Available

Last year's edition of the Big T is currently being distributed in the Houses and in the Big T office after about 7 p.m. Anyone who has not picked up his yet is urged to do so as soon as possible.

## Mobilgas Seeks Observers For Break-In Economy Run

A revision of the observer set-up for the Mobilgas Economy Run was announced this week.

In past years Caltech has supplied all the official observers for the break-in and final runs. This year Tech men will continue to handle the break-ins, but will staff only about half the cars on the final run.

About 100 men from all classes, including grad students, will be needed to work on the break-ins, which will begin February 15 and continue through the end of the term of March 21.

Under this year's revisions, break-in runs will be limited to five hours and observers will receive two dollars an hour and will be supplied with a (non-

# New Houses Near Capacity, Lists To Close Tomorrow

New undergraduate houses A and B have been filled to the desired capacity this week and the process of equalizing class distribution among the seven houses is nearing completion. Over 60 people, about one-third of these present house residents, have volunteered since last Thursday.

There is still room for 30 people in new House C, the one to be next to the Athenaeum.

### LISTS CLOSE

Dr. Robert Huttenback, Master of Student Houses, requests that all off-campus students still considering moving on-campus next fall sign-up for House C in his office by tomorrow afternoon.

Huttenback hopes to finally close the lists tomorrow with the house rosters determined by the lists at that time.

House A, with an ideal capacity of 85, has at present 64 members: 26 freshmen, 35 sophomores, and 3 juniors. Around 20 incoming freshmen will be added next fall.

Signed-up for House B are 19 freshmen, 22 sophomores, and 6 juniors. There will be room for 30 new members next fall to be drawn from new freshmen and grad students.

### ROOM IN C

House C as of Wednesday day 16 freshmen, 9 sophomores, and 2 juniors committed. Space is being held for about 25 freshmen next fall and the remaining room Huttenback hopes to fill with present undergraduates by tomorrow.

At least 10 more members for House C must be drawn from present house residents in the process of equalizing classes and reducing old house population to the designed capacity. All rooms except the present large doubles will then be used as singles. Attempts are also being made to ease the shortage of juniors and the abundance of sophomores in the new houses, although no juniors will be required to move.

Huttenback is trying to contact 40 off-campus students who indicated in a poll first term that they desired on-campus rooms next year but have not yet signed-up. He hopes to have re-

ceived replies from all by tomorrow.

### SPLIT DUES

As outlined in the New Student House committee report last term, new house members who are presently members of old houses will split their third term house dues between the old house and the new house. Also, such members will abandon their voting privileges in the old house.

New house members will meet together to elect officers the last two weeks of this term at the same time the old houses will hold elections.

## Dr. Ingersoll Dean of SC Engineering

The appointment of Dr. Alfred C. Ingersoll, associate professor of civil engineering at Caltech, to the position of Dean of the College of Engineering at the University of Southern California was announced by USC last week.

Ingersoll has been at Caltech since 1950. During 1954-55 he was a guest professor of applied mechanics at Bengal College of Engineering in India.

In his new capacity, Ingersoll will be responsible for managing the 2000-student school and the \$2 million of annual research that it does. About 500 students graduate annually from the engineering college.

Ingersoll's work has included research for the Hyperion sewage treatment plant; he also did the hydraulic engineering for the artificial waterfall on Fort Moore Hill.

In accepting the position at SC, Ingersoll said, "I regard the future of engineering at USC as an opportunity unparalleled in the United States today."

Ingersoll received his BS degree from the University of Wisconsin in 1942, his MS in 1948, and Ph.D. in 1950. He first came to Caltech in 1950, became assistant professor in 1951, and associate professor of civil engineering in 1957.

## Tech Invited To Mock Conventions

Caltech has been invited to participate in an intercollegiate mock national nominating convention. The Republican convention will be held on Friday, April 22, at Oxy, and the Democratic convention Saturday, April 23, at Los Angeles State College.

Each participating college will send a delegation to represent a state of its own selection. Colleges from all over the U.S. will participate. Students interested in being delegates to either convention should contact Art Rubin (Fleming) as soon as possible.

## BOD Opposes Defense Loan Loyalty Oaths

The ASCIT Board of Directors decided Monday night to oppose the disclaimer affidavit in the National Defense Education Act.

In essence, the Board of Directors claims that the disclaimer affidavit is detrimental to the aims of the NDEA program in that it imposes a test oath, in principle opposed to constitutional guarantees of belief and association.

The Board's sentiment is that Congress should remove the offending passage; they, therefore, urge the passage of the Kennedy-Clark bill, or similar measures, stipulating such a course of action.

Attached to the resolution, which will be sent to appropriate Senate and House committees, is a statement to the effect that the BOD takes this stand as an independent group, and does not "pretend to necessarily represent the opinion of the student body as a whole."

About 20 people were present at the discussion, which centered for the most part on the pros and cons of the affidavit. Some of the questions discussed were: (1) Are students as a group being discriminated against, when they want to borrow money? (2) Is the affidavit beneficial to national security? (3) Should such a distinction be made between belief and action? (4) Can the oath be justified as the government's use of its right to protect itself? and (5) Are students in such a critical position that the government should require a loyalty oath.

Though most of the discussion was split with regard to pros and cons, a majority of people there felt that it should be up to the individual involved, and his strength of character to decide for himself.

## Camp Counsel Applications Due in A Week

The following 34 people have submitted applications for camp counselors at the 1960 New Student Camp. If you have applied and your name is not on the list, please resubmit your name on a sheet of paper addressed to Tom Jovin in Blacker.

Applications will be accepted for another week as more people are needed.

Dick Jones, Dick Norman, Tim Litle, Carl Rovainen, John Soule, Tom Falconer, Norman Gordon, Paul Purdom, T. J. Tarby, Rod Dokken, Pete Mayer, Larry Rabinowitz, Cleve Moler, Bob Koh, George Younce, Ken Casey, Dave Pritchard, John Weaver, Dave Bowman, Doug Stewart, Ben

(Continued on page 3)

## Editorial

## Easy Come, Easy Go

The ASCIT minutes this week contain a short paragraph that is completely overshadowed by the discussion on the loyalty oath. The paragraph proposes discussion of two rather important amendments to the venerable By-Laws.

Elimination of the ASCIT Executive Committee is the first suggestion. If anybody happened to notice this comment, their first reaction would probably be "What in tarnation is the Executive Committee." The frosh have never heard of ExComm and most everybody else—including ExComm members—has forgotten about it.

The ExComm was established two years ago (largely due to the agitation of California Tech editors Walsh and Leeson) as a group to handle long-range problems and policy. It consists of the ASCIT president and five other men selected by the BOD.

The group's "accomplishment" has consisted of the ExComm Report on Caltech Student Life. All we've seen of this much-heralded (again by the Tech) project so far has been a set of reprints of the polls ExComm took to gather material for their report. There have been no statistics compiled, no analysis made, no conclusions attempted.

ExComm claims to have run out of things to think about. Judging from the general line of discussion at Monday night's BOD meeting, the NDEA loyalty affidavit might have been the subject for a "policy decision."

The basic problem with the Executive Committee is that nobody gives a damn. There is work to be done if anybody were willing to do it. So, unless somebody can scare up a half-dozen Doug Carmichaels, perhaps we better bid a fond farewell to dear old ExComm.

The second proposal is to allow Board of Control members to succeed themselves. This is something that has needed changing since it was originally passed.

There is enough trouble getting good men to run for the BOC as it is, without eliminating eight good candidates simply because they're experienced.

## Plagiarism Discussed In BOC Article

BY TOM JOVIN

Plagiarism is a difficult notion to deal with at any educational institution. In writing themes, the line between (a) interpreting the ideas of others, and (b) passing off the ideas of others as one's own, may appear hazy at best. Yet the distinction exists and must be carefully recognized.

The picture of a student before the Board of Control, facing a possible charge of plagiarism, is one of an individual usually unaware of what he has done. For the process of transposing material from references to a theme — without giving due credit to the source — is quite often entirely unconscious. This is particularly true at Caltech due to the usual tendency toward procrastination.

As in other problematical areas, it is necessary to resort to the intent behind our Honor

System. The freedom it grants is free from stipulated restrictions but not from the responsibility of respecting the rights of fellow student, faculty member, and Institute alike. This principle of avoiding acts of "unfair advantage" is central to our way of life at Caltech and should clearly inhibit the indiscriminate and indiscrete use of sources as well premediated cribbing on examinations.

Relative to other offenses, however, plagiarism still takes the lion's share. Perhaps two points should be stressed: (1) the responsibility for personal integrity has to fall on the individual, and (2) the responsibility for knowing how to give proper credits in footnotes and bibliography, according to the conditions set forth by the instructor, must also belong to the student. In this case, ignorance is not bliss.

## Board Members Reveal Duties

With ASCIT elections coming up soon (nominations are February 10), the Board of Directors decided to give short accounts of the duties of each officer. Four of the nine members are included this week.

### • Vice President

The duties of the ASCIT Vice-President fall into two classes. The Vice-President serves as a voting member of the Board of Directors. In the absence of the ASCIT President, he serves as chairman of the BOD. The "Veep" has no specific BOD duties; consequently, he has considerable freedom of action in this capacity.

The Vice-President's job as Chairman of the Board of Control is by far his most important duty. He is responsible for investigating all suspected violations of the Honor System. The "Veep" calls meetings of the BOC and presides over them. Along with the Secretary of the Board of Control he serves as a liaison between the BOC and the Dean's office.

—Tom Tebben

### • Treasurer

The duties of the ASCIT Treasurer afford an opportunity for the office holder to obtain business and accounting experience by maintaining financial records for a \$20,000 per year non-profit corporation. His position affords him a big influence in determining the fiscal budget. He also oversees the \$15,000 spent yearly by the publications.

At the end of the fiscal year

(which runs from April 1 to March 31), he submits a financial statement to be reviewed by the Caltech auditors.

The above duties, in addition to the participation in BOD meetings and activities, are specifically required. Usually about five hours per week will suffice for the job. However, at specific times (e.g. during budget and Jazz Concert periods), the requirement will be considerably greater. Otherwise, the treasurer may spend as much time outside of these duties, and in as many realms as his energies, imaginations, and interests dictate.

—Carl Morris

### • Business Mgr.

The main concern of the Business Manager is the campus publications. As chairman of the Publication's Committee he supervises both T's the Tech, Totem, and ASCIT Photo. He is on committees for the awarding of Honor Keys and Certificates and ASCIT appointments. He is in charge of letting the outside world see whatever we do that is worth publicizing.

In addition to sitting on the Board and voting on general issues, as can be witnessed by this Monday's meeting, the BM is responsible for maintaining the vital stacks of paper, envelopes, and stamps in the Board Room as well as handling other Board trivia.

—Richard Norman

### • Athletic Mgr.

The ASCIT Athletic Manager's chief chore is the staging of the

annual Fall Sports Banquet. The spring awards assembly will also keep you busy, as will continually hounding the various suppliers of our different awards in attempts to get the proper awards at the right time. In return for these duties, however, you will get the privilege of going to Board meetings every Monday evening to help shape the destiny of noble CIT.

Seriously though, I'm sure everyone realizes that the experience and honor of holding a student body office is, in itself, sufficient remuneration. It can't possibly tell everything in 100 words, so if you have any questions I suggest you read the Little t, and/or come and talk to me personally.

CARL GOTTSCHALL

### Letter

## BOD's Loyalty

Editor, California Tech

We feel that the decision of the ASCIT Board of Directors on the question of requiring a "loyalty oath" of students desiring Government loans is the opinion of a minority which, though labeled as such, will be considered by many not acquainted with the facts to be the opinion of a majority of Caltech students, and we deplore this irresponsible action of a supposedly responsible group of people.

KENDALL CASEY  
CARL GOTTSCHALL  
DICK JONES

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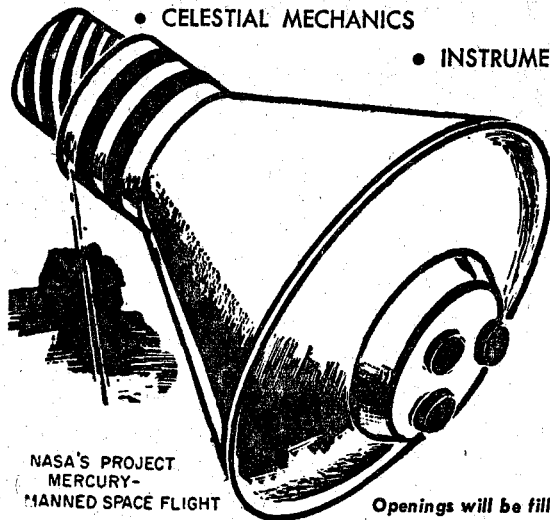
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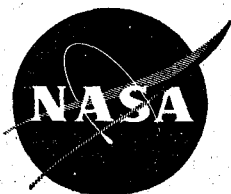
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**BRIGHT LIGHTS . . .  
COFFEE . . .  
. . . AND SHOES**

by griffen



Girls, girls, girls! . . . drink, drink, drink . . . sing, sing, sing . . . play, play, play . . . Alan Tobias left his plush suite at the Huntington-Sheraton and stepped into his 1929 Isota-Franchini; it was 9 o'clock and he was already late to his EE 103 class. What a bore life was to poor Alan.

Arturo Rubino, son of an Italian immigrant, had been working since 6 a.m. at his landlord's all-night drugstore in order to pay the rent on his dingy one-room flat on North Fair Oaks. It was his last year at school; just one more summer job and he would be able to give back the loan to the Institute. Warily he climbed on his Rollfast two-wheeler and began to pedal to his 11 o'clock physics lecture. Arturo was tired.

Now it is a natural sequence of events that the paths of these two Caltech men should cross, not on the field of academics where rich Alan Tobias clearly had every advantage of time and space, but on the field of love, advantage of time and space, but on the field of love, where man stands naked in his integrity, natural charms and physical attributes. And so it happens that there was an exchange in the California Tech office late one night . . . where there was a beautiful creature, full of life and vitality, with a charming smile that smote all in sight . . . wealthy heir and immigrant's son alike, for love knows no class structure.

When Arturo danced with the lovely young thing, he had visions of a serene home life and security and spaghetti dinners and how he would give the world for her once he had his degree and the endless opportunities had been presented to him. He thought how wonderful it was to hold her smooth hand and to feel her breath on his neck, but he didn't dare to think any further because that was bad and besides, this was a nice girl and he loved her.

Alan came a little late since he had had a dinner date in Hollywood with one of his several mistresses, all of whom were gorgeous starlets. He had decided to drop in just to have some kicks to relieve his dull existence. The moment he walked in the door, his gaze fell upon Arturo and the innocent coed dancing as if in the clouds. "I must have her," he thought, as he approached for the inevitable meeting; Arturo

eyed him coldly, but he controlled his fiery Latin temper, realizing that although he had never had time to take karate at the gym, his many jobs had toned his big, muscular frame to cat-like quickness and strength.

So he stepped out of the darkened dancing room to clear his thoughts while Alan, the suave, debonair, rich playboy, danced with Arturo's sweet, unpretentious love . . . and all Alan wanted was to add her to his collection; to lure her into his den at the Huntington-Sheraton.

Calmed down, Arturo came back, only to find that his sweetheart had disappeared with the infamous Alan Tobias. He rushed outside, and full of despair, watched futilely as the Isota-Franchini, its tuned exhausts humming, gained speed up Calitoria Street.

(Next week: Rubino's Revenge)

# The Wonderful Secret

(Reprinted from the September, 1959, issue of "Beverly Hills Sentiments." Submitted by Brad Efron.)

This is the story of Jim and me, and a honeybee. But mostly it is Aunt Mamie's story . . .

One afternoon as Jim and I were driving along a country road, a bee zoomed into the car, settled on the steering wheel a couple of inches from Jim's hand, and buzzed threateningly. What did Jim do? In seconds he was fighting with the bee, determined either to exterminate it or shoo it out of the car.

As a result, the car careened across the road, plunged over the bank, and landed upside down in the ditch. By the kindness of Providence, Jim and I escaped without permanent injury. He came out of it with a broken arm, and I had nothing more than scratches and bruises. The car was towed off to the junk pile.

While I was having my physical checkup, I thought of Aunt Mamie and her encounter with a bee. Aunt Mamie was not brilliant or beautiful. Nobody outside of Plum Creek ever heard of her deeds. But Aunt Mamie had the wisdom of the

heart, and a certain calm of soul built up from time with the Good Book, and communion with her Maker. And Aunt Mamie knew bees.

I remembered an afternoon in my childhood when Aunt Mamie and I were driving along in her old car that was as unstylish and weatherbeaten as Aunt Mamie. And I remembered the bee that buzzed into the car and settled on the steering wheel.

"Quick, Aunt Mamie," I had said. "Do something!"

"Nonsense!" she had answered. "Just let the bee be." Then she calmly pulled the old car to a stop at the side of the road and began pointing out to me the little creature's brown-and-amber coat, his fuzzy legs, his beautifully formed body. We listened to his softly modulated buzzing—wonderful to a child of ten. And Aunt Mamie told me about the intelligence of bees, their community life, their honey making, and other things I had never heard before. Presently the bee crawled out the window of the car, and went his way.

Afterward, when I was older, I asked Aunt Mamie her secret; how she was always able to meet life calmly.

"It's my pause, poise, power formula," she told me, smiling the smile of accumulated wisdom. "You know what a little brook does when it meets a big boulder? It doesn't fight or struggle—it just quietly piles up water until there's power enough so the brook can just flow around the boulder and continue on its way."

Aunt Mamie chuckled, then looked solemn. "Sometimes it takes a while for the power to build up, and that means waiting. But the power always comes. I do the same thing the brook does. Pause isn't really inactivity, you know; it's a chance to build up power."

Pause, poise, power! How THE WONDERFUL Secret . . . often I have thanked Aunt Mamie for giving me the wonderful secret!

—Grace V. Watkins

## CAMP COUNSELORS

(Continued from page 1)

Burke, John Golden, John Stromberg, Joel Tenenbaum, Tom Tisch, Milton Lindner, Skip Stenbit, Ken Larson, Matt Couch, Bill Bauer, Bob Juola, Lance Taylor, John Todoroff, Rog Noll.

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 <p><b>Electronics &amp; electro-mechanics</b> at the <b>Autonetics Division</b> (Downey, California)</p>	<p><b>Autonetics</b>, a leader in the field of electronics, is engaged in research, development, and manufacture of Computers, Inertial Guidance, Armament Control and Flight Control Systems. Autonetics designed and built the inertial navigation system for the USS Nautilus and Skate; the first, completely auto-</p>	<p>matic landing system for supersonic missiles and aircraft; the first, general purpose, all-transistor, digital computer. It is now at work on the inertial navigation system for the first nuclear-powered Polaris-carrying submarines and the guidance and control systems for the Minuteman and GAM-77 missiles.</p>
 <p><b>Naval aircraft &amp; missiles</b> at the <b>Columbus Division</b> (Columbus, Ohio)</p>	<p><b>The Columbus Division</b>, designed and built the Navy's T2J Buckeye, America's most versatile jet trainer which will train today's jet cadets to command tomorrow's manned weapons systems, and the Navy's supersonic, all-weather A3J Vigilante, today's most versatile manned weapons system. Advanced</p>	<p>design studies now underway at the Columbus Division include undersea, land, and air weapons systems for all Military Services. Current studies include ASW, missiles, ECM, intercept aircraft, electronics systems, VTOL-STOL, ground support equipment, and other still confidential programs.</p>
 <p><b>Design &amp; development of manned weapon systems</b> at the <b>Los Angeles Division</b> (Los Angeles, California)</p>	<p><b>The Los Angeles Division</b> is the home of the next-generation manned weapon system—the Mach 3 B-70 Valkyrie multi-purpose bomber—and America's first manned space vehicle, the X-15. Engineers in this division are engaged in research, development, and</p>	<p>production of complete manned weapon systems. Work encompasses the fields of Electronics, Metallurgy, Structures, Aerodynamics, Thermodynamics, Dynamics, Mathematics, Physics, Human Factors and Industrial Engineering.</p>
 <p><b>Missile weapon system management &amp; space research</b> at the <b>Missile Division</b> (Downey, California)</p>	<p><b>The Missile Division</b> is the home of the GAM-77 "Hound Dog," an air-to-surface missile for the Air Force's B-52 bomber. The Missile Division has within its ranks some of the nation's most experienced engineers and scientists in the fields of missiles and weapon systems. They are performing research on</p>	<p>missiles and space exploration vehicles of a wide variety of range, speed and propulsion methods. Scientists at the Aero-Space Laboratories, an organization within the Missile Division, are conducting creative research well in advance of existing technology in the space sciences.</p>
 <p><b>Propulsion systems and concepts</b> at the <b>Rocketdyne Division</b> (Canoga Park, California) (McGregor, Texas)</p>	<p><b>Rocketdyne</b> is engaged in ideas-to-hardware development of propulsion systems. High-thrust liquid propellant engines, built by Rocketdyne, have powered most of the missiles used for military and civilian space projects including Atlas, Jupiter, Thor, Redstone, Explorer, Discoverer, Pioneer, Juno, and others. Under development at present are two super performance liquid systems. While leading the nation in liquid propellant</p>	<p>systems, the division is under contract for high energy solid propellant motors and unique accessory equipment. Solid propellant operations are located at McGregor, Texas. Other propulsion system concepts are actively under development employing the principles of ion energy, nuclear energy, plasma jets, arc-thermodynamic and magnetohydrodynamic systems.</p>

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# Letter To The Editor Opposes Loyalty Affidavit Provision

Editor, California Tech

McCombs and Trenholme, in last week's letter, gave a rather skillful but typically limited defense of the "Loyalty Oath" provisions of the National Defense Education Act.

They picture hordes of slimy, lying, bomb-carrying, government-overthrowing Communists filching government scholarships coming with which they will conquer the U.S.; they picture similar animals using subsidies to teach rotten lies to the innocent young patriots of America. I will gloss over the several gaps in their logic, and their repeated use of vague terms; suffice to say that they are there.

McCombs and Trenholme represent an attitude that is growing within our government — if you look long and hard enough, you can find a few crackpots who threaten to assassinate Eisenhower, and if you concentrate on them long enough, you can become genuinely alarmed. Should we then for this resolve that henceforth the whole of the United States shall be devoted to anti-Communism? If so, I am hereby announcing my departure to a place where I can be pro-something once in a while.

Our legislators seem obsessed with the idea that their violent overthrow is imminent. This places them in the somewhat ludicrous position of demanding loyalty (renewable annually) from scientists and students, who are to be the new national heroes.

Perhaps the crux of the argument is, do these much-heralded traitors and betrayers constitute an influence arge enough to pose a threat? Is enough gained by the oath to compensate for the disturbance it creates? My answer is in the negative.

No small number of imported secret-stealers and assassins can seriously dent this country's stability. No whisper campaign will crumble our foundation, unless there is something to wisper about. No rabble-rouser will sway the American people into revolt — no people so well fed and well occupied will either join in a violent revolt or allow one to take place. No major revolution has taken place where there was no real ax to grind. Our fear, then, is not of Communism from without, but of injustice from within. We do not need loyalty oaths, especially not in order to get an education.

If the government must legislate confidence for itself directly, rather than earn it indirectly through virtue and efficiency, is it not a step back? Is this threat so well organized that it forces us to take a step back, no matter how small? This is no time for infringements on liberty — of any sort. If our country is to be at its best in this time of trial, it must operate as always — on the basis of increasing freedom and openness, not on a restriction of many for the conviction of few. I do not advocate complacency; I advocate confidence that we can keep our own house in order without suppression, and come out the better for it. The United States government has more loyalty than it needs, without asking.

Certainly this is oversimplified — I trust to the reader the job of cleaning up the rough edges. Certainly saboteurs cannot be

let run loose; but let's not make a mania out of tracking them down. Certainly Communists exist. So do Facists. Certainly the world is divided down the middle. But international policy is not the question here; only internal affairs. Loyalty cannot be legislated, it must be earned. Legal gimmicks are not the answer United States' opposition to communism.

Let's clear the air: trust a lit-

tle, talk a little; let's have more of the fair, open competition upon which this country thrives; let's cut down on the secrecy and suspicion which has begun to sneak up on us; let's start by protesting loudly against loyalty oaths.

I don't doubt that Techmen have not and will not respond with unified enthusiasm to Moler's suggestion for action—the

colleges which have rejected NDEA are not technical schools; Techmen do not spend too much time contemplating social reform; many are resigned to the presence of loyalty oaths, or find themselves somewhat less than aroused by the whole deal. Few wish to jeopardize their position by opposing the oath. On the other hand, in the unlikely event that Tech should as a group oppose the oath, it might

well precipitate a decisive national chain reaction.

I understand and respect the fears of proponents of the loyalty oath. Nevertheless, I am convinced that the other factors which I have mentioned outweigh any call for a loyalty oath in conjunction with NDEA, and for this reason I decided to oppose it publicly.

PAT MANNING

Wednesday, Feb. 10

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# Another Letter Also Takes Stand Against Disclaimer Oath

Editor, California Tech

Last week "a rather hysterical condemnation" appeared in the Tech, defending the oaths necessary for a National Defense Education Act loan. All people demanding the removal of the disclaimer oath were characterized as non-thinking parrots. It is reassuring to know that among these parrots are all 67 members of the American Association of University Professors (Caltech included), 42 out of 89 voting Senators, and President Eisenhower.

The NDEA is the first significant act by Congress to provide help for students seeking higher education. Its terms include a low 3 per cent interest rate and deductions for prospective elementary and secondary school teachers. It is the best large scale loan program in existence. In addition to receiving money the student must sign two oaths.

The first oath is the controversial one. It is an affidavit in which the student assures that "he does not believe in, and is not a member of and does not support any organization that believes in or teaches, the overthrow of the United States government methods." The second oath affirms "I will . . . defend the Constitution and laws of the United States against all its enemies, foreign and domestic." Though I am fairly sure that Trenholme and McCombs are not any less patriotic than myself, I feel that by prescribing what a student can or cannot believe, they are, in fact, enemies of the Constitution.

The best precedent for the loan disclaimer is the Supreme Court case, **American Communications Association vs. Douds**.

The case involved the belief disclaimer of the Taft-Hartley Act, an oath identical in wording to ours. Justice Jackson, one of the conservative members of the court, said:

"Only in the darkest periods of human history has any Western government concerned itself with mere beliefs, however eccentric or mischievous, when it has not matured into overt action; and if that practice survives anywhere, it is in the communist countries whose philosophies we loathe."

The Douds case of 1950 sustained the oath by a three-to-three vote, but it is fairly certain that the present Court would declare it unconstitutional. Justice Frankfurter, who is the pivotal person on civil liberties issues, made it clear in the Douds case that when Congress passes provision relating to belief as opposed to actions, it "has cast its net too indiscriminately."

The question most people ask is, how many freedoms am I really giving up by simply signing a piece of paper, especially since I don't believe in that Communist stuff, anyway. The NDEA is a clear case in which the government is setting standards of belief by penalizing people who refuse to sign oaths. The history that Hitler has given us shows that we must protect our rights of free thought against any encroachment by the government. Even mild (in comparison with Germany) investigations by McCarthy were very effective in silencing his opposition. Our best protection against possible dictators is to keep government completely out of determining people's ideas, even through "innocent oaths."

The effects of the McCarthy era can be ascertained by asking yourself if you would have

any hesitations about visiting a Communist Party meeting. I surely have qualms. Disclaimer oaths are a perpetuation of the McCarthy tradition. They, too, are standards of right and wrong. Open discussion, not legislation, should be seduced by it. We need have no fear of Communism in the marketplace; and the FBI and the Smith Act are doing an excellent job in the cellar.

The reason given in last week's letter for giving up our Constitutional rights was "to exclude the disloyal or punish them if they lied to obtain government funds . . . That perjury is easy to prove." However,

guilt of perjury is hard to prove. The Californians tried under the Smith Act were acquitted due to insufficient proof that they were advocating the illegal overthrow of the government. The chairman of the California Communist Party could sign the disclaimer without any fear of perjury. Am I to believe that it would be easier to prove that a student wants to overthrow the government? Moreover, there is absolutely no truth to the allegation that Zionism is linked to Communism.

Anyone interested in the menace of Communism should read Dr. Buchman in "America Needs an Ideology," by Campbell and

Howard. He points out that if democracy is to survive we must present to the uncommitted nations of the world an ideology with which the Russians can not compete. Buchman's ideology of four absolutes is not sufficient as they are also claimed by Communism. There is only one commodity that America has which Russian cannot claim.

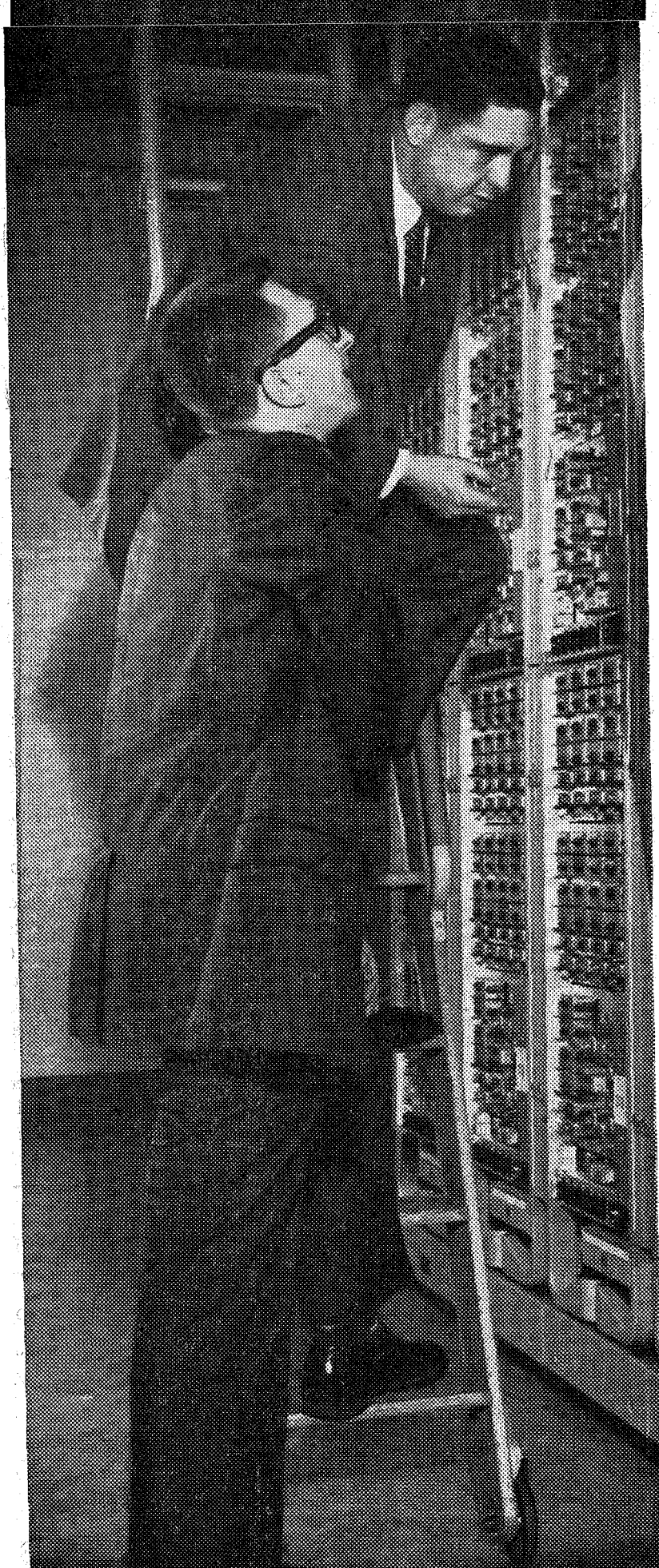
The freedom of thought that I have been talking about is this commodity. It is the one light that has been attracting Afro-Asian nations. In recent years this light has been harder for them to find. It would impress them to know that our government supports a person's college

education no matter what he believes.

By opposing the oath I do not want to take money away from those that have the loans at present. If Caltech really finds it impossible to make up the difference in interest rates, I feel that it should at least take a stand against the disclaimer oath. As an Institute and a student body we could play an effective role in convincing the three senators needed to remove the disclaimer oath. There are very few things that we as students can have much effect upon, but this issue is certainly one of them.

STAN KLEIN

## MEET BURNELL RICHARDSON AND DICK MASLOWSKI



They're transmission engineers with Michigan Bell Telephone Company in Detroit. Burnell graduated from Western Michigan in 1951 with a B.S. in Physics, spent four years in the Navy, then joined the telephone company. His present work is with carrier systems, as they relate to Direct Distance Dialing facilities.

Dick got his B.S.E.E. degree from Michigan in 1956 and came straight to Michigan Bell. He is currently engineering and administering a program to utilize new, transistorized repeater (amplifier) equipment.

Both men are well qualified to answer a question you might well be asking yourself: "What's in telephone company engineering for me?"



SAYS DICK:

"There's an interesting day's work for you every day. You really have to use your engineering training and you're always working with new developments. Every time Bell Laboratories designs a new and more efficient piece of equipment, you are challenged to incorporate it in our system effectively and economically. For example, I have been working on projects utilizing a newly developed voice frequency amplifier. It's a plug-in type—transistorized—and consumes only two watts, so it has lots of advantages. But I have to figure out where and how it can be used in our sprawling network to provide new and improved service. Technological developments like this really put spice in the job."



SAYS BURNELL:

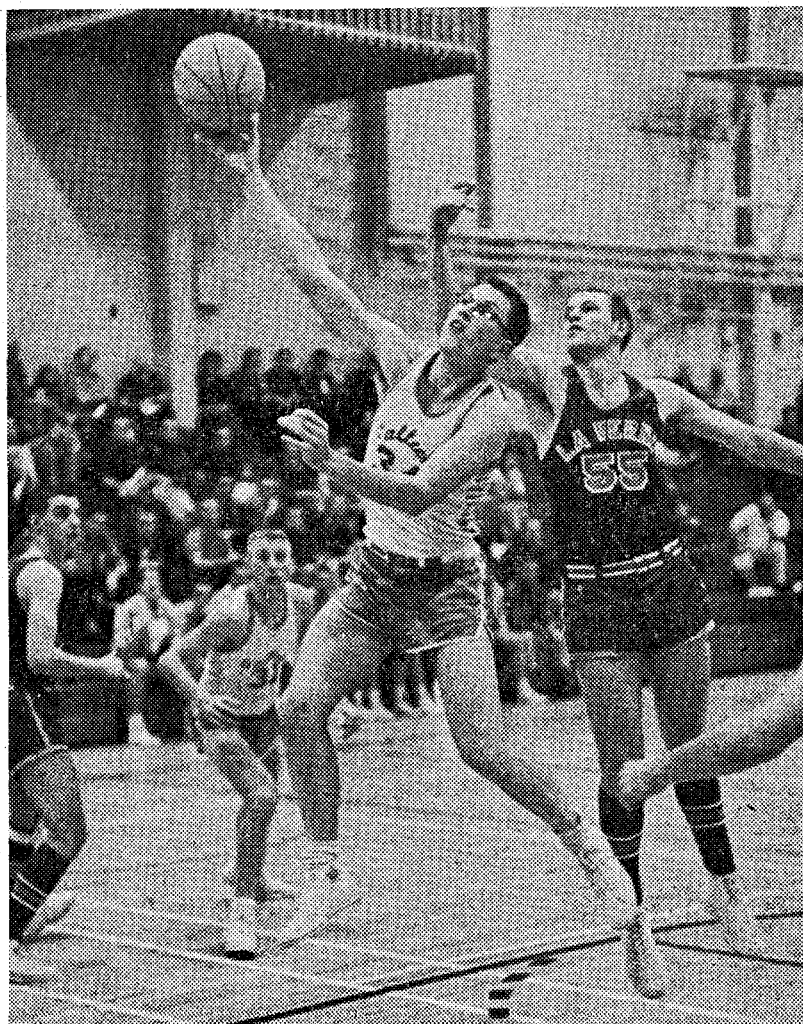
"Training helps, too—and you get the best. Through an interdepartmental training program, you learn how company-wide operations dovetail. You also get a broad background by rotation of assignments. I'm now working with carrier systems, but previously worked on repeater (amplifier) projects as Dick is doing now. Most important, I think you always learn 'practical engineering.' You constantly search for the solution that will be most economical in the long run."

There's more, of course—but you can get the whole story from the Bell interviewer. He'll be visiting your campus before long. Be sure to sit down and talk with him.

BELL TELEPHONE COMPANIES



# Beavers Drop Three Games, Face Redlands, Riverside Next



Forward Roger Noll drives around his man for a layup in the La Verne game. Beavers lost by a point.

Tall and talented Whittier handed the Caltech basketballers a hard fought defeat last Tuesday, 60-46. The Poets tremendous forward wall, consisting of Mason, Hooks and Johnson, demonstrated their scoring and rebounding skill to nab the win.

Leading by a scant 31-24 at halftime, the Poets almost blew it to the Beavers, connecting on only one field goal in the first eight minutes of the second half. With ten minutes left on the clock, the scored stood tied at 40 all. The Beavers were unable to keep up, however, and fell steadily behind until the end.

Top scorer for the Beavers was, again, Fred Newman with 20 points. Bill Ripka scored 14.

Rebounding, the Poets strongest point in past games, was remarkably even between the two teams, the Caltech team fighting hard for the loose balls. Mason, however, managed to set a new record in rebounding for

# The California Tech SPORTS

Whittier players, grabbing 31.

The Caltech basketball team extended its losing streak to six straight last week by dropping successive games to Occidental, La Verne and Whittier. In all three games the Beavers suffered from cold shooting plus spasmodic lapses on defense.

### LA VERNE WINS

La Verne upset the Beavers last Saturday by sinking a field goal in the last eight seconds to win, 65-64. The Beavers, forced to play the last half without the services of an injured Fred Newman, managed to catch the Leopards after being behind by as many as 12 points during the second half. With five minutes remaining, forward Roger Nell sang an easy lay-up to tie the score, then seconds later, after a missed free-throw at-

tempt, Larry Brown swished a 15-foot jump shot to put the Beavers ahead. The local varsity could not hold the advantage, however, and the lead changed hands several times before the end.

The Beavers almost nabbed the victory as, with 25 seconds left on the clock, Dean Gerber hit a sideline jump shot, giving the Beavers the lead at 64-63. But moments later Gerber was called with a much-disputed personal foul while stealing the ball from a La Verne guard. The free throw was missed, but La Verne got the rebound, sinking the winning goal second later.

A desperation half-court shot by Brown as the buzzer sounded was off the mark by inches. Bill Ripka grabbed high-point honor.

(Continued on page 7)



## Beaver Chips

By Noll and Koh

### Beginning Of An Age

This season's basketball games have been the focus of several new developments in the Caltech athletic field. First, and I think most important, has been the excellent spirit displayed by the Caltech faithful at both the winning and losing causes. Contrary to the accepted opinion concerning the spirit of Caltech students, the typical pro-Beaver fan at the games this winter has been a raging, wild-eyed fanatic, which makes it all the more fun for everyone, team and fanatics! Anyone present at last Friday's game with Oxy will testify that the spirit was tops.

The second new innovation this term is the ability of ASCIT photo to take really competent action shots for print in the newspaper. Specifically, Gary Goodman and Graeme Blake have turned out excellent photographs, and each seems to be better than the last.

On the sour grapes side, the third point is that the refereeing at the games has, in my estimation, reached a new low. Its tough enough to lose games to five players, but when you lose to seven, that's downright depressing. The LaVerne game was possibly the worst yet, the fitting climax being the highly questionable call on Dean Gerber when he stole the ball with about twenty seconds remaining.

The final development, back to the happy side, is that Caltech has finally produced a top-notch freshman squad. With depth and ability, the little Beavers have won all but two games this year. Things look great for next year's varsity.

### Whence Interhouse Sports

Last term we ran two columns on the future of the Interhouse sports program with the addition of three new student houses. In the furor of rotation and population battles, however, this problem seemed to have fallen on deaf ears. So now we try again.

Next year's Interhouse sports program must be basically different than this year's. We don't have the space nor the time to have the same program. In light of this, then, what are we going to do?

Certainly all of the House athletic managers, certainly the prospective managers for next year, should consider this question seriously—the future of Interhouse sports depends on it.

The California Tech sports department suggested that we run two sports a term next year, one a tournament variety and one a round-robin type (such as tennis and softball).

Any suggestions on this problem will be welcomed by the California Tech for discussion in subsequent columns.

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**Interhouse**

# Ricketts Wins Tennis, Ties Darbs For Lead

Ricketts and Dabney, perennial competitors, are now deadlocked with 75 points apiece in the wide-open Interhouse race. Fleming is just a pace behind with 70 points.

Riding the crest of three singles victories, the Rowdies blasted to a big tennis win. Ambidextrous John Walsh breezed to his second consecutive first singles triumph, losing only seven of 48 games in the process.

Rusty Marr, tied for the second singles winning berth, and freshman Ted Gibbs humiliated the opposition in annexing the third singles win for Ricketts with a 41-7 game record.

Blacker, using four seniors and a freshman, lost to the victors by the narrow margin of 34-31, with Neil Sheeley leading the way. Sheeley, tied for second single top spot, losing only to Marr by 8-4. Tom Jovin and Dick Robertson faltered slightly in the final doubles match of the day to take second slot behind Fleming's Bob Lin and Bob Rudick.

Dabney, Fleming and Throop rounded out the field.

Trophy standings at the half-way mark are:

	R	D	F	B	T
Softball	25	20	15	7½	7½
Cross-country	20	15	25	0	0
Swimming	5	25	20	15	10
Tennis	25	15	10	20	5
	75	75	70	42½	22½

Interhouse track is the next sport on the agenda with no overwhelmingly strong contenders on the horizon. Carl Hamilton in the discus is the only eligible returning event winner in

the 14 events. Ricketts, winners for two years, is due for an off-season with all their first and second-place winners from last season ineligible or graduated.

Blacker looks fairly strong but freshmen are always a big question mark. This year there is a heavy concentration of frosh runners, especially in the dashes and 330.

## Basketball --

(Continued from page 6)  
ors with 13 counters.

### SO DOES OXY

The Tigers from Occidental provided the defeat Friday night, thumping the Beavers, 83-60. Guard Billy Oates hit for 27 points to provide the crushing blow.

The first half of the game was close, with the Beavers trailing by from 5 to 10 points throughout. At half-time the score was 36-29 for the visitors.

During the second half, however, the Beavers fell behind, trailing at one point by 30 points.

High-point man for the Beavers was Newman with 15, but Fred was exceptionally cold from the field, hitting but two field goals in 22 attempts. Close behind was Noll with 13 points.

The Saturday the Beavers make the long trek to Redlands to challenge the league-leading Bulldogs. Redlands previously beat Caltech, 76-60.

SCIAC statistics show several Caltech players at or near the top in various areas. Fred Newman leads the league in scoring, with Len Maley ranked eighth. Roger Noll is second in rebounding, while Newman is fifth.

## Alchemists Still Winning Games

Caltech's other basketball team, the Alchemists, have had the commendable trait of winning games for the past few years. Although their record is only moderately good this year (4-3), the Alchemists have been undefeated in league competition for the past two years and have advanced to the semifinals of the Los Angeles County Recreation Park Tournament.

Managed by Dr. Herschell Mitchell, the team consists primarily of Caltech faculty and graduate students. It includes Dr. Fred Anson, Ch.; Dr. George Richter, ChE; Phil Platzman and Tom Koehler, Ph.; and Bill Anderson, A.E. Only Anson has had previous experience. He led Caltech to its only SCIAC basketball championship in 1954 and was named all-conference center.

Mitchell has managed the team since its conception 10 years ago. In addition to the Alchemists, he manages a volleyball team and a baseball team of Caltech volunteers. His absence for the year has been sorely felt. (Mitchell is on a leave of absence this year.)

The Alchemists play in a

# Frosh Record Indicates Strong Future Varsity

A full court press on the small Whittier floor coupled with a poor shooting night contributed heavily to a 60-51 defeat of the Beaver frosh by the Whittier frosh Tuesday.

Dave Barker connected for 15 markers to lead the frosh attack points of the lead with three minutes left to go. Only a terrific foul shooting percentage kept the frosh, now holding a 7-2 overall record and a 3-2 slate in loop play, in the game against the league leaders.

The Caltech freshman basketball squad team won two out of three games during the past week, bringing their season record to 7-2.

Last Saturday the Beavers outclassed the La Verne JV's, 77-53. The visitors were never in the

league of amateur teams sponsored by Pasadena business concerns. Mirror-Glaze sponsors a team as does Gwinn's. Most of the games are played Monday night at PCC, with three more games to be played this year.

game after the first 10 minutes, with Caltech applying its new-found hustle very effectively. In spite of the absence of starting guard Dave Barker due to an injury, the Beaver offense machine was able to roll effectively.

Led by a 6-foot 10-inch center, the Occidental frosh were defeated by Caltech on Friday, 58-53. Although completely outmanned in the height department, the Beavers demonstrated enough hustle and ability to grab a win.

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Appointments for interviews Thursday and Friday, February 4 and 5, can be arranged through the Student Placement Center.

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# S. A. Expert Visits Campus

BY MATT COUCH

If the United States hopes to improve relations with South America, we must take the nations and people of this area seriously and show interest and respect for their accomplishments and aspirations. So states current campus visitor Richard W. Patch, the second member of the American Universities Field Staff to visit Caltech this year.

Patch says that a common picture which people in South America have of the U.S. is that of a large child who hasn't grown up much. Patch feels this view is justified in many instances. Our physical size and wealth support the "large" idea. The fact that we haven't grown up is evidenced by our lack of a long-range policy of any sort, and our apparent indecisiveness, toward South American affairs.

### Bolivian Action

As an example of action which is harmful to the U.S. image, Patch cites the recent history of our aid to Bolivia. During and after World War II, the U.S. started a modest program of technical aid to Bolivia which was accepted. As the cold war lines were drawn, our aid increased greatly, but became in many cases directed toward political ends. About 1956, U.S. budget-cutting caused large foreign aid slashes which were most strongly felt in South America, for reasons not explained to the people there.

Events such as those just outlined, says Patch, have made South Americans feel confused and ignored by the U.S. As a result, they have developed a rather cynical attitude toward the U.S. and are reluctant to accept aid with any strings attached.

### Economic Needs

Deterioration of South American relations is potentially very serious, explains Patch, if only for economic reasons. As our own resources are depleted, we will increasingly need to seek sources in South America. But, if the U.S. continues to lose markets in South America we may well find these sources out of reach.

Patch feels that improved U.S. relations with South America in the political and economic fields can only result if relations on the social level are improved first. To improve social relations people in the U.S. must show interest in South America and

cease to take South America's friendship and support for granted.

### Exchanges Needed

More exchanges of students and wider study of South American affairs and histories in American colleges would be a big help.

In his discussions here at Tech, Patch will draw upon his wide knowledge of Peru and Bolivia to explain developments in South American. He will attempt to analyze events, distinguish current trends, and offer possible solutions to some of the many complex problems of the area.

Patch's schedule from this afternoon until next Tuesday (his last day at Tech) follows:

### Schedule

This evening he will have dinner at the home of Dr. and Mrs. Hallett Smith.

Tomorrow Patch will attend Econ 100 at 8 and 11 a.m. in 101 Dabney, speaking on "Bolivia

and the IMF." At noon he will speak at the YMCA undergrad lunch, topic, "An Indian on the Make."

Patch has dinner scheduled at the home of Dr. and Mrs. Carl Anderson.

He will be out of town over the week end, returning to campus Monday afternoon. Monday evening he will have dinner in Blacker House, followed by a YMCA Public Affairs Commission panel discussion in Dabney lounge at 7:30 p.m., titled, "Revolutions in South America."

Tuesday morning at 11 a.m., Patch will attend H 5 in 206 Dabney, discussing "Bolivia and the Outside World." He will have lunch with the H 5 staff. After dinner with Dr. and Mrs. Peter Fay, Patch will attend the 8:00 a.m. H 124 meeting, discussing "The Indians of the Andes."

Patch is staying in Ricketts House guest suite.

## Apply Today For Honor Key, t Ed.

Application deadline for Honor awards is today. Interested students should drop a note listing their names and student body services to Hugh Keiffer, K-Box, Blacker.

Next Thursday is the deadline for applications for Little t editor. These should be given to Keiffer also.

## Interview Sked

Thurs., Jan. 28—Anaconda Wire.  
Thurs.-Fri., Jan. 28-29 — Union Oil Co. of Calif., Westinghouse, Spuace Technology Labs.

Fri., Jan. 29—NASA (Edwards and Moffett), Kobe

Mon., Feb. 1—Carnation, So. Cal. Edison, Del Mar Engineering, Beckman, Marquardt.

Tues., Feb. 2—Texaco, Bourns, Endeveco.

Wed., Feb. 3—Raind, Convaic-Pomona, Douglas.

Thurs., Feb. 4—Douglas, Ampex, Linde, Goodyear Aircraft, Du Pont, Ramo-Wooldrige.

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### STATE

770 E. Colorado, Pasadena  
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"ROOM AT THE TOP"  
Simone Signoret  
Laurance Harvey  
"LOOK BACK IN ANGER"  
Richard Burton

## The man in the moon wears a western hat

In advanced electronics, the mark of the West is everywhere—in the far corners of the earth—under the seas—even in outer space.

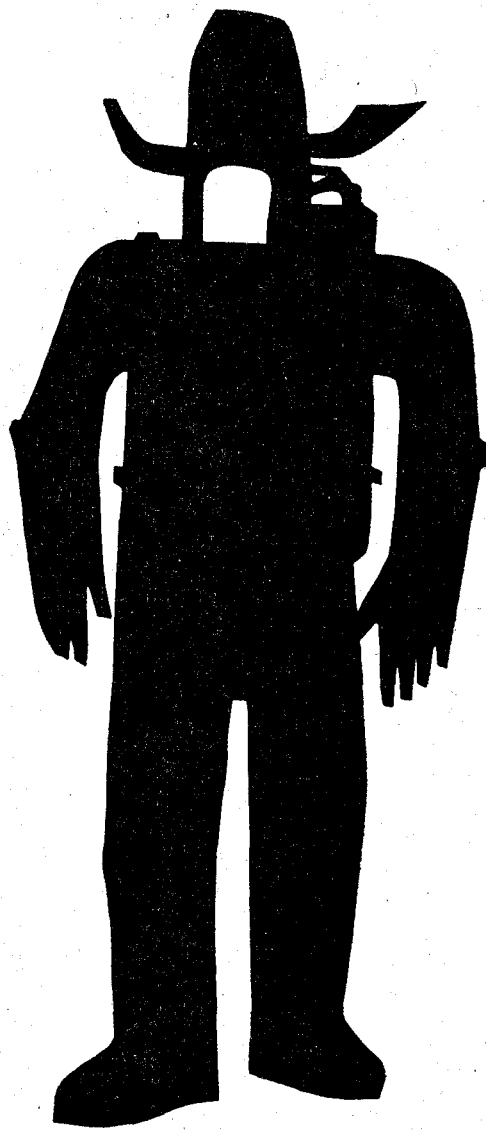
Western-born Beckman Instrumentation is at work right now exploring the mysteries of plant life the world over. Here, as part of a program in pharmaceutical research, Beckman recording spectrophotometers are used in the study of obscure leaves, flowers and roots to speed the discovery of useful new drugs.

At sea, atom-powered submarines carry Beckman atmosphere analyzers to monitor air purity. A Beckman data processing system sped development of the nuclear power plant for the Navy's first atomic surface ship.

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Everywhere, the influence of the West is unmistakable. Even the moon cannot escape.



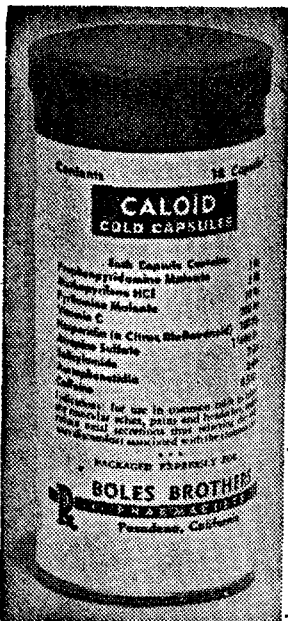
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