BOD Opposes Defense Loan Oath

The ASCBT Board of Directors decided Monday night to oppose the military oath-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, which would be consistent with the interpretation 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.

The questions discussed were:
1. Are students as a group being discriminated against?
2. Do you want to work for the government?
3. Is the affidavit beneficial to national security?
4. Is the oath being used against the government's right of freedom of speech?
5. Are you willing to take an oath?

Tomorrow, Friday, April 22, at 12:30 p.m. in the Assembly Chamber, applications will be accepted for 10 House positions. The student Senate will be handling the organization of the selection of the local Senate, which will be required to move.

Huttenback hopes to try to catch the lists coming to the house to determine the lists at that time.

To determine the lists, Huttenback hopes to give the house members a chance to put names of freshmen to be added to the lists at that time. The first meeting will be at 9 p.m. in the house and will pick up the resolution of the question of equalizing class lists among houses.

Excerpts from a section of the resolution as it stands now, unless the board decides otherwise:

This year's edition of the Folk Singing Group will be supplied with a (non-student house) box lunch. Sign-up for observers will be held Monday and last until the break-in begins. Applicants should contact the Industrial Relations Office, 313 Through. The IAO will be handling the organization of the selection of the student members. Klappi is assistance chief observer.

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 will be held on Saturday, April 23, at Los Angeles State College.

Each participating college will send a candidate and a delegation of five, unless the college has a state of its own selection. Caltech will participate in the third group with students who want to participate. Students interested in being delegates to either convention will contact USC Alumni, 903 Bruning (as soon as possible).
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, in the capacity of an original member of the Board of Directors, serves as a liaison between the ASCIT and the Dean's office.

—Tom Tobeck

**Treasurer**

The duties of the ASCIT Treasurer afford an opportunity for the officer holder to obtain business and accounting experience by maintaining financial records for a $5000 non-profit corporation. His position affords him a big influence in determining the fiscal budget. He also oversees the $5000 spent yearly by the publications.

—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 sponsors of our different awards in attempts to get the proper awards at the right time. In respect 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.

—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, Tomorrow, 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 publicising.

In addition to sitting on the board and writing editorials, he is a member of the faculty responsible for maintaining the vital stacks of paper, envelopes, and stamps in the Board Room as well as handling other Board trivia.

—Pete Metcalf

**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. Should this happen, notice this comment, their first reaction would probably be "What in tarnation is the Executive Committee?" The froth have never heard of ExComm and most everybody else—including ExComm members—has forgotten about it.

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

The group's "accomplishment" has consisted of the Ex-Comm's refusal to take a vote on the question, "Are there supplementary provisions which could be inserted into the By-Laws to make them more effective?"

ExComm claims to have run out of things to think about. Judging from the 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 was willing to do it. So, unless somebody can scrape up a half-dozen people, 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 BO.C 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 begins to crack at best. Yet the distinction exists and must be carefully recognized.

The picture of a student before the Board of Control, facing a 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.

At the individual and institutional areas, it is necessary to resort to the intent behind our honor system. The freedom it grants is to be used to the best possible advantage, but not from the responsibility of respecting the rights of fellow students, faculty members, 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 indiscriminate use of sources as well premised cribbing or 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 credit in footnotes and bibliography, according to the conditions set forth by the Instructor, also rests on the student. In this case, ignorance is not bliss.

---

**The California Tech**

Published weekly during the school year by the Associated Students of the California Institute of Technology, Incorporated.

**Editorial Board**

Clive Helper, Editor
John Pease, Assistant Editor
Lame Taylor, Assistant News Editor
Harry Smith, Business Manager

**Editorial Staff**
Bob Robb, Art Director
Lance Taylor, Assistant News Editor
Harry Smith, Business Manager

**Business Staff**
Neil Sheats, Bill Marsh, Managers
Circulation: Philip Bratton, Doug Smith
Member of The Associated College Printers
Second Class postage paid at Pasadena, California


---
Girls, girls, girls! ... drink, drink, drink—sing, sing, sing . . .

Alan Tobias left his lush suite at the Huntington-Sheraton and stepped into his 1292 Iona-Fraschelli; it was 9 o'clock and he was already late to his 10 o'clock class. What a bore life was to poor Alan.

Arturo Rubino, son of an Italian peasant, had been working since 6 a.m. at his landlord's alfajero druggist in order to pay his last year at school; just one more summer job and he would be able to give back the loan to the Institute. Wearyly he climbed on his Rollfast two-wheeler and began to pedal to his one-room flat on North Fair Ave., Los Angeles Division. He approached for his breakfast—his Rollfast two-wheeler had the heart of a golden Rolls and the strength of a hurricane.

As he approached for breakfast, his dream of a serene existence. The sun was now shining, and he could see a beautiful creature, a street, a lovely girl, and a honeybee. But mostly it was Aunt Mamie's story . . .

As he approached for his breakfast, he was driving along a country road, a bee zoomed into the car, settled on the steering wheel a couple of inches from his hand, and stung him. What did Jim do? In astonishment he was fighting with the bee, skirmished three times to nate it or shoo it out of the car.

As a result, the car careened across the road, into 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 examination, 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; but Aunt Mamie had the wisdom of the heart, and a certain calm of soul and a certain calm of soul

"I'm my pause, pause, power formulas," she told me, smiling the smile of an apostle of wisdom. "You know what a little know-how is worth? It doesn't cost a bean! You can't do anything in this country without a little know-how; it's a chance to build up power."

Pause, pause, power formulas. How THE WONDERFUL SECRET. Often I have thanked Aunt Mamie for giving me the wonderful secret!

—Grace V. Watkins

**ENGINEERS AND SCIENTISTS**

**REPRESENTATIVES OF NORTH AMERICA AVIATION, INC.**

**WILL CONDUCT ON-CAMPUS INTERVIEWS Feb. 11 & 12**

Visit your placement office now for all the facts about a future with North American Aviation, Inc.

**Drapes Sandia**

**Cosmetics Tobacco**

**CALIFORNIA RECALL**

**PHARMACY**

**CRESCENT CITY, ORANGE, FL**

**555 S. BROADWAY**

**7-3156**

**Breakfast Dinner Lunch**

**WACHES**

**engineered for success.**

**Widely sought by leading

**Sciences and American researchers**

**HE WOYES and SON**

**108 SOUTH LAKE AVE**

**BRIGHT LIGHTS...**

**COFFEE...**

**...AND SHOES**

**by griffen**

**The Wonderful Secret**

(Reprinted from the September, 1960, issue of *Beverly Hills Gentlemen*—Submitted by Brad Elson)

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

As he approached for his breakfast, he was driving along a country road, a bee zoomed into the car, settled on the steering wheel a couple of inches from his hand, and stung him. What did Jim do? In astonishment he was fighting with the bee, skirmished three times to nate it or shoo it out of the car.

As a result, the car careened across the road, into 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 examination, 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; but Aunt Mamie had the wisdom of the heart, and a certain calm of soul and a certain calm of soul, and a certain calm of soul

"I'm my pause, pause, power formulas," she told me, smiling the smile of an apostle of wisdom. "You know what a little know-how is worth? It doesn't cost a bean! You can't do anything in this country without a little know-how; it's a chance to build up power."

Pause, pause, power formulas. How THE WONDERFUL SECRET. Often I have thanked Aunt Mamie for giving me the wonderful secret!

—Grace V. Watkins
Letter To The Editor Opposes Loyalty Affidavit Provision

Editor, California Tech

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

They picture horse of silly, lying, bomb-carrying, government-overshadowing Communists flocking to 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 it to say that they are there.

McCombs and Trephonie represent an attitude that is growing within our government — if you look hard enough, you can find a few crackpots who threaten to assassinate Eisenhowever, and if you concentrate on them long enough, you can be very 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 overthow 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 to those much-heralded traitors and betrayers constitute an influence great 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-sellers and assassins can seriously dent this country's stability. The whisper campaign will crumble our foundation, unless there is the idea that their violent overthrow is imminent. No rabble-rouser will sway the American people into revolt — it takes people so well fed and well occupied either join in a violent revolt or allow one to take place. No major revolution has taken place where there was no need for them. Our fear, then, is not of Communism from without, but of injustices from within. We do not need loyalty oaths, especially not in order to get an education.

If the government must legislate for itself directly, rather than earn it indirectly through virtue and efficiency, is it not a step back? Is this threat so widely organized that it forces us to take a step back that is almost imperceptible? No. The threat is so small that it will crumble our foundation, unless there is the idea that their violent overthrow is imminent. This is no time for, in the words of Mr. Justice Cardozo, "the administration and production of force" by "a little and rather skillful polemic" — the basis of increasing freedom, and openness, not on a restriction of might 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 without 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 Pacifists. Certainly the world is divided down the middle. But international policy is not the question; 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 little, 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 speak 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 Mr. Wolfer's suggestion for action — the colleges which have rejected NDEA are not technical schools; Techmen do not spend too much time contemplating social rearrangement are assigned 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 fear 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.

P.AY MANNING

Wednesday, Feb. 10

THE GARRETT CORPORATION

AiResearch Divisions

will be on campus to interview

ENGINEERING STUDENTS

B.S.-M.S.-Ph.D. candidates

The Garrett Corporation is one of the most diverse research, engineering and manufacturing organizations in the aircraft, missile and technological fields.

From AiResearch laboratories have come pioneer developments in aircraft and missile components and systems. Today 90% of the free world's aircraft use AiResearch equipment.

Other Garrett divisions and subsidiaries are creating a variety of products, including industrial turbochargers and survival equipment, as well as supplying sales and service to airframe companies, airlines and the military.

Project work is conducted by small groups in which individual effort is more quickly recognized and opportunities for learning and advancement are enhanced.

With company financial assistance, you can continue your education at fine neighboring universities.

- TYPICAL PROJECT ACTIVITIES -

Electronic air data computers, pressure ratio transducers, instruments, electrical systems and motors and generators

Preliminary design, from analytical and theoretical considerations, for high-level technical work in aerodynamics, stress analysis, thermodynamics, heat transfer, cryogenics, pneumatics, nuclear power and mathematics.

Auxiliary power units and hydraulic and hot gas control systems for various types of missiles.

Electronic air and vapor cycle refrigeration turbines, pneumatically and mechanically driven components.

Gas turbine engine and other high speed rotating machinery design and analysis involving gas dynamics, thermodynamics and aerodynamics.

Air and spacecraft environmental control systems involving air and cryogenic valves and controls and heat transfer equipment.

- ORIENTATION PROGRAM -

In addition to direct assignments, an eight-month orientation program is available to aid you in job selection. You participate in Garrett project and laboratory activities and work with engineers who are outstanding in their fields. Your orientation may include familiarization with sales, contract administration and production.

- JOB OPPORTUNITIES -

Thermodynamics
Aerodynamics
Missile Hot Gas and Hydraulics
Combustion Analysis
Chemical Engineering
Mechanical Engineering
Instrumentation Design
Gas Turbine Engines
Stress and Vibration Analysis
Preparatory Design
Physics
Gear Design

Laboratory Engineering
Cryogenics
Aerodynamics
Mathematics
Electrical Engineering
Instrument Design
Electronics
Analog Computer Design
Cycle Analysis
Central Engineering
Computer Programming
Space Physics and Ionization
Sales Engineering

Missile Turbine Accessory
Power Units
Magnetic Amplifiers
Liquid Oxygen Systems
Air Turbines
From Centrifugal Compressors
Welding Engineering
Turbocompressors
Connecting Networks
Electronic Flight Data Systems
Electronic and Transistor Circuity
Air Conditioning and Heat Transfer

THE GARRETT CORPORATION

9851 S. SEPULVEDA BLVD., LOS ANGELES 46, CALIFORNIA
DIVISIONS: AiResearch Manufacturing, Los Angeles; AiResearch Manufacturing, Phoenix; AiResearch, Aerospace Industrial; Aerogear Engineering; Air Cruisers; AiResearch Aviation Service
Another Letter Also Takes Stand Against Disclaimer Oath

Editor, California Tech

Last week a "rather hysterical condemnation" appeared in the Tech, defending the oath necessary for students seeking education under the National Defense Education Act loan. All people demanding the removal of the disclaimer oath, be it non-thinking parrots, are, however, centrist or mischievous, when it is reassuring to know that among those who are demanding the removal of the American Association of University Professors, California branch, included 43 out of 80 voting Senators, and President Eisenhow-er. 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 income tax. 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 "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 ene mies, foreign and domestic." Though I am fairly sure that Treesholme and McCombe 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. Dowds. 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 centrist or mischievous, when it has not matured into overt action; but if that practice survives anywhere, it is in the communist countries whose philosophy we abhor." The Dowds case of 1956 sustains 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 Dowds case that when Congress passes provision relating to belief as opposed to actions, it "has cast its net too indiscrimi nately."

The question most people ask is, how many freedoms are I really giving up by signing a piece of paper, especially since I don't believe in the Communist Party? It's simple. 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 of the solution that 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, an idle 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 dialogue or punish them if they lied to obtain government funds . . . That perjury is easy to prove." However, mult of perjury is hard to prove. The Californian 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. Buchanan in "America Needs an Ideology," by Campbell and Howard. He points out that democracy is an overcomitted nation of the world an ideology, with which the Russians can not compete. Buchanan'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 thing 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 is.

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 active role in persuading 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

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

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 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 use new, transistorized repeater (amplifier) equipment.

Both men are well qualified to answer a question you might well be asking yourself: What's a telephone company engineering for me?"
Beavers Drop Three Games, Face Redlands, Riverside Next

Tall and talented Whittier handed 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 count 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 part in past games, was remarkably even between the two teams, the Caltech team fighting hard for the loose ball. Mason, however, managed to set a new record in rebounding for 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, 66-64. The Beavers, forced to play the last half without 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 Noll sunk an easy layup to tie the score, then seconds later, after a missed free-throw attempt, 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 deep penetration half-court shot by Brown as the buzzer sounded was off the mark by inches. Bill Ripka grabbed high-point honors.

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 Eugene 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 fudging 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.

Masters & Doctoral Candidates

Space Technology Laboratories, Inc., Los Angeles, California, has been a pioneer since 1954 in virtually every phase of theoretical analysis, research and development, of military and civilian space systems including the systems engineering and technical direction for the Air Force Ballistic Missile Program.

STL invites you to see our technical representatives when they visit the campus on

JANUARY 28 and 29, 1960

to discuss opportunities in the following fields:

Theoretical Physics Experimental Physics Solid State Physics
Applied Mathematics Digital Computers
Space Communications Computer Design
Radar Systems Guidance & Navigation
Antennas and Microwave Telecommunications
Inertial Guidance Electro-Mechanical Devices
Analogue Computers Applied Aerodynamics
Aerodynamics Propulsion Systems
Systems Engineering

Please make arrangements with your placement office for interview appointment. If unable to see our representatives, you may contact STL by mail. Address your resume to:

College Relations, Space Technology Laboratories, Inc.
P.O. Box 95004, Los Angeles 45, California

Space Technology Laboratories, Inc.
**Interhouse**

Ricketts Wins Tennis, Ties Darbs For Lead

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

Riding the crest of three singles victories, the Beavers blasted to a big tennis win. Ambidextrous Fred Ricketts breezed to his second consecutive first singles triumph, losing only seven of 68 games in the process.

Rusty Marr, tied for the second singles winning berth, and freshman Ted Gibbs humiliated a freshman, lost to gles triumph, losing only seven of 62 games in the process.

Dick Robertson faltered slightly the opposition in annexing the single top spot, losing only to Neil Sheeley. Floyd Fleming and Bob Lin rounded out the field.

**Basketball**

(Continued from page 6)

So Does OXY

The Tigers from Occidental provided the defeat Friday night, thumping the Beavers, 85-60. Guard Billy Oates hit for 27 points to provide the crushing blow.

The first half of the game was close, with the Beavers trailing only by five to 10 points through half. At halftime 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 made the long trek to Redlands to challenge the league-leading Bulldogs. Redlands previously beat Caltech, 76-60.

SClAC stats show several Caltech players at or near the top in various areas. Fred Newman manned the league in scoring with Len Maley ranked eighth.

Basketball —

(Continued from page 6)

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 Kohler, Ph.; and Bill Anderson, A.I. Only Anson has had previous experience. He led Caltech to its only SClAC basket-

**Frost Freshmen Indicate Strong Future Varsity**

A full court press on the small Whittier floor coupled with a poor shooting night contributed heavily to a 40-61 defeat of the Beaver freshman by the Whittier frosh Tuesday.

Dave Barker connected for 15 markers to lead the fresh attack points of the lead with three minutes lefts to go. Only a terrific foul shooting percentage kept thereno, now holding a 7-2 overall record and a 5-2 slate in loop play, in the game against the league leaders.

The Caltech freshman basketball squad won two out of three games during the past week, bringing their season recor-

**Welcome to THE CAMPUS BARBER SHOP**

Near the Coffee Shop

ALL HAIRCUTS $1.50

Two Barbers to Serve You

**RAMO-WOOLRIDGEE**

RAMO-WOOLRIDGE invites ADVANCED DEGREE CANDIDATES in ELECTRICAL ENGINEERING PHYSICS MATHEMATICS MECHANICAL ENGINEERING to discuss with members of our Technical Staff professional research and development opportunities in the following general fields:

- MISSILE ELECTRONICS SYSTEMS
- ADVANCED COMMUNICATIONS
- INFORMATION PROCESSING SYSTEMS
- DIGITAL COMPUTERS AND CONTROL SYSTEMS
- ELECTRONIC INSTRUMENTATION and TEST EQUIPMENT
- BASIC ELECTRONIC RESEARCH
- ELECTRONIC RECONNAISSANCE and COUNTERMEASURES
- OPTICS and UNMANNED AIR NAVIGATION and TRAFFIC CONTROL
- INFRARED AND MICROWAVE
- ELECTRONIC LANGUAGE TRANSLATION
- NUCLEAR ENERGY APPLICATIONS
- APPLIED MATHEMATICS
- BIPASS and APPLIED PHYSICAL RESEARCH

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

**CONVAIR/POMONA in Southern California**

offers NEW PROGRAMS with excellent opportunities today for Engineers. Convar-Pomona, created the Army's newest weapon, REDEYE. Shoulder fired MISSILE and developed the Navy's ADVANCED TERRIER and TARTAR MISSILES and many other, still highly classified programs.

Positions are open for experienced and inexperienced Bachelors, Masters and Doctorates in the fields of Electronics, Aeronautics, Mechanics and Physics.

**CONVAIR/POMONA**

Convair Division of GENERAL DYNAMICS CORPORATION Pomona, California

Contact your placement office immediately to assure yourself of a conference interview with Convar-Pomona. February 3rd

If personal interview is not possible send resume and grade transcript to B. E. Convar-Pomona, Engineering Personal Administrator, Dept. CH-419 Pomona, California.
S. A. Expert Visits Campus

BY MATT COUCH

If the United States hopes to improve relations with South America, we must take the Indians 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 much.

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 clashes 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 Dilemma

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 facts from myths, 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 Ecom at 100 and 8 a.m. in 101 Dabney, speaking on “Bolivia and the IMP.” 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 Home, followed by a YMCA Public Affairs Commission panel discussion in Dabney lounge at 7:30 p.m., titled, “Revolution 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 141 meeting, discussing “The Indians of the Andes.” Patch is staying in Ricketts House guest suite.

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 speeds development of the nuclear power plant for the Navy’s first atomic surface ship.

Across the land and in 54 foreign countries, Beckman provides fast, accurate control of manufacturing and processing operations—with pH meters, precision potentiometers, servomotors, computers and a host of other electronic components, instruments and systems.

In the race to space, Beckman plays an important part in the development of fuels, engines and the complex systems for bringing information (and travelers) back to earth. And when our first spaceman goes into orbit, his air supply will be guarded by a Beckman CO2 sensing element.

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

*The man in the moon wears a western hat*