

California Institute of Technology

Thursday, November 10, 1949

Volume LI.

Sophs Sack Slithy Frosh

The sophs again succeeded in proving that history repeats itself, by giving the frosh a sound beating of 5 to 2 at the mudeo held Tuesday at Tournament Park. The novice frosh couldn't get out enough men to beat the well organized class of '52.

Spectators Muddy

A number of people turned out to get mud on their shoes and clothes. The Pasadena Star-News sent out a reporter to cover the event which was witnessed by the students as well as some deans, members of the faculty, and well dressed outsiders. Many of the spectators got their share of mud, but others such as Dr. Clark managed to stay in good shape.

Junior Judges

Dallas Peck and Ray Greutert,

Sophs-Frosh

The Soph-Frosh dance has been scheduled for Saturday evening, November 19, and will be held in Dabney lounge and gardens.

president and vice-president of the junior class, handled the arrangements for the mess. The judges were Walt Pfeiffer, Jim Ibers, Dean Blanchard, John Fee, and Dick Brewer, with Ray Greutert, and Hiroshi Kamei acting as head judiciaries.

This year's mudeo was a one-sided affair with the sophs decisively winning each event. Many people feel that the victory was due to the experience of the sophomores, while others believe that if more frosh had gone out the results would have been closer. Tom Janssens,

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Health Fund

Because of the great increase in the cost of hospitalization, the Student Health Committee has found it necessary to confine itself in authorizing payments from the Emergency Hospitalization Fund strictly to the terms of its stated policy. Therefore, for the present, payment from the fund will be authorized only in those cases of illness and accident which occur during term time. In other words, no payments will be authorized for the present in cases of illness or accident which occur during any vacation period.

Institutors Aid In Tech Sports

Last week saw the C.I.T. Institutors busy mainly in the line of Tech Athletics. Blacker Institutors Butler, Smith, Schultz, Mitchell, Mishan, and Gehrels served as spotters in the cross-country meet last Saturday, while Dabney men Allison and Stockebrand donated their services at the Frosh football game by handling the chain. (The one that you stretch when it's on our side).

In fields other than athletic, credit goes to Ricketts House for producing the Consolidated Charities Drive thermometer sign on display by Olive Walk.

Campus Calendar

THURSDAY, NOVEMBER 10
12:00 Y Upperclass Lunch Club
12:15 Throop Club Meeting
7:15 A.S.C.I.T. Board of Directors
Meeting in Lower Fleming
7:45 Dancing Class

FRIDAY, NOVEMBER 11
11:00 1949 Rose Bowl Football Films
in Culbertson
4:15 Cross Country vs. Pomona in
Tournament Park
3:30 Soccer, Caltech vs. San Francisco
State in Tournament Park
Blacker Exchange with California
Hostel

Dabney Easter Party
Fleming Record and Bowling Party

SATURDAY, NOVEMBER 12
8:00 Caltech Football Varsity vs. Redlands at Redlands

5:45 Caltech Football Frosh vs. Redlands Frosh at Redlands

SUNDAY, NOVEMBER 13
7:15 Film Classics Series in Culbertson
7:30 Caltech Musicals in Dabney

MONDAY, NOVEMBER 14
7:15 Film Classics Series in Culbertson

TUESDAY, NOVEMBER 15
12:00 Y Freshman Lunch Club
7:15 Alumni Placement Talk in
Blacker

WEDNESDAY, NOVEMBER 16
7:30 Orchestra Rehearsal in Culbertson
9:00 Glee Club in Throop Club



Decoration scenes, before and during last Saturday's Interhouse Dance; upper left, Jenny the Mule and admirers in Blacker Court; Upper right, Ricketts; Lower left, Fleming; Center, Throop Club punch bar; Lower right, Surrealistic Dabney.

Devaluation Problems Told By Tech Foreign Student

Students from Sterling Bloc Face One-Third Cut in Funds

By Robin Williamson

The effect of devaluations upon Britain and the sterling block has been discussed on all planes and at great length, but very little has been said about its effect upon the struggling emigrant students of these countries, who will one day be required to play leading roles in the recovery plan of which devaluation is but a small part.

Fortunately only a few will find that this change has made continued study in the U.S. actually impossible, while American students abroad will certainly welcome the higher standard of living afforded by the more favorable exchange rates.

Added Drain

In the majority of cases the additional drain will be from personal or family sources, since the grants and scholarships which aid the students from abroad are, almost without exception, made in terms of the currency of the country of their origin.

Therefore it seems likely that in the future prospective students from the countries with devalued currencies will find study at American institutions less practicable and will tend, more and more, to search among

the appropriate establishments in their own monetary block.

Dollar Permits Cut

It is possible that foreign grants may be raised to equal their dollar value before the cut and also that schools in this country may increase the number of scholarships available to foreign students, but such legislation takes time.

In addition, the number and amounts of permits issued for the purchase of dollars by private foreign students, with or without grants, is expected to be drastically reduced, although in long range economic policies aimed primarily at competitive export, it may be found more important to invest in scientists

and men with technical knowledge rather than to invest in consumer goods.

One-half to One-tenth Cut

In general, as matters stand at present, all students from Great Britain, Scandinavia, the Low Countries, and the Middle and Far East, who do not have dollar originated scholarships

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ASSEMBLY

Tomorrow at 11 o'clock, Silverwood's movie of the 1949 Rose Bowl game will be shown in Culbertson.

The movie of Northwestern's victory over California in the intersectional classic will be shown by Mr. Lee Hanson, the man who took the pictures originally. He will give a running commentary on the action to fill in on what the camera missed.

Hiway Engineer Jobs Available

Announcement has been made that the closing date for acceptance of applications for positions at grade P-2 for highway engineer and highway bridge engineer, \$3727 to \$5232 a year, is Nov. 16. Applications for these positions must be filed with the U. S. Civil Service Commission, Washington, D. C., not later than November 16, 1949. Applications for positions at grades P-3 through P-4 will be accepted until further notice.

Beavers To Sponsor Talks

The third Beaver meeting of the fall term was held Monday noon at the training table.

Dr. Rodman Paul was elected to the Executive Council as faculty representative. Most discussion centered on the Beaver-sponsored program of talks to local high schools by qualified Tech men. The high school program was quite successful last year and the Beavers anticipate an extended program of such visits this year.

It was decided that henceforth a Beaver member who failed to attend three meetings in succession without good reason would have his membership in the Beavers brought up before the group for review.

A motion to elect new members to the Beavers during the year, should the membership drop below a minimum of 5, was made and carried.

Rowdies Pound Brake Drum

The Brake Drum is on the loose again! Last Monday night the Ricketts Juniors, defending champs of the traditional Frosh-Soph battlepiece, lowered the greased orange and white drum into the patio on a wire. Then the brawl began.

Escape Thwarted

The fight centered around Kim Hamberger, who, being the tallest man around, was therefore the first to get his hands on the treasured object. The Frosh put a flying wedge around Kim, but were thwarted in their attempt to break out of the patio by the Sophs, who had wisely wired all exits shut.

Finally Bill Wilmore managed to get the drum into his room and out through the window into Blacker Court. After an unwelcome shower by onlooking Blackerites Wilmore took off across the Athenaeum lawn.

Confused Reports

From this point on reports differ. The Sophs claim that Wilmore got away, while the Frosh assert that he was mobbed before he could escape. However, there is good reason to believe that the Frosh will be the ones to decide when the Brake Drum will make its next appearance.

Placement In Industry Talk

The Alumni Placement Lecture for Tuesday, November 15, will be given by Mr. T. W. Johnson in Blacker House at 7:15 p.m. The subject under discussion will be the Opportunities in Large and Small Industries for Scientists and Engineers.

Wide Background

Mr. Johnson is Vice-President of the Security First National Bank of Los Angeles—in charge of industrial loans in the Southern California area. He is also a member of the Research Committee of the L. A. Chamber of Commerce and during the war he was in charge of War Production loans.

Relative Merits

Drawing from this allied background, Mr. Johnson will discuss the relative merits of large and small companies and the advantages and disadvantages of each type.

The discussion will then continue with the things a prospective employee should look for in each and where he will find the necessary information.

Charity Drive Ends Tomorrow

Tomorrow's the last day to turn in your contributions for the \$2500 ASCIT-sponsored Consolidated Charity Drive.

The week-long drive seeks to raise \$2500 (or approximately \$3 per man, including grad students) for three charities: The World Student Service Fund, The March of Dimes Infantile Paralysis Fund, and the Pasadena-Altadena Community Chest.

Only Drive

Since this is the only off-campus charity drive to be held this year, it is felt that Tech students should give proportionately more. The Consolidated Drive was adopted by the Board of Directors in an effort to eliminate much of the previous misunderstanding and inconvenience caused by the occurrence of several drives during the year.

YMCA Drive

The YMCA will have its regular fund-raising drive later in the year, as usual, for it is felt that contributions to the Y support activities of direct interest to the student.

(Continued on Page 4)

Unique Themes Mark IH Dance

Threading their way through Egyptian mummies, bales of hay, and Freudian cartoons, over 200 Tech couples were regaled last Saturday night at the annual Interhouse dance held at the four student houses and Throop Club.

Five dance bands, five themes, and five lounges for refreshments and "sitting this one out," offered opportunity for satisfying any wanderlust.

Variety

Although not spurred on by a possible spread in Life magazine, as happened last year, the social committees in each of the four houses and Throop Club offered a wide variety of themes, refreshments, and quantity of dark corners per dancing couple.

Blacker's spectacular decoration, Early California, was replete with burro, hay, wagon wheels, and a real gold sluice, (no gold, however), in the Blacker Courtyard. Supplying music for the 49'ers was Stanley Carle's orchestra.

Freud, et al

Wandering from Blacker through "Christmas Tree Lane" (Blacker's varicolored illuminated Tunnel) into the Dabney scene, the touring dancers met with Surrealism, Steig, and the subconscious.

Cartoons, Freudian symbolism, and mystifying gadgets kept the brightly illuminated Dabney walls lined with sometimes perplexed dates and datees. For those able to tear themselves away Jim Phillips and his band provided smooth dance music.

"Little Egypt"

Rocky Jordan never had it as good as those thronging Fleming's "Little Egypt," purported to be modeled after a famous den of iniquity in Cairo.

The Fleming dance floor and lounge featured mysterious wall hieroglyphics, a live mummy, dubious looking fezied punch and date servers and a pinball kissmeter. Vern Rowe wiggled the stick for the orchestra.

Darkness Falls

The horsey set over in Rickets managed to admire the Santa Anita theme decorations while touring the paddock in the middle of the dance floor; that is, until an almost total blackness descended later in the evening. Hal Neeley's orchestra was the dance band.

Climbing through the rear end of a rocket into other rooms, other worlds, Tech dates were met with almost interstellar blackness. "Out of This World" was the theme. Within a shell modeled after old Terra, Max Bisley's dance band provided the music.

Off Campus Men Attention

The only way to get your portrait in the 1950 Big T is by securing an appointment with the photographer from the Big T representative who will be stationed outside Dabney Hall during the next two weeks. All photos this year will be made on campus, at the Big T office in Lower Fleming House. Hours will be from 3 to 6 in the afternoon and from 7 to 9:30 on some evenings.

McCreerys Host

Y Firesides Sunday

Dr. Henry F. McCreery, professor of history, will entertain a group of students at his home next Sunday evening. This is the second in this year's "Y" Fireside program.

Those who visited Dr. and Mrs. McCreery's last fall will vouch for the fact that H. F.'s fireside was one of the best of the year.

Remember, if you wish to join in, just sign one of the lists posted in each of the four houses and in Throop Club.

Secretary's Report

During these first months at school, the Instituters have done such an outstanding job in service to the Associated Students that some particular commendations is certainly due.

Under the able leadership of Norm Fink, the organization has become an outstanding group for getting some of the long neglected jobs done around campus. The Board of Directors is truly indebted to the cooperation from this organization.

With little or no recognition the Instituters have willingly contributed their time toward making signs for rallies and signs to direct visiting schools to the houses after games. They have supplied spotters for cross-country meets and tapemem for football games. They have helped with the Consolidated Drive and at present are preparing decorations for the coming ASCIT dance.

The ASCIT has turned to the Instituters an enumerable number of times for assistance with gratifying results. In commendation for their fine work the Board directs this article.

Ollie Gardner

Honor System

Sample Case

In line with the Board of Control's policy of publicizing Caltech's Honor System, the following is a sample case from the proceedings of the Board. For obvious reasons, the names of the individuals concerned will be withheld.

This case came to the attention of the Board of Control through a laboratory instructor in Swift's course, Chem. 12, Quantitative Analytical Chemistry. He presented the following evidence:

At the conclusion of one particular experiment, the instructors anticipated rather large errors in the determination of the unknowns, and indeed, most of the students including the "A" students turned in relatively poor results. However, two men, "P" and "Q", had made remarkably accurate determinations under the circumstances.

On further checking, the instructor found that a card bearing the analysis of one of his "unknowns" was missing and that this particular unknown was the one analyzed by "P" and "Q".

Furthermore, on checking over the papers of a recent home examination, the instructor observed that "P" and "Q" had made the same unusual error which was not made by any of the 35 other members of the class.

When called before the Board of Control and presented with the evidence, "P" confessed to having stolen the instructor's card and to having collaborated with "Q" both in the experiment and on the home-examination.

By a unanimous vote of the Board, "P" was expelled from school, and "Q" was suspended for a year.

David B. MacKenzie
Chairman, Board of Control

A Comparison--

Caltech vs. Cornell

(Ed Note Dick King, CIT, class of '49, is at present enrolled in Cornell's graduate school in Electrical Engineering. He was well known on the Caltech campus through his activities on the California Tech, Big T, athletics, Tau Beta Pi, and the Beavers. The following letter was written to Ralph Lovberg recently, and we feel that it is of interest to the entire Caltech student body.)

Ever since my arrival I have been comparing Tech with Cornell, and this is what I find.

First, the campus here is beautiful. The quad must be as large as about half of Tech put together, and with grass, grass, and more grass. There are also a few million trees to give all the shade you want in the summer, turn to beautiful colors in the autumn, and watch the snow fall in the icy winter. The campus is big! It is on the top of a hill, overlooking the town of Ithaca (a Pasadena of about 15,000 people) and also with a view of Lake Cayuga. It's a beautiful spot, though that stuff called rain that they've been having lately doesn't hurt at all.

There are about 9600 (maybe only 9000) students of all varieties—Arts, Agriculture, Engineering, Physics, Law, Home Ec, and others. You can see all shapes and sizes, of both sexes (ratio 4:1 against the males), and of all ages. And this I have learned—there is no such thing as a "Caltech Look," or if there is, a great many of the students here have it. No kidding, I have seen more snaky looking guys than I saw out in sunny Pasadena. And at a couple of football games I saw a couple in pajamas, and one guy with a portable distillery on his back—at least that's what he said, and that's what it looked like.

The engineering school is pretty good—just turning into a five year undergrad curriculum. The Chem Eng. course is supposed to be the roughest in the country. But the engineers all have the reputation of having to work hard. Haven't found out if they do yet, but the undergrads that I know are always busy with the books. The Engineering School is also separate from the rest of the school, which is true of most universities. They have their own magazine, their own governing council (students, that is—with faculty supervision), and sponsor several activities—such as the "Slide-Rule" capers dance coming up this Saturday. But that's about where it ends.

As for the other activities, they are run by the Arts students, or by those with personality plus. For instance, you have to work for three years on the paper to stand a chance to be one of the big-wigs, and then only if you really have the stuff to put it over. Nothing like at Tech, where you walk in, and in a couple of months can be an editor if you're interested. They have several musical organizations. The male glee club takes 30 or so new members every year, out of the 150-200 applications for tryouts. They practice on Wednesday and Friday nights from 7:30 to 9:00 p.m. (This Friday night stuff isn't too bad. That night is nearly like any other night of the week because of the Saturday classes). You either come to practice or they have others who will. There is an A Cappella Chorus with 35 total members, and competition for that is even worse.

The "Cornell Daily Sun" comes out every day (coincidence) and is a pretty good paper. But I'm sure that there are not very many engineers on the staff.

They have frats and hazing problems here too, and fairly strict rules. For instance, the Frosh initiation (the unworthy frosh wear their red dinks till at least Thanksgiving—how easy can a Tech frosh have it?) has a "non-coercion" rule, which was violated by the Soph Council the other day. The Student Council immediately took action, and relieved the Soph council of its initiation privileges, and recommended probation to the faculty, all for neglect to cooperate with the rules. (It was a neglect, because what happened was not the fault of the Soph council, but they didn't use the proper care).

But the real thing which impressed me here is the spirit, especially that is shown towards other schools. The Big Red is a part of what is known as the Ivy League, along with Brown, Columbia,

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Potpourri

By Bob Crichton

My topic this week is athletics. The policy of the Institute is that "all undergraduates are required to take regular exercise, preferably in the form of intercollegiate or intramural sports."

Before the war, the Physical Education committee allowed any sort of exercise to count for P.E. credit. First, they allowed men to swim at the pool downtown. Then somebody asked for credit for swimming at the beach on weekends, and they granted that. It finally went so far that people were getting P.E. credit for walking to Kerckhoff four times a day.

1942 Ruling

In order to stop this continual evading of the spirit of the regulation, the committee, in 1942, passed a rule that P.E. credit could only be given for recognized intercollegiate or intramural sports, or P.E. classes on the campus.

However, during the past two years credit was given to bowling and skiing, both of which were off-campus activities.

Last week the P.E. Committee decided that on the basis of their pre-war ruling they could no longer give credit to bowling.

Bowling Not Issue

Let me state that I feel that the issue of P.E. credit for bowling is very insignificant beside the larger issues that it has raised.

The basic issue is should there be a maximum channeling of strength into major sports, or should the athletic program have a high degree of flexibility to allow for the creation of new minor sports?

Major Sport Emphasis

The case for more emphasis on major sports is briefly that a) We already have enough sports; b) A few talented men are carrying the load of competition; c) We must not spread ourselves too thin or we will do even worse in conference competition, and d) If we are to stay in the conference, we must present teams strong enough to provide real competition, or like the University of Chicago, we will have to drop out of the conference.

Flexibility

The case for flexibility in the athletic program is as follows: a) 65% of the students are not in any intercollegiate sport, and 43% of the students are not in either intercollegiate or intramural sports. While many of these are veterans excused from sports, we should still allow for the growth of new sports that will draw some of these people into competition. b) Minor sports will not draw many people from major sports because the major sports are more popular. c) The greatest good for the greatest number, i.e., if a new sport draws most of its support from the P.E. classes and only a few men from other varsity sports, then the good it is doing most of the men who switched from P.E. far outweighs the harm it did the other varsity sport.

Extremes

I think that too great an emphasis on major sports, to the detriment of minor and inter-house sports, would be unfortunate. Equally unfortunate would be a tremendous growth of minor sports that would sap the present major sports.

DuBridge Views

At this point, let me set down a few basic principles. I asked Dr. DuBridge for his ideas, and here they are. "We want physical exercise for every student, preferably in a sport of his own choosing." . . . "The number of sports is limited by practical questions such as staff, space, budget and time limitations." . . . "The interests of a small group of ardent students should not be placed above that of the whole body."

Next, let me point out that everyone benefits from athletics. All personnel men before interviewing a man, ask, "What activities did this man go out for in college?" Athletics is a big point in his favor.

Participation

Our pre-war standard of participation in the sports program was 75%. It is now 57%, again the small figure is largely accounted for by veterans, which

CAMPUS BREWINS

Bah! Every fleeting week forces us to take a dimmer view of mankind in general and woman-kind in particular. The great snoop has once again circulated among the sheep that we call brethren, always hoping that some fair play will be discovered, and always returning as misanthropic as ever. Why was this stuff called sex ever invented? That's easy, to wit: it allows every man to make a complete ass out of himself, and every woman to help him in the process.

Interesting conjecture of the week: Who stole Sue's little blue convertible last Thursday night, and returned it sometime Friday?

Interesting joke of the week:

Bob Stanaway recently heard about the physiological phenomenon regarding the immersion of a sleeper's hand in warm water. He hastened to tell his roommates about this delightful experiment, and shortly thereafter was delighted to find one of them lying asleep on his (Stanaway's) bed, one hand hanging invitingly over the edge. Showing more scientific zeal than forethought, he procured a bucket of warm water, set it on a pile of books, and eased the hanging hand into it. He was called to the phone at that moment, returning shortly to find, to his immediate gratification but subsequent regret, that the maneuver had come off exactly as scheduled. He didn't find out for a couple of days that the whole thing, down to the perfectly timed phonecall, had been carefully planned, and that it had been no more than a half gallon of Pasadena's pure (?) water that had saturated his sack.

Potential beer magnate, Steve Pardee foamed back into the news this week. His birthday (probably the twelfth) was recognized by a gift from his Indianapolis Schlitz heiress consisting of some recordings of her barbershop quartet. She sings the bass. Pardee, with amplifier, enjoyed the record to its fullest (volume), but only for a short period while the vigilante committee was being formed. The priceless objects d'art were removed much to the delight of the Fleming group who like music.

Being no longer able to avoid it, our attention is forced to that mass mess known as the Inter-house Dance which gave belated birth to itself last Saturday evening. Honors for the social chairman most diligent in decorative preparations go to Klarfeld of Fleming, who vanished Friday, and wasn't seen again until he appeared with a remarkably mature date on Saturday night. It developed that she was a business acquaintance—something to do with Muntz TV. Watch that boy, he'll get ahead.

Brad Houser had a little trouble is an increase of 11% over last year.

Therefore, I think that we need to increase the number of men out for major sports, and at the same time we can allow a certain element of flexibility in the program to allow for the potential growth of a few new minor sports that will absorb the pre-war 25% who didn't go out for any sport.

New Sports

At the present time, the P.E. committee has been besieged by a flood of petitions to start new sports: gym, sailing, weight-lifting, bowling, volleyball, rugby, lacrosse, wrestling, boxing and even ping-pong, to mention only a few.

It is my opinion that the P.E. committee took its stand on bowling in order to avoid setting a precedent that might cause a flood of new sports.

Old Rule Stand

I also feel that the P.E. committee took refuge behind an old rule, created to solve the problem of evasion of exercise, not new sports, and that it failed to offer any constructive program.

I feel that a new approach is still needed to the whole issue of new sports.

ASCIT Board Meeting

Tonight the ASCIT Board of Directors will be attempting to formulate general policy and requirements for all new minor sports. Every member of the student body who has any feelings for either side of this issue is needed, invited, and urged to attend the meeting this evening in lower Fleming at 7:15 P.M.

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The Frost Burner

"Edward, My Son," whether you take it in the play or movie form, proves to be interesting and thought-provoking. The moral of the play boils down to be the Golden Rule. As far as exemplifying the moral, the plot serves its purpose, but is dulled by its own length. The play consists of a series of scenes depicting the acts of Arnold Holt against society. Holt associates himself with his son, and does everything in his power to make Edward like a god.

Doting Parent

"Edward, My Son," gives a new slant on the doting parent situation. Holt dotes so much that he would kill for his son, and can see no faults in this boy who has been warped by his father. It presents by means of an unusual example the thought that love for a son might be self-love.

Movie vs. Play

The movie version seems longer and more drawn out than the play version. The movie even goes to more time and trouble to prove its moral. In most scenes the movie is inferior to the play, except in such as those in which Hollywood excels. In the play version the love scenes do not click the way they do in the movies. The production at the Pasadena Playhouse failed to give an atmosphere of earthy passion during the illicit love scene. Hollywood specializes in love scenes, and makes a more effective job of them than does the play.

Love or Money

"For Love or Money," a Broadway hit, started yesterday at the Pasadena Playhouse for a run from Nov. 9-20. With a strange young girl living in an older actor's house, this play has the outward earmarks of a successful comedy. There won't be any first-hand information until the play starts its run, but from semi-reliable rumors "For Love or Money" will be an entertaining production. George Phelps directs a cast whose leads are: Jean Ruth, Don Shelton, and Joan Wheeler.

Oily Gardner was somewhat taken aback, when, while holding hands his girl said loudly "What are you trying to do, milk it?"

Over Blacker way all were treated to another look at Gloria Murphy, continentaly escorted by the gallant Dutchman, Carel Otte. Ogilvie danced one dance

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HOUSE JACKETS

Corduroy and Flannel Mens' Distinctive Fashions

Fowler & Schrader

Open Mon.

& Fri. Nights

"Men's Distinctive Fashions"

HAROLD O. GRONDAHL

Created by Man

By BOB STANAWAY

Faster jets, safer airplanes, craft wing, or the shock caused by a landing impact. In the hands of Dr. McCann and the able men who feed it problems, the service of the computer is available to all industry on a cost plus overhead basis and also as a facility to Caltech research departments in Chemistry, Engineering, etc.

\$100,000 Cost

Constructed at an estimated cost of over \$100,000, this complex computing machine does, in a few days or weeks, what it formerly would have taken many mathematicians their entire lifetime to accomplish. This terrific

There are two types of computers in Bridge. The first is one which solves problems by the digital method which consists of reducing the complicated differential equations to a combination of arithmetical computations. In the electric analog computer, however, the physical problem is set up in an analog

Two Types

cial capacitors, inductors, resistors, and transformers for simulating linear systems with a maximum of 100 degrees of freedom.

2—Fifteen special amplifiers for simulating negative impedances such as are required for servomechanism problems.

3—Six sets of sinusoidal steady state forcing functions, with controllable frequency, phase angle, voltage, and current.

4—Three arbitrary transient forcing functions with which any arbitrary function can be duplicated as either voltage or current.

5—Additional square wave forcing functions for special problems requiring a large number of such functions.

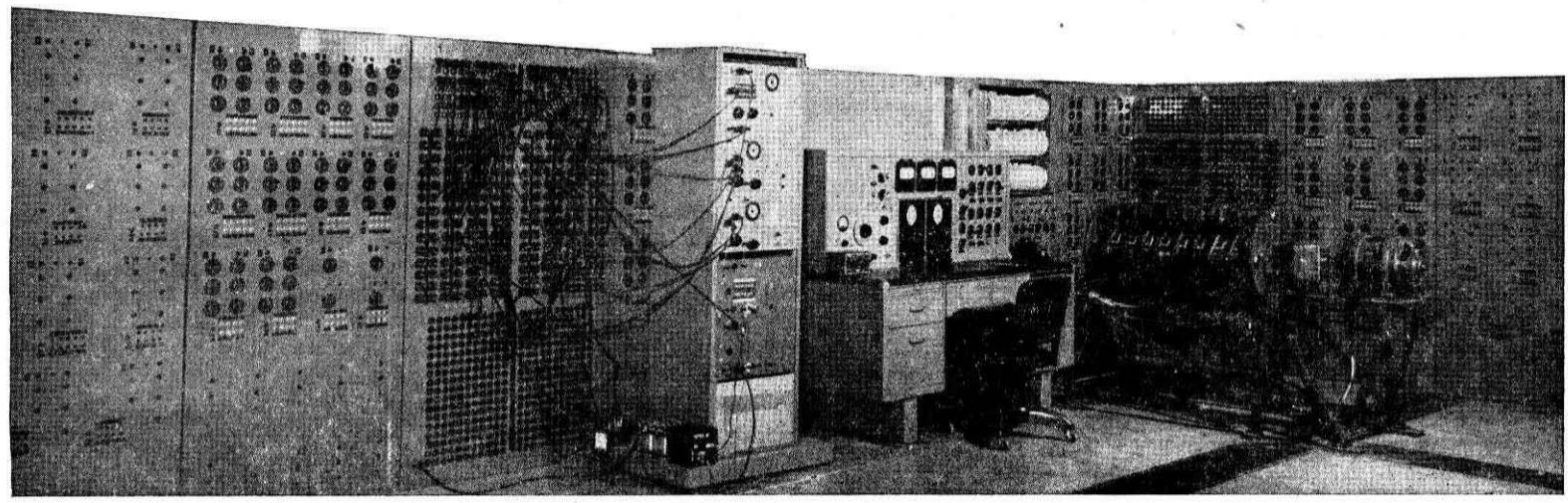
6—Ten multipliers for representing the products of two variables (these can also be used for division).

7—Several units of the device

and by sacrificing a little accuracy the analog can be used in a much larger variety of problem types. The digital computer will work problems in every field the analog can, but it is much slower and clumsier in many types of problems. On the other hand, there are situations where it has the advantage over the analog. The digital computer, constructed of temporary I.B.M. equipment, is being extensively used at present for basic research being conducted here on campus, while the analog is kept busy doing work in the practical fields of electric circuit theory and vibration analysis for industry.

"Think for Man"

The main interest of the men associated with this phase of Caltech's research is to determine new and better methods of setting up analogous mathematical representations of the physi-



speed-up in mathematical calculations makes practical many problems that were heretofore virtually impossible, because of their complexity. The only way these problems could be dealt with in everyday life was by trial and error. This, of course, is very costly and extremely time consuming.

An example of the type of calculations easily handled by the Maniac can be realized by setting up the differential equations of the vibration in an air-

gous electrical circuit, and the desired mathematical solutions are recorded as voltages and currents. The equations of linear constant coefficient systems can be most readily simulated in this way by the proper connection of resistors, inductors, and capacitors forming circuits to which the known excitation functions are applied as voltages. The new computer contains the following elements:

Computer Elements

1—One hundred sets of spe-

for representing arbitrary functions of the dependent variable are available.

Digital vs. Analog

Working in conjunction with the analog computer, under the direction of Dr. Frankel, is the digital computer, which is expected to extend machine computation into very high accuracy and statistical analysis. At present the analog will do work within from 1 to 5% accuracy.

This is all that is usually necessary in engineering problems,

cal problems, thus enabling them to use the computer in the solution of these problems. In consequence of this amazing machine comes much speculation on the part of its creators concerning new and more efficient machines that, "created by man" will "think for man."

Gad!

Little dog, looking up at a parking meter—"Hell, you gotta pay now?"

THE DU PONT DIGEST

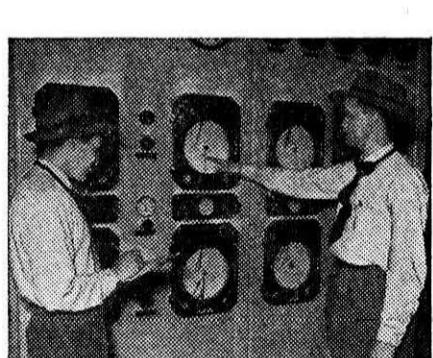
FOR STUDENTS OF SCIENCE AND ENGINEERING

yarn from corncobs!

A DU PONT PROCESS CONVERTS FURFURAL INTO A CHEMICAL FOR MAKING NYLON

One of the fascinating things about nylon is the unlikely sounding raw materials that go into it. Popularly, nylon is said to be made from coal, air and water. This is because originally, in developing its chemical intermediates, chemists used benzene (from coal), ammonia (from air and water), and oxygen (from air).

But Du Pont is always looking for new ways of doing things. After the discovery of nylon in 1934, research men immediately began looking for alternative ways of making the two main intermediates—adipic acid and hexamethylenediamine. In 1935, when nylon was still in the laboratory stage and three years before its commercial debut, they started work on the possibility of using furfural in the process.

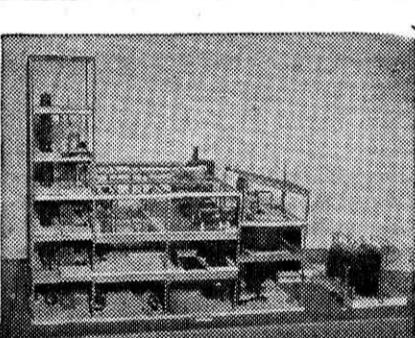


C. R. Dewey, B. S. Chem., Niagara University, 1941, and J. M. Estes, B.S. Ch.E., University of Missouri, 1937, engaged in production of adiponitrile at the Du Pont Electrochemicals plant in Niagara Falls, New York.

14 Years of Research and Development

It seems a far cry from corncobs to nylon, and it was. The development from the first small-scale laboratory experiments to the present full-scale plant cost 14 years of time and about five million dollars. But it enabled chemists to produce large quantities of adiponitrile, the compound from which hexamethylenediamine is made, by an economical process which uses natural materials that are in continuous supply.

In the new process, furfural is converted by a series of steps to 1,4-dichlorobutane. The next step explains in part why Du Pont undertook the project in the first place. As producers of cyanides, they had sodium



Scale model of a part of the DuPont adiponitrile plant at Niagara Falls. Here furfural, an agricultural by-product, is converted into a chemical intermediate for making nylon.

cyanide available for converting the 1,4-dichlorobutane into adiponitrile.

The final product, hexamethylene-diamine, is then reacted with adipic acid to make nylon "salt." Still more processing and the salt becomes yarn, and the nylon flake used by the plastics industry.

Opportunities at Du Pont In many scientific fields

This is an excellent example of the interesting work in industrial organic chemistry carried on at Du Pont. It required the technical knowledge and skill of highly trained research and development men, including organic and physical chemists; chemical, mechanical, civil and electrical engineers, and others.

Only a large company with ample resources in men and money could afford to engage in research of such magnitude. To the young college graduate, Du Pont offers the broadest of opportunities in many scientific fields, along with the advantages of working directly with a small group of associates.

Keynote of Du Pont personnel policy is promotion from within on a competitive merit basis. A conscientious effort is made not only to choose college-trained people of promise, but to develop each individual as rapidly as possible.



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

Entertaining, informative—Listen to "Cavalcade of America" Tuesday Nights, NBC Coast to Coast

ON THE RECORD

By Bill Whitney

Last Sunday evening the Cathedral Choir of the Los Angeles First Congregational Church brought the 16th Annual Bach Festival to a close with selections from the great **B Minor Mass**.

This year's performance was not quite up to the standards set by those of two preceding years. Much of the difference was caused by the weak assistance given by the **Los Angeles Conservatory Symphony**. Too, the chorus was not so well coordinated as it could have been, and seemed in its singing to lack inspiration.

Nevertheless, the program did have some good moments. The "Crucifixus" and "Et Incarnatus" were handled very capably, as was "Sanctus," chosen to be the concluding selection of the program. The solo singing was quite notable. In particular, Fern Sayre, young but veteran Bach Festival soprano, handled her parts with her usual ease and excellence.

Musical Concert

The Caltech Musicales will present a record concert this Sunday evening at 7:30 in Dabney Hall of the Humanities. All are welcome.

Gluck....Iphigenie En Aulide

Mahler....Das Lied von der Erde

Brahms....Sonata for violin and cello

The following concert will be held three weeks from this Sunday, same time and place.

This year was the first in some time that the Mass was not performed in its entirety. Perhaps the directors have found that the plan followed in past years—presenting the entire Mass in two Sunday concerts—is not a practical one. Still, the performance was heard by what we estimated to be its largest audience in the three years we have heard it. The 1949 series possibly was publicized more successfully than it has been. One would hope instead that, after sixteen years, Los Angeles is developing a Bach Festival habit.

The concerts are maintained solely by public interest and voluntary financial support. An increase in both of these things could undoubtedly have an effect in improving the quality of the

(Continued on page 6)

The Evening Concert

KFAC 8-10 p.m.

Presented by the Southern California and Southern Counties Gas Companies

THURSDAY, NOVEMBER 10

La Dame Blanche—Overture, by Boieldieu. Boston "Pops" Orchestra conducted by Arthur Fiedler (7).

Manfred (Symphonic Poem), by Tchaikovsky. Indianapolis Symphony Orchestra conducted by Fabien Sevitzky (59).

L'Impériale and L'Apotheose de Lulli, by Couperin. Chamber Orchestra conducted by Maurice Hewitt (48).

FRIDAY, NOVEMBER 11

In Memoriam, by Sibelius. London Philharmonic Orchestra conducted by Sir Thomas Beecham (9).

Symphony—The Airborne, by Blitzstein. Robert Shaw, Narrator. Charles Holland, Tenor. Walter Schirff, Baritone. Chorus and New York City Symphony Orchestra conducted by Leonard Bernstein (59).

Symphony No. 1—the Santa Fe Trail, by Carl McDonald. Philadelphia Orchestra conducted by Eugene Ormandy (20).

My Country at War—Symphonic Suite, by Carl McDonald. The Philadelphia Orchestra conducted by Eugene Ormandy (22).

Temple of Peace—Minuet, by Lully. Minneapolis Symphony Orchestra conducted by Dimitri Mitropoulos (44).

SATURDAY, NOVEMBER 12

I Pagliacci, by Leoncavallo. Soloists, Chorus and Orchestra of La Scala, Milan, conducted by Franco Ghione (24).

La Bohème—Highlights, by Puccini. Soloists, Chorus and Orchestra of La Scala, Milan, conducted by Umberto Bertoni (24).

MONDAY, NOVEMBER 14

Euryanthe—Overture, by Weber. Chicago Symphony Orchestra conducted by Frederick Stock (8).

Symphony in D Major, by Cherubini. Leipzig Gewandhaus Chamber Orchestra conducted by Paul Sümpter (32).

Ania Dorfman, Pianist.

Concerto for Piano and Orchestra, by Beethoven. NBC Symphony Orchestra conducted by Arturo Toscanini (32).

Faust—Symphonic Study, by Elgar. London Symphony Orchestra conducted by Sir Edward Elgar (32).

Henry VIII—Dances, by German. City of Birmingham Orchestra conducted by George Weldon (19).

TUESDAY, NOVEMBER 15

Iphigenie in Aulide—Overture, by Gluck. Columbia Broadcasting Symphony conducted by Howard Barlow (9).

Rustic Wedding Symphony, by Goldmark. Vienna Philharmonic Orchestra conducted by Robert Heger (38).

Concerto for Violin and Orchestra, by Khachaturian. Symphony Orchestra conducted by Alexander Hauk (35).

The Rite of Spring, by Stravinsky. Concertgebouw Orchestra of Amsterdam conducted by Eduard van Beinum (30).

WEDNESDAY, NOVEMBER 16

La Cenerentola—Overture, by Rossini. NBC Symphony Orchestra conducted by Arturo Toscanini (9).

Symphony No. 95 in D Major (Miracle), by Haydn. Concertgebouw Orchestra of Amsterdam conducted by Eduard van Beinum (24).

Bartók—Gigl, Tenor (32).

Non Colombele From Isabeau, by Massagani.

Ahi! Ritrovata Nella Sua Capanna From Lodoletta, by Mascagni.

Lamento di Federico From L'Arlesiana, by Cilea.

Un di All' Azzurro Spazio From Andrea Chenier, by Giordano.

CAMPUS BREWINS

(Continued from Page 2) with her and was converted to that small but vociferous group of Gloriaphiles. To Frosh Stefanie Carel is reported to have said (about G.M.) "We're going to be friends—you've got to leave my woman alone." This strikes us as being a little narrow-minded.

Conspicuous by his very presence was Einwohner of the Moral Fiber. It looks like true love; Teddy walked over to his date's house and they took a bus to the dance, both, of course, carrying textbooks in case the dance got boring—BUT, the dance didn't get boring, and Teddy left his book to gather dust while he proceeded to sweep the lady off her feet in a commendably debonair manner.

Having covered for better or worse the activities of the week, let us digress and take some lessons in procurement from those sensible enough to know that a fifty-five cent phone call will probably get you nowhere. Fleming's Waheed, Arnold, Keswick, Perrault and Horn, starting off Friday night on a normal (for them) weekend maneuver, wound up at the Colony Club in Gardena. After his second Coca-Cola (trademark registered) (with two zombie chasers) Waheed felt a little indisposed, so the boys dashed off to find greener pastures.

Instead, greener pastures followed them, and a vehicle containing four young things pulled up beside them, forced them to the curb, and they said, "We noticed that you have a Wisconsin license plate on that **darling, brand new, cream colored convertible**, and thought we might chat." The two groups found themselves immediately miscible in all proportions, and the happy ending is that they all appeared at the Interhouse the following night—happy for everybody but Ted Smith, that is, who had already arranged a blind date for Waheed, which was naturally scorned.

Not to be neglected while on the subject, Bob Smith of Dabney called up Stanaway's wholesome Finn (racial, not monetary or piscatorial) sans introduction, and was told to call back in five minutes. Stanaway's phone rang immediately, and the Finn wanted to know if Smith was all right. Stanaway cheerfully purged himself, and Smith arrived, bearing the prize, Saturday night.

Bath!

Musical Masterpieces

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2-5 p.m. Sunday

Presented by the Slavick Jewelry Company

THURSDAY, NOVEMBER 10

"Tancrède" Overture—Rossini. Vincenzo Bellizzi and Royal Opera House Orchestra.

Concerto in D Major—Tchaikovsky. Jascha Heifetz, Violinist. John Barbirolli and London Philharmonic Orchestra.

Don Juan—Tone Poem—Richard Strauss. Sidney Beer and National Symphony Orchestra.

FRIDAY, NOVEMBER 11

An American in Paris—Gershwin. Artur Rodzinski and Philadelphia Symphony Orchestra of New York.

Symphony No. 3 in A Minor—Hans von Koussevitzky and Boston Symphony Orchestra.

SATURDAY, NOVEMBER 12

Carnival in Paris—Svensden. Nicolai Malko and Danish State Broadcasting Symphony Orchestra.

Canzonetta—Traditional. The Magic Flute—Meyerbeer. La Paloma—Yradier. O Sole Mio—

CHARITY DRIVE

(Continued from Page 1)

Since it is against the national policy of the Red Cross to participate in any federated fund-raising campaign, there will be no Red Cross drive on campus this year through personal solicitation.

Here's where the money which is contributed goes, and here is a partial list of what it does:

Facts About the**Community Chest**

Thirty-six different health, welfare and character-building organizations cooperate in Pasadena each year through the Community Chest in securing the funds to carry on their work. The total need in the Pasadena-Altadena area amounts to over \$500,000. The red feather campaign means many campaigns in one.

Even though this is not their home community, students should see the importance of supporting these agencies in their adopted communities. The work of these thirty-six agencies go far toward helping to make Pasadena a very delightful place in which to live—even for a short time.

Facts About the National Infantile Paralysis Foundation

The work of the National Infantile Paralysis Foundation is well known. It is the organization which sponsors the annual March of Dimes. In addition to millions of dollars direct relief to cover hospital and doctor expenses for victims of polio, it also makes grants to leading universities for research. The federation has made a five-year grant to Caltech of \$300,000 for basic research, which it is hoped may eventually lead to knowledge of the cause and cure of poliomyelitis.

Universities, students and professors have paid a heavy toll during the war and the critical reconstruction period in Asia and Europe.

Today, of the surviving students in Europe and Asia, 400,000 are in need—need of food, medicine, clothes, shelter, equipment. Student relief and rehabilitation are essential to restore students to health, to return them to their studies.

This is a drive for funds by aid from students and faculty in America for students and faculty in China and Europe.

Money is allotted approximately as follows:

34%—Europe.

34%—China.

12%—Southeast Asia.

16%—Education and Operation.

4%—Special Projects (European students in U.S., etc.)

All funds raised in this country are cabled directly from New York to Shanghai and Geneva in accordance with allocations determined by the International Committee on World Student Relief. Monthly reports of the expenditure of all funds are sent to WSSF Headquarters in New York by the national committee. Periodic audits and complete annual statements are sent to New York. All records of expenditures are on file in the New York office, and the World Student Service Fund books are audited annually by Hurdman and Cranston, 350 Madison Avenue, New York City.

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Sy. 2-3871 - Pasadena 1**Columbian Student Wins Fellowship**

Mr. F. W. Hunter, regional director of the Federal Security Agency with headquarters in San Francisco today announced that Mr. Alvaro Salgado Farias of Colombia is enrolled for the fall semester at the California Institute of Technology, under a United States Government fellow for graduate study in the field of electrical engineering.

This award was made under a program administered by the Office of Education of the Federal Security Agency in cooperation with the Institute of International Education and the Department of State. The program, which has been in effect since 1941, authorizes a limited number of travel and maintenance grants to Latin-American graduate students for study and research in the United States.

The plan also provides for grants to United States graduate students for study and research in Latin-American countries.

Approximately 75 students will arrive in the United States this fall to enroll for the 1949-1950 academic year under this program, said Mr. Hunter. Courses of the Latin-American graduate students will range from the most specialized phases of medicine through ceramics and from agriculture to music. Universities and colleges in all sections of the country are participating in the program.

In announcing the award, Mr. Hunter said that Mr. Salgado will specialize in rural electrification. He received the degree of civil engineer from the National University, Bogota, in 1947 and he has been working as chief engineer for municipal improvements in the state of Cundinamarca.

The two-way exchange of students provided under this program, said Mr. Hunter, has made possible valuable exchange of information and ideas and has contributed to better understanding of cultural backgrounds and customs of the various American nations.

Gad!

Definition: Civil Service—something you get in restaurants and stores between wars.

Gad!

Did you hear about the sleepy bride who couldn't stay awake for a second?

Caltech students are cordially invited to attend a lecture:

"CHRISTIAN SCIENCE, THE RELIGION WHICH TEACHES TRUE SPIRITUALITY"

by Mrs. Elizabeth F. Norwood, C.S.B., of Brookline, Mass.

Place—2nd Church of Christ, Scientist, Pasadena,

814 East Claremont,

Time—Tuesday evening, November 15, 1949 at 8:00 P.M.

For transportation meet in front of Dabney Hall at 7:15

CALTECH CHRISTIAN SCIENCE ORGANIZATION

HE'S A REAL TRIPLE THREAT!
RUNS - PASSES AND BROCKS!

Mardi Gras or Smardi Gras!

Who cares for such things as the New Orleans Mardi Gras when it's time for the Caltech Interhouse Dance! Saturday night one more dance was held in the true Interhouse tradition, and Blacker House was there in force. The house was decorated in the same lavish but inexpensive manner it always is for dances, and its members were decorated in whatever they could beg or borrow (no stealing) along the lines of sport clothes.

Notables

No one was notable for his absence. Notable for his presence was Ed "Curly's Buddy" Pyatt, the brain behind Blacker's decorations. The House's thanks for a fine evening go to Ed and his assistants, Bob "Coffee" Smith and Bill "Mule Team" Conner. Of course, the whole House pitched in on the decorations and on the cleanup afterward and they too are to be commended for their ingenuity, spirit, and promptness in the handling of both these tasks.

Jenny

Also notable for her presence was Jenny. She was obtained through the efforts of the Pasadena Chamber of Commerce and the kindness of the Gouldmont Flintridge Stables. "Mule Team" Conner was trying to get Jenny in the house as a Social Member until he was wised up that Jenny was a she and that Mr. Tannaham had said she was definitely not going to eat any meals in the house dining room. You'll just have to select your friends more carefully, Bill.

Hay! Hay!

Speaking of "Mule Team's" friends brings up the subject of hay. Brace yourselves, Blackerites, for here is some of the information about the Barn Dance on Nov. 19. This affair will be just for Blacker, so any teams will be made up from the House itself. Now is the time to start lining up and practicing. Perhaps an inter-alley challenge can be made. At any rate, be thinking about it.

The dance will be held at a new place, the Ride-a-While Riding Academy in Burbank, and the entertainment during the evening will include Hay Rides, Square Dancing, Dancing, and anything else, within reason, that you guys can think up.

Dabney Features Surrealist Theme

Dabney House took no real part in the evening's merrymaking—real, that is. It was entirely surreal, at least, if one can judge by the limbs and bodies that adorned the Darb's lounge, or the hypnotic eye that adorned their dining room.

While their vocalist wandered about admiring the Tech men and sampling the punch, Jim Phillips and his ten pieces, complete with players, provided the rhythms from a corner where they were accompanied by the musical splash of water flowing from a short piece of pipe suspended from fine threads but apparently containing a large divergence of V. At the north end of the lounge one's attention was drawn to an ever-retreating spiral, in contrast with which, the advanced version of Lena the Hyena hanging over it appeared to be reaching toward one for a kiss. One hastily retreated to Fleming . . .

"For Love or Money" will tickle Darbs' and dates' funny bones tomorrow night at a Pasadena Playhouse theatre party. After the proper mood has been set by this three-act series of double-entendres, dancing will follow in the Dabney dimly lit (we hope) lounge.

Tentatively scheduled is a pre-Cal Poly football game exchange, to be held Friday afternoon with Scrippssies from Browning Hall.

The annual Dabney-Browning milk crew race will highlight the affair. (Note: This contest is not sanctioned by the PBAA).

A COMPARISON

(Continued from Page 2)

Dartmouth, Harvard, Penn, Princeton, and Yale. And there are traditions a mile long in this league. Also at this school, the youngest of the Ivy schools—charter signed in 1865—there still is an old set of traditions, which include a really fine relationship with other schools.

To illustrate what I mean, it is merely necessary to tell what happened at the half time activities of the Cornell-Colgate game. With both bands in attendance, the Red Raider band performed first. (Guests, you know). When they struck up their alma mater, the whole stands immediately were on their feet. I remarked that this was not the Cornell Alma Mater, but the guy standing beside me gave what I consider the classical reply, and one which I won't forget for sometime. "We do it for all the schools as a sort of courtesy. They do it for us, too." And the 20,000 fans, mostly Ithacans, certainly seemed to indicate that this spirit was the natural thing which prevailed.

That attitude, of courtesy, respect, and good feeling typifies these schools back here. It seems to me to be a grown up attitude, in contrast to the somewhat childish fancies in the SCIC. For I distinctly remember the several times that a Tech rooting section walked out on their guests singing their song, with disdain which could only be from ignorance of courtesy. And, I guess this attitude is not completely alone with Tech.

It seems to me that Tech should grow in this line. Whatever advantages Tech has, and there are many, can be completely lost with a boorish attitude which I remember. It is a pleasure to be in a place where people can give courtesy to another school, without damning, screaming at, or sarcastically razing the institution against which they are pitted. The general attitude of everyone, including the "Sun", shows this courtesy, and it is only in some individuals who fail to see it. These individuals fail to see much of anything else, either.

That's about it in a nutshell (and a big one at that). Sorry to yak so long, but that's the way I felt. I am in great hopes that Tech will "grow up" in its relations with other schools, and pioneer a really fine competitive spirit of courtesy among the other schools of the SCIC. You have a great start, with the exchange assemblies started, and things like that. But it's the attitude on the athletic fields that needs fixing, or maybe it is the general attitude, I don't know.

One final word. That business about engineers at Tech competing only with engineers for the extra-curricular activities is really the truth. You don't realize what an advantage that is until you go to a big school. And I still think that Tech is just as good as Cornell in some respects, and much better in a great many. I'd like to see it better in ALL respects.

Dick King

Countrymen Push Oxy Runners to 30-27 Win

Playing host to a strong Oxy team and a rather weak Whittier aggregation last Friday, the Caltech cross-country team managed to get an even split for the day.

Close Score

The meet, first conference competition for both Caltech and Oxy, was a close one scored officially as three separate dual meets. It left Oxy leading Caltech by a close score of 27-30. Both Caltech and Oxy defeated Whittier soundly to the tune of 15-46 and 17-42. Unofficial scoring as a three-way meet still left our team slightly behind, the totals being: Oxy 27, Caltech 32, Whittier 72.

Speed Stars

John Barnes of Oxy was the individual star of the meet, covering the three-mile distance in 16.28.8. Close behind him was Pete Mason of Caltech in 16.35.4. Bill Pilkington took an easy third for Caltech, while Parker and Jones of Oxy showed a

(Continued from page 5)

Thatcher Scores

Soccer Win

Last Saturday the Tech booters journeyed all the way to the Ojai Valley only to be beaten by the close score of 2-1. The Thatcher opponents proved to have an extremely fast and able team, and they managed to score two goals during the first period, managed to keep the ball in opposing territory for a large part of the remainder of the game. However, they were not able to score more than once.

Troubles

The main trouble seemed to lie in our inability to, once in scoring position, kick the ball through. Countless shots bounced off the goal posts or went whizzing over the goal. The dry dirt field was a new experience to the team and at the end of five minutes play many throats were dry due to the choking dust.

The halfback line showed con-

(Continued on page 6)

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1949-50 BASKETBALL SCHEDULE

Nov. 22, L. A. State at Armory
*Nov. 23, Chapman at Chapman
*Dec. 3, Pas. Col. at P. C. C.
*Dec. 9, LaVerne at LaVerne
Jan. 7, Redlands at Redlands
Jan. 14, Whittier at P. C. C.
*Jan. 20, Pomona at P. C. C.
*Jan. 21, Cal Poly at P. C. C.
*Jan. 28, Occidental at P. C. C.
Feb. 1, L. A. State at L. A. State
Feb. 11, Redlands at P. C. C.
Feb. 14, LaVerne at Armory
Feb. 18, Whittier at Whittier
Feb. 22, Pomona at P. C. C.
Feb. 25, Occidental at P. C. C.
*indicates Frosh preliminary

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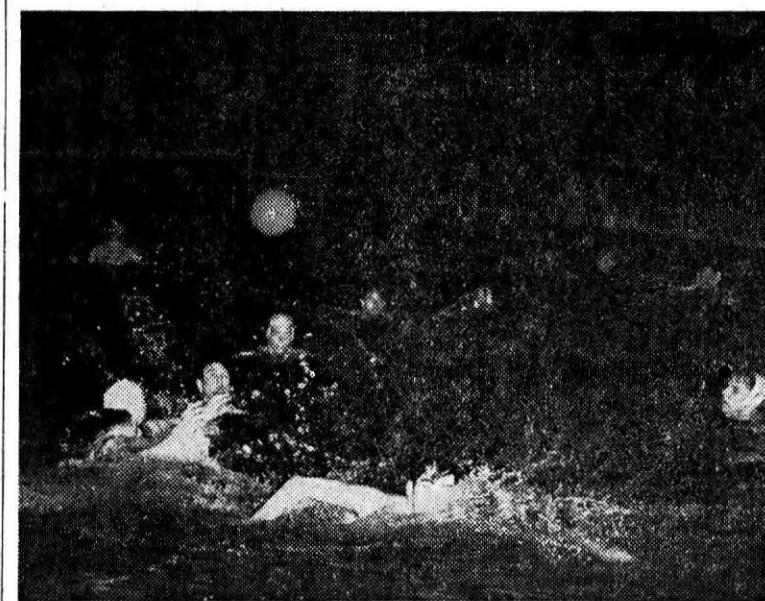
\$1.25 up

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Beaver Sports

THERE IT GOES!



Ball squirts from Oxy Player's possession in Oxy-Tech water polo game. Hall (foreground) and Libbey (right) vie for recovery.

Tech Polomen Meet Loyola

At 4:30 today the Beaver water-wingers will meet the Loyola tanksters in a water polo contest here at the PCC pool. The game promises to be a real battle for the Engineers, since Loyola has always possessed consistently top-notch teams, a rule to which this year is no exception.

Today's event will be Caltech's fourth game of the season. After bagging the first two, against UCLA Frosh and Compton, they dropped the third to Occidental a week ago Tuesday. Coach Palmer has had the tankers scrimmaging daily, both polishing their plays and correcting the mistakes which led to the Tiger victory.

Tech Presented Perpetual Trophy

The Athletic Department has just received a new perpetual trophy presented by Howard G. Vesper, class of 1922.

In presenting this beautiful 30-inch trophy, Mr. Vesper asks that it be awarded at the close of each basketball season to that member of the squad most qualified from the standpoints of sportsmanship, improvement, moral influence and scholarship. He suggests that each of these factors be given equal weight, with the first three to be determined by the members of the basketball squad and the fourth to be determined by reference to appropriate records.

Purpose

The name of the winner each year will be engraved on the trophy which is designed to accommodate such listing for a considerable number of years. Mr. Vesper, who is President of the California Research Corp. in San Francisco, was a three-letter basketball man at Caltech, says, "It was my very great privilege to participate actively in basketball at Caltech during the years 1918-1922, and I feel that this experience was of lasting benefit to me in many respects. It is my sincere hope that the establishment of this award will repay

(Continued on Page 6)

Tech, Redlands Meet In Final SCIC Play

Bulldogs Improved for Beaver Contest as Tech Eleven Journeys

Anything can happen Saturday night at Redlands when the Beavers will try to gnaw the Bulldogs down to size. Caltech will be out to avenge its other SCIC defeats against a team that has greatly improved since the beginning of the season.

Bulldogs Improve

Prognosticators rated Redlands near the bottom of the league as school started and their prophecy seemed borne out when La-

Verne trampled them 27-6. Then the Bulldogs tied Arizona State 20-20. Arizona State ran up a 30 point margin over us.

However in their next game, versus Pomona, the Bulldogs reverted to early season form and lost 27-14. Then came the Redlands-Oxy game last week. Presto-change again. Redlands triumphs 21-20.

The Cycle

Several predictions could be made on the basis of this record. Observing that the Bulldog steam runs out in weekly cycles, you might forecast an Engineer victory, since Redlands was at full pressure last week. But if you notice that Redlands has beaten some of the teams that clobbered us, you would say

SCIC Standings

Team	Won	Lost	Pct.
Whittier	3	0	1.000
Pomona	2	1	.666
Redlands	1	1	.500
Caltech	0	3	.000

we've a good chance of losing. Or you can throw up your hands and refuse to make a prediction.

After two weeks without a game, the Beaver team is raring to go. Except for Jim Wilcox and John Lewis, the whole team is in good shape. Wilcox is up and around on crutches now while Lewis has a chipped bone that will probably keep him out for the rest of the year. Woody will take over his duties as full-back.

All in All

Again we hope that the Beaver offense has been worked on to eliminate those costly fumbles and interceptions. A good passing attack has been demonstrated in the several games.

Last Seconds

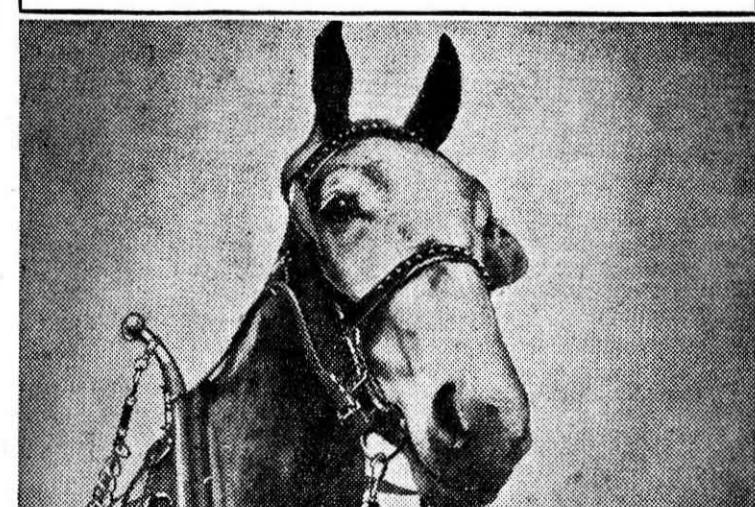
The real action-packed game of the tourney this far was the Fleming-Throop thriller of November 2. Neverman and Beebe paced the Throopsters to a 16-12 lead at half time. The Red Shirts picked up in the second half, however, and fought to a 23-23 tie with only seconds to play. With the game all over but the whistle blowing, Bob Wald sank a basket and Throop's hopes. Final score: Fleming, 25, Throop, 23.

Dabney Wins

November 3 was Green Shirt Day on Tournament Park basketball courts as the So-Westers outscored the Ricketts five, 34-26.

(Continued on page 6)

J. Paul Sheedy* Switched to Wildroot Cream-Oil Because He Flunked The Finger-Nail Test



FOR A WHILE, Sheedy's life story was a pretty sad tail. People rode him about his wild, unruly hair. And it wasn't until his favorite filly gave him the gait that he decided to do something about it. He trotted down to the corner drug store and bought a bottle of Wildroot Cream-Oil hair tonic. You should see him now! Non-alcoholic Wildroot containing Lanolin keeps his hair neat and well-groomed all day long. No more annoying dryness, no more loose, ugly dandruff.

Take a tip from Sheedy. If your sugar balks when you ask for a date, you need Wildroot Cream-Oil right away. Get it in bottles or tubes at your local drug or toilet goods counter. And ask your barber for professional applications. You'll be a winner every time!

* of 327 Burroughs Dr., Snyder, N. Y.

Wildroot Company, Inc., Buffalo 11, N. Y.



HOTALING'S

TWO STORES FOR MEN
54 E. COLORADO ST. 921 E. COLORADO ST.

ARROW UNIVERSITY STYLES

DABNEY, BLACKER

(Continued from Page 5)

Dick Brewer again was high scorer for the Darbs.

One of the most important of the current interhouse basketball series was played between Fleming and Blacker last Monday. The extremely spirited game ended with the Blackerites on top of the very close 16-13 score.

Here are the standings of the Interhouse Basketball contests thus far:

House	Won	Lost	Pct.
Blacker	2	0	.000
Dabney	2	0	.000
Fleming	1	1	.500
Throop	0	2	.000
Ricketts	0	2	.000

COUNTRYMEN

(Continued from Page 5)

strong last lap to finish fourth and fifth. Bob Cobb and Brad Houser took sixth and seventh for Caltech. Smyth, Dickinson, Lansdown, Bowerman, Tracy, and Shakespeare finished out a long Caltech team.

Pomona vs. CIT

Next week features what should be a close meet between Pomona and Caltech, here in Tournament Park at 4:15 Friday. Pomona finished with four men ahead of the first Whittier man in their dual meet, so we seem to be on fairly even terms.

THATCHER SCORES

(Continued from Page 5)

siderable improvement. Dave MacKenzie, center half, seemed to be everywhere on the field at once and played a very good game.

Preview

This weekend the San Francisco State team plays here at Tournament Park. Game time will be 3:00 o'clock on Friday afternoon.

The Thatcher-Tech lineups were as follows:

Tech	Thatcher
Asquith	G. Miller
Noble	LF. Everett
Welch	RF. Wilson
Martin	LH. Chesley
MacKenzie	CH. Keller
Baggerly	RH. Walter
Price	RO. Brigham
Schuyler	LE. Turk
Schlinger	CF. Burk
Fairall	RI. Burr
Wood	LO. Carlisle

SPEAKIN' SPORTS

(Continued from Page 5)

clue that along with Pomona and Whittier we will not attend the Redlands Tournament this year.

Thanks

I'd like to pin a big ole fat rose on Miss McGee and Miriam of Athletic Office fame for their all-out efforts to make life easy on we seekers of athletic truths. Many thanks, youse guys.

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Next Door to
Caltech Barber Shop**FROSH SPORTS ROUNDUP**

(Continued from Page 5)

Frosh basketball squad. All those interested, whether they be pros or people like me, are urged to turn out for the team. Practices will be held at McKinley High School, and games will be played before the main games, wherever they may be.

Water Polo

The Frosh mermen dropped a close game to Oxy last Friday by a 3-to-2 margin. They played the UCLA Frosh yesterday, but the game was too late for publication.

Let's have all men make an all-out effort to get to the Redlands-Frosh game, whether by plane or pogo-stick. It promises to be a good game.

TECH PRESENTED

(Continued from Page 5)

this obligation in some measure and will be effective in stimulating greater interest and enthusiasm in basketball at the Institute."

Accepted

The Athletic Department is most happy to accept this trophy and is arranging to make the first award at the close of the 1949-1950 season. It is hoped that Mr. Vesper can be present at an appropriate time next Spring to make the initial presentation.

Gad!

There was a woman that had quintuplets and decided to name them after the vowels A, E, I, O, U. Arine, Erine, Irine, Orine, and Ulysses.

IH Pin Topplers Hit High Scores

Ralph Stone paced the Rowdies for the second straight week as he set the years' high mark with a terrific 225 game this Monday, and added enough pins to cop the weeks' top total with 511. Ricketts won six of their eight games, lengthening their lead over second-place Throop, who won four. Dabney moved from cellar to center spot by winning five, as Blacker took three and Fleming took two.

Standings after five weeks:

HOUSE	WON	LOST	PCT.	AVE.
Ricketts	29	11	.725	145
Throop	24	16	.600	140
Dabney	16 1/2	23 1/2	.412	122
Fleming	16	24	.400	129
Blacker	14 1/2	25 1/2	.362	128

Team honors this week went to Dabney team One for a 2106 series and Ricketts team Two for a 730 game. Other individuals posting high marks included Sid Stone (R), 478 series; John Boppert (B), 197 game and 461 series; Carl Fox (R), 188-460; Duane Neverman (T), 182-466; Jim Allison (D), 180-465; and Andy Check (R), 456.

Smaller Teams

Due to removal of P. E. credit from IH bowling this year, teams are being cut from four to three men (two teams per house), effective next Monday to ease the strain on several houses in obtaining full teams.

Intercollegiate

A home-and-home match is being arranged with U.C.L.A.'s kegling squad, probably on Nov. 20 and Dec. 4. Tech's five-man team will be chosen from the top

ON THE RECORD

(Continued from Page 3) presentations from year to year. The annual Bach Festivals are an important contribution toward the development of a genuine musical culture in Los Angeles, and should be continued.

Concert Schedules

Nov. 10-11

L. A. Philharmonic Orchestra**Alfred Wallenstein, conducting****Concerto in G Minor for Oboe and Strings—Handel****Paganiniiana, Op. 65—Casella****Four Slavonic Dances—Dvorak****Symphony No. 1 in C Minor, Brahms****Philharmonic Auditorium****Thursday—8:30****Friday Matinee—2:15**

Nov. 17-18

L. A. Philharmonic**Alfred Wallenstein, conducting****The Tempest—David Diamond****Septet, Op. 6—Beethoven****Symphony No. 4 in G Major, Mahler****Philharmonic Auditorium****Thursday Evening 8:30****Friday Matinee 2:15**

Nov. 20

London String Quartet**Coleman Chamber Music Series****Quartet Op. 76, No. 2—Haydn****Paraphrase on "De Camptown Italian Serenade—Wolf****Races—Foster-Collins****Landscapes—Bloch****Quartet Op. 76—Brahms**

averages in the IH league, which are currently as follows: Woody Brattnober, 171; Duane Neverman, 159; Ralph Stone, 157; Sid Stone, 153; and Andy Check, 152.

SOPHS SACK

(Continued from Page 1)

frosh prexy, said, "In spite of the fact that we lost the mudeo, the frosh participants showed a fine class spirit which unfortunately is lacking in a few members of the class."

Sack Race

The fledgling frosh showed they could contribute something to sport even if they could not better the sophs. During the hopeless sack race the frosh found it expedient to make progress by standing erect, and then falling on their faces in the mud and repeating the procedure. By this tortuous method they managed to keep the relay team moving across the sea of mud.

Forfeits

The only points the frosh made were given to them by the junior judges because of the sophs "illegal use of trees." The sophs beat the frosh in the tug of war by tying the rope around a tree. Upon hearing the announcement of the loss of points on the tug of war the sophomores tossed announcer Pardee into the mud pit. This was all the luck had during the hunting season for juniors.

Flynn Announces Care Book Drive

Food for hungry minds of Europe and Asia in the form of acutely needed technical books is now possible through CARE, Edward J. Flynn, Southern California CARE director, announced recently.

Libraries, universities and other institutions in war-devastated countries will receive scientific and technical books they need, Flynn advised, on the basis of contributions from the American people via CARE.

"Millions of books have been confiscated, and hundreds of libraries destroyed in Europe and Asia," said Flynn, in outlining the book program. "For nearly a decade American-published textbooks have been unavailable to the rest of the world. CARE is responding to this need by making its facilities available to all Americans."

Increase

At the moment it is too early to accurately foretell the sterling bloc's policies on education, but in the meantime they must remain a source of worry to those who are vitally concerned through their own investment of time. While there are sound economic reasons for a more generous allowance of dollars to emigrant students, it is possible that thrifty legislation may preclude any increase.

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