

Beware!

California Tech

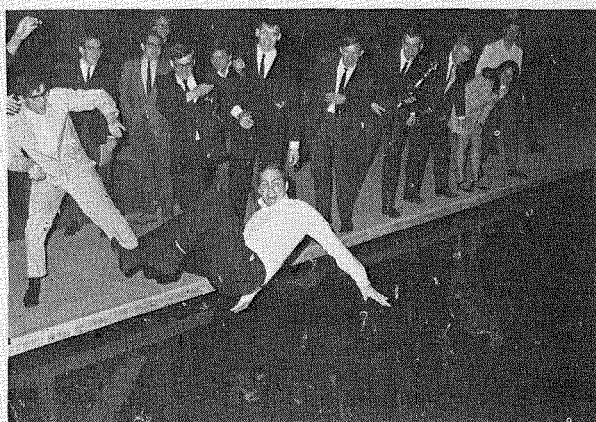
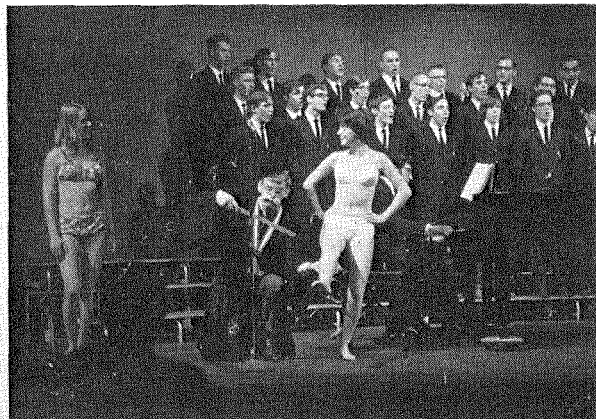
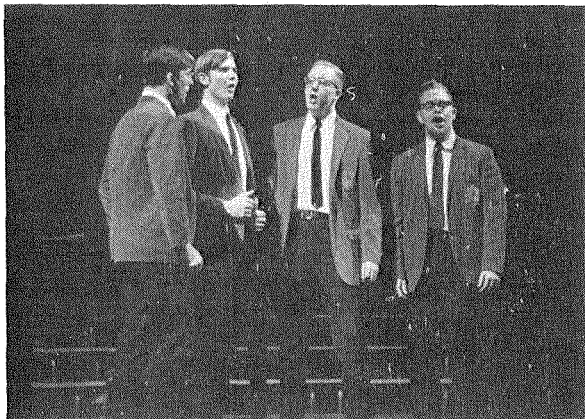
Associated Students of the California Institute of Technology

The
Ides of
March

Volume LXX

Pasadena, California, Thursday, March 13, 1969

Number 21



Interhouse Sing: (left to right, top to bottom) Ruddock House Quartet, Blacker House ensemble doing "Dem Bones;" Dan Nemzer waiting for Dr. Bonner to complete list of Blacker wins, and aforementioned senior enjoying (?) his celebration at Millikan Pond.

Blacker, Ruddock Win I-House Sing Honors

The Blacker House Chorus and the Ruddock House quartet captured top vocal honors Saturday night in the fifteenth annual Interhouse Sing. The final judges' scores were 229-228 in

favor of the Blacker chorus. With three teams competing in both the choral and quartet competitions, the Ruddock chorus placed second and the Blacker quartet took runners-up in their respective contests. Ricketts finished third in both cases.

Blacker's director, senior Dan Nemzer, counted off four fingers to his fellow house members as he strode brightly up to the stage to accept the trophy from IHC Chairman Charles Creasy and Emcee Lyman Bonner. Nemzer was triumphantly carried on the shoulders of his fellow Blacker members to Millikan Pond where his victory was properly celebrated. Nemzer has conducted the Blacker Chorus for the last four years. The Blacker chorus has won the Choral competition for the past six years.

Glee Club Doesn't Place

A fourth team, Chris Diamantoukos and Bob Spencer from Fleming also performed, doing a medley of Simon and Garfunkel songs. Last year's competition saw four houses competing in what Dr. Bonner called the "most vocal competition of the year," (followed by loud hissing from the audience.)

The Ruddock quartet trio of songs included "My Grandfather's Clock," and a dissertation on the futility of studying, "a Sophomoric Philosophy". The group included Bob Bell, Bud Blum, Ian King, and Terry O'Neil.

Blacker's routine was highlighted by "Dem Bones" a spiritual (?) greatly enhanced by the precision timing of the chorus and two live models (Betsy Oliver and Jan Streiff) illustrating the anatomical principles of the song.

While the judges were deliberating, the Blacker House trio

(Continued from page 2)

ChE10 to Study Artificial Kidney Bio-Systems

by Dave Linker

On the theory that Teachers should learn to apply their knowledge to practical problems, especially to problems directly related to people, there is a new course in the Chemical Engineering division. It is ChemE 10, and it supersedes ChemE 50.

The specific problem to be dealt with is the application of engineering techniques to the medical problem of artificial kidneys. The course will begin with an introduction to the physiology and function of the human kidney, then it will go into the function, operation, and economics of artificial kidneys.

Student work

There will be possibilities for student work on three types of artificial kidneys, the Kil kidney, the Kolff kidney, and the Klung kidney.

Lectures will be given by doctors from Wadsworth Veterans' Administration Hospital and Bio/Systems Company, Inc., as well as the Caltech faculty.

It is hoped that this course will encourage students to do work on making the machines cheaper and safer to use, since the main impediment today is not difficulty of turning out the machines, but lack of money for maintaining and operating the machines, and there are many accidents of operation which can be harmful or fatal.

Working students

As an example of what is hoped will occur, second term last year, Bill Bradley and Larry Waterland, both of Fleming House, took the predecessor to ChemE 10, ChemE 50. As a result, they became interested in the problem of air entering the blood during dialysis. Since then, they have worked on the problem, and believe that they have found a way to remove the air from the system, eliminating the problem.

Perhaps more courses of this type in the future will restore the sense of purpose to the seemingly endless stream of knowledge we are subjected to.

—photo by Dash

Scientists Speak Out!

Federation To Study, Spur Social Action

by Dave Lewin

Monday noon, the sedate halls of the Athenaeum sheltered a meeting with great potential for changing the role of the scientist in policy decisions. In the aftermath of nationwide series of meetings on college campuses on the misuse of technology. Herbert Meiselman, a research fellow in Engineering Science, called together a group of faculty, and students, and undergrads to discuss possibilities for effective action by scientists.

The feeling of the group was that scientists can and should influence how technology is applied to modern problems, and even act politically to prevent its misuse. Physicist Murry Gell-Mann, one of the more vocal members of the group, said that he envisions an organization, national in scope, but with strong local chapters, which would hammer out positions on the application and misapplication of technology and utilize lobbyists at various levels of government to influence decisions and implement programs.

Political Science

An organization such as the one proposed would concern itself with environment degradation, conservation of natural resources, applications of techno-

logy to the problems of the cities, and the question of priorities in funding research and technology. Many young scientists and engineers are trying to find employment tackling social problems with scientific tools, only to find that funds are severely limited. Instead, they see this money going to military projects at the expense of social ones.

One of the main concerns of the committee is that any organization that grows out of the recent campus concern with the uses of technology, and of the discussions here at Caltech, be of a nature to command the respect of legislators. The faculty members of the ad hoc committee see the role of scientists educating legislators about technical problems as one of the central functions of any such group, while both the undergrads and grad students proposed that an equally important function on a local level would be to educate the campus community as to its ability to participate in the decision making process on technical questions, and the necessity of its involvement therein.

Dr. Gell-Mann proposed that a local group with national ties be formed to decide on some problems to tackle, and present these, with some plans of action,

before the campus at an early date. The possibility of affiliating with the Federation of American Scientists, a group with a history of action in this area, was brought up as one possible mode of action," and arguments for and against this idea were presented. The committee offered to help the Caltech Y in its sponsorship of the forthcoming "Scientist and Modern Warfare" series. Where will things go

(Continued on page 5)

Resident Associateships in the Undergraduate Student Houses

Graduate students or members of the faculty interested in applying for the position of Resident Associate in the Undergraduate Student Houses, for the academic year 1969-70, should contact the Master of Student Houses prior to March 21, 1969. There may be one or two posts available for married couples (without children).

For further information, call at the office of the Master of Student Houses (Lloyd House) or phone ext. 2195.

Richard H. Stanford,
Acting Master of
Student Houses

Staff Wanted

If you have ideas and the desire to work on them or a desire to work on interesting ideas of others and would like some of the leverage required to implement them, you should consider joining the ASCIT Presidential Staff. You would find yourself with ultimate responsibility and virtually absolute authority over the programs with which you involve yourself. Only a limited number will be accepted. If you are interested, drop a note in the campus mail to Stephen Horner, Dabney House or leave a note in the ASCIT office in Winnett.

Editorial

The Ides Of March

Beware the Ides of March, for evil times are upon us. The food is terrible. The middle east seems on the verge of open war. America's own war in Vietnam continues without end or hope. Millions of people all over the world live on the verge of starvation. And most terrible of all, finals are coming.

Oh woe, ill begotten earth, for dark days are upon us.

Sarazin, Moskatel

Dumb BOD

Dear ASCIT BOD:

Congratulations! For the second straight year you've blown appointments. My term as business manager expires at the end of this term (read the by-laws, it might save you a lot of trouble.) I did not resign. I told Hornbuckle my term was expiring and you should appoint a new business manager for third term. So you appointed Schroeder "acting business manager," decided I'd resigned, and never did open nominations. Maybe next year.

Jeff Hecht

The Question Is Academics

ARC Presents First In Continuing Drama

by Mark Jackson

Did you know that:

- the faculty Academic Policies Committee is now considering a proposal for a program of independent study?
- a series of seminars on teaching techniques is currently being held on campus?
- plans are afoot to involve upperclassmen in teaching freshman "core" courses (Ph 1, Ma 1)?
- various groups are investigating means of obtaining academic credit for students teaching in schools in Pasadena?

If your answers were "No," "No," "No!" and "No!?" you are as well informed as most people at the Institute. Academics is presumably central to our reasons for being here, yet most Teckers are utterly unaware of activities in this sphere.

The lack of communication is so widespread that even the various committees involved don't know what anyone else is doing.

This leads to duplication of effort, lost opportunities, and unnecessary delays. This column, will hopefully serve as the first in a series designed to let the upper right forepaw know what the lower left hind leg is doing.

In order to make this work, we need information on which committees are doing what. A recent YMCA-sponsored meeting provided some (besides motivating us to start this column), but there are many groups involved in different ways. If you are currently working on something of this nature, please contact Mark Jackson (Ru), Mike Kahn (Ru), or George Waller (off campus—Ru).

The group which is most important from the point of view of the student body is the Academic Reform Committee. Created by ASCIT last year as a long-overdue successor to the Academic Reform Groups (and how many of you remember those?), the ARC is charged with studying proposed changes in academic policy.

Most of the Committee's time has been absorbed this year by work on the aforementioned proposal on independent study.

The formal proposal was published in the Tech two weeks ago, and there is a good chance that something of this sort will be presented to the faculty with the backing of the Academic Policies Committee.

The ARC presently has several other proposals (educational exchange, teaching techniques) in mind, but suffers from lack of manpower. Anyone with ideas and enthusiasm can go to them for encouragement and, possibly, aid; contact Mike or George. The important thing is that the individual involved be willing to work; the ARC has only six members and is strapped for time.

Here, then, is a mechanism by which the students can make their voices heard. The most people who are aware of what can be and is being done, the faster Caltech can be made to live up to its potential.

Notice

SWEET STUFF

Don't forget the Caltech Wives Bake Sale today on the Olive Walk. We're selling cookies, cakes, brownies, bread, and home-made goodies of all types. All this is not institute cooking.

REMINDER TO OFF-CAMPUS STUDENTS

Please pick up your mail in the OFF-CAMPUS MAIL BOXES in the basement of Throop Hall.

FOUND

In the CALIFORNIA TECH office—one box of tissue and one snake-bite kit in a drugstore bag. Will the owner please claim before the staff uses up the snake-bite kit.

FLICK IN FINALS

Yes, to help you flick in during Finals Week to Cinematech proudly presents two special shows in Culbertson, 8 p.m.

Wed., March 19—Foolish Wives and Thunder Over Mexico.

Thursday, March 10—Underworld and Broken Blossoms.

LOST

at Interhouse Sing: one quasi-Russian hat. Will the souvenir collector please return it to Roger Goodman, ext. 2170 in Blacker.

CASH

Campus clubs and organizations should submit their budget requests for the fiscal year ending February 28, 1970 to Leonidas Guibas in Ruddock House as soon as possible.

TECH STAFF NEEDED

To learn how you too can earn graft and corruption writing for the California Tech, see Moskatel (Ru), Sarazin (Pa), or Mrs. Hood in Winnett Center.

(Continued on page 5)

Veep Speaks Out

Honor System Changes Proposed

by John P. Healy

The role of the honor system and ASCIT at Caltech are complex subjects. No student realizes this more than Pete Szolovits, vice president of ASCIT and head of the BOC.

The BOC's major problem is how to handle non-academic violations. As far as Pete knows, no one has ever been expelled or suspended from Caltech for a first-time non-academic violation. The major areas of concern are relations with B&G, specifically the food service, and stock rooms, especially the EE stock room. Very rarely does anything get reported from the food service, since it's usually considered an administrative problem between the manager and student. If off-campus members come in and take food, they're violating the honor system in the sense that they're stealing part of the Institute.

Electronics drain

The problem with the EE stock room is that, Pete estimates, about \$10,000 per academic year of supplies either is not paid for, or signed for and not paid for. "During the day it's a very easy access place. People feel that at night it's also a very easy access place; and so they pick in, take their stuff, put their money down, and walk out. And there's nothing that I can say about that which is immoral, except that according to our honor system booklet it's a violation." A better lock is going to be installed on the stockroom door to discourage this. "But that's sort of a failure of the BOC and the honor system, and a failure of the sense of property of the undergraduate student body," says Pete. It's a disturbing problem, but he doesn't really know what to do about it.

Interhouse Sing

(Continued from page 1)

of Dick Neu, Ken Kamm, and Craig McCluskey entertained the audience with a Renaissance Round relating the story of a girl's learning such archaic musical terms as a "long-pricked-note" (a dotted note) and to "shake" (trill). The permutations available from the round aroused the audience to understandable laughter.

The Glee Club rounded out the program, demonstrating the proper method of doing choral songs. At the conclusion of the awards ceremony, Olaf Frodsham, director of the glee club, led the whole audience in the Caltech alma mater.

Toying With Tradition

Changing the honor system is "playing with a tradition," and this tradition is what makes it work. "On academic matters it's very easy to justify what the board of control does — there's a good philosophy behind it. And there's sort of a moral commitment on the part of everyone at Caltech that thou shalt not cheat and things like that . . . but there is no moral commitment on the part of the students that thou shalt not steal a pitcher of milk from the food service. People do things which are technically illegal, but which are in fact moral, or not immoral." What do you do if somebody like this gets hauled in by the guard? "If you read the honor system booklet it says that purity of motive is no excuse, and I don't think that's true," he says.

Pete believes ASCIT should take new directions: "Any organization that follows old patterns is dead, but taking new directions doesn't mean that it should drop everything that's happened in the past." The research project and center are fine for those who participate, and he realizes that he won't get many more involved. "I'm afraid that for the past couple of years ASCIT has more or less ignored everybody else. Maybe that's good every once in awhile — for a two year period every ten years, but I don't think now is the time for that."

Blocks of Girls

He has some specific things he thinks ASCIT should consider. Girls shouldn't live a block-and-a-half from campus. Women were going to be admitted in 1970, but this has been postponed a year because the women's dorm wouldn't be completed. "The basic problem is that they shouldn't have a separate dorm that segregates them from the rest of Caltech students," says Pete. If the Dabney house experiment succeeds, this will emphasize that women should be living in the present housing arrangements. "The houses are certainly not overcrowded." Another area to be explored is whether the admission of women should increase the size of

the student body.

Communication from students on faculty committees to the rest of the students has been poor. "What I'd like to do is set up some sort of a format where people who represent the student body on these committees can be questioned about what's going on," he says. "I don't think the way to do it is to announce a meeting in Winnett Clubroom One because nobody will show up or the people who will show up are those people who will know anyway. What I'd like to try as an experiment is to schedule meetings in the lounges of various houses."

Discount Prices

A ten per cent discount at the bookstore would mean an increase in ASCIT dues. Right now ASCIT gets \$3500 a year from the bookstore. A two dollar increase in dues per term would mean a student must buy more than \$20 of books per term for the discount to be worthwhile. A study is being done this year to find out how much students spend. Two cash registers are being used—one register for sales to faculty and non-students. At the end of the year the feasibility of a discount may be decided.

Pete believes EPC poll-procedure must also be analyzed.

(Continued on page 4)

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For Tired Seniors...

by Nick Smith

Those few of you who go to lectures in 22 Gates may have noticed a new object to stumble on outside. Underneath the majestic oak that rests between Gates and Dabney, there sits a bench. This is by no mean an ordinary bench, for it has many years of history behind it.

Back in the days when men were men, and giants walked the earth; long before the lush and verdant fields in the middle of campus were torn out for a library, there was a tradition known as THE SENIOR BENCH. For years this proud piece of furniture has been abused and neglected, even to the extent of not being in the Little t any more. Here is the story behind that bench.

Many years ago, (at least 35) a bench was placed under the oak tree mentioned above, and it became the exclusive property of each year's senior class. By 1939, this tradition had become so firmly established that it was mentioned thusly in the Little t: "The bench beneath the Senior Oak is the exclusive resting place for the work-wearied Seniors. They

have waited three years for this privilege, and are naturally inclined to look upon any infringement by lower classmen as worthy of suitable punishment!"

The tradition remained in this form for about fifteen years after the above paragraph was printed. Sometime in 1953, a sudden change occurred. The phrase suddenly became "the resting place of seniors and secretaries." The reason for this was not explained in any of the Little t tradition pages of that era, but a clue came out of the 1965 issue of the Little t. It said, "In 1954, after a bloody battle, the secretaries chased the seniors off and it is now officially known as Post 334 of the Pasadena Association of Culture-Lovers, Bird-Watchers, and Modified Stock-Racers." For the most part, though, the only mentions of the bench in modern times are the forlorn words, "There once was a senior bench," that appear in most Little t's since the mid-50's.

Seniors and secretaries, restore this tradition to its rightful place in your hearts, and use the bench.

What to Do With Yourself Over Term-Break

by Bill Bradley

Are you stranded at Tech over the break? Tired of snaking? Want to try something new? If you're feeling culturally deprived try the Music Center. If you're feeling morally depraved, see HAIR—there's a rumor that it'll be closing down at the end March. If HAIR isn't enough for you, go to the raunch flicks. If that doesn't work, see your UCC — he'll tell you what to do. If you're the clean-cut type, who grooves folk music, try the Ash Grove, the Troubadour, or our own Pasadena Ice House. They generally have good shows and don't cost that much. If you happen to be a jazz freak, Brubeck is at the Santa Monica Civic on March 22. Other highly-lauded shows include "The Committee" and "You're a Good Man Charlie Brown." Check out the L.A. Times' Amusement Section or FM and Fine Arts for times and places. You might check out the flick guide while you're looking at the paper. Who knows — maybe you'll find a good one, like "the Killing of Sister George" or "Rachel Rachel." Of course the old standards — Disneyland, Knott's Berry Farm, the TV or movie studios — still hold if you have some bod to snow. If you want to go to Disneyland, see Personnel (2nd floor Throop) for discount cards. If the weather is too cold for Disneyland it may be just right for skiing. There are some reasonable runs within two hours drive. If you don't have any equipment, a full day of skiing will probably cost you \$15.

"Fourth?"

by Robert Geller

North
S A K 7 4 3
H 9 3
D A K 7
C A 5 2

West
S 9 6 5 2
H J
D 5 2
C K Q 9 7 4 3

East
S Q 8
H 10 6 2
D Q 10 6 3
C J 10 8 3

South
S J 10
H A K Q 8 7 5 4
D J 9 8 4
C —

East-West Vulnerable
The bidding

South	North
Kehela	Murray
4 H	4 NT
5 D	5 NT
6 D	6 H
Pass	
D'Alelio Pabis	Ticci
4 H	4 NT
5 D	5 NT
6 D	6 H
7 H	Pass

West led the king of clubs.

Although he was one of the inventors of standard bidding methods, Howard Schenken has been on the warpath against Standard American for some time. In his latest book, **Howard Schenken's Big Club** (Simon and Schuster, \$4.95) Schenken gives two different versions of his Big Club system, one which simply grafts a strong one club opening onto Standard American bidding, the other being a complete summary of the system he plays with his expert partners. Schenken's system has been proven in practice.

The basis of both Schenken systems is the strong artificial one club opening, with the negative one diamond response. Unlike the strong two club opening

used by most experts, the Big Club requires only seventeen points, which both keeps the bidding low on strong hands and limits other suit openings to minimum hands. The Big Club shapes the entire Schenken structure, changing the meaning of many other bids. For example, a raise of an opening to the three level, or a response of two no trump, to a non-club opening is a limit bid, only inviting game. There is no need to treat these bids as forcing since opener has already limited his hand by failing to open one club.

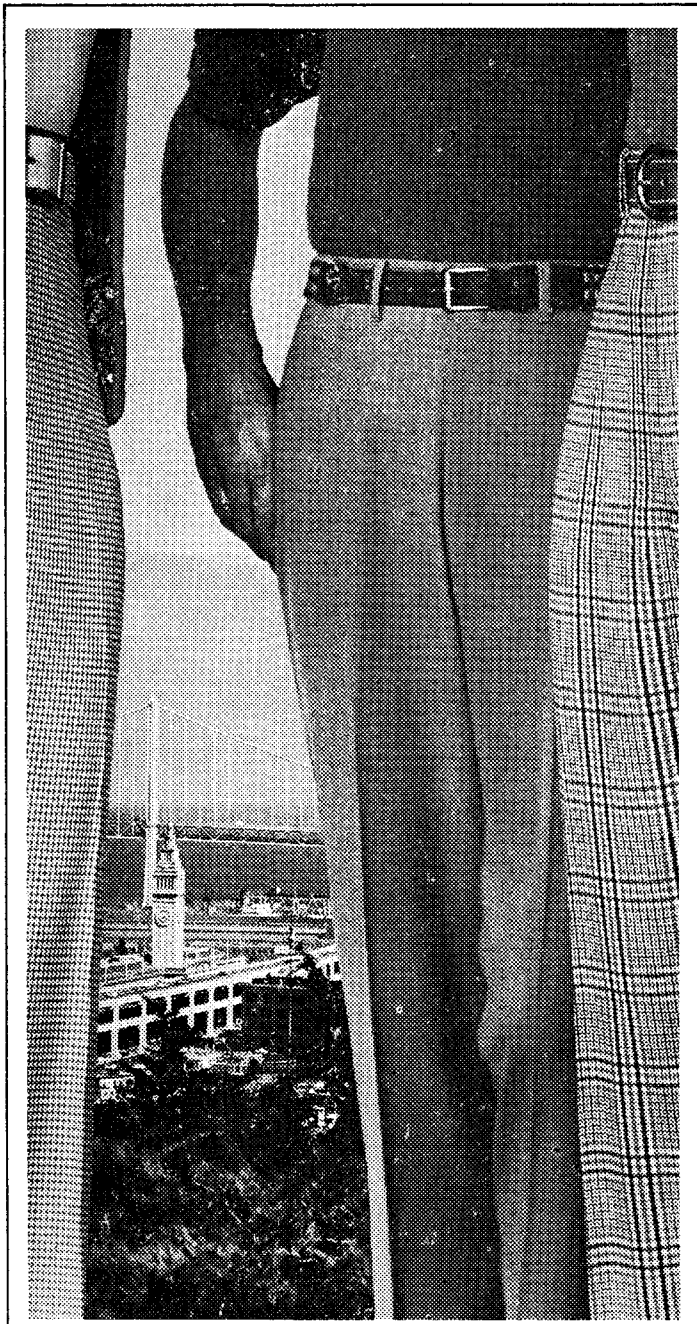
World Championship

Much of the inspiration for Schenken's system comes from the repeated drubbings he has received at the hands of the Italians in World Championship play. Schenken played on four North American teams in the early nineteen fifties, when American bridge was the strongest in the world. All four teams, using Standard American bidding, easily defeated their opposition. Since 1955 however, the United States has finished second in every World Championship. Schenken played on three of those teams, using standard bidding in 1961, but playing the Big Club in 1963 and 1965. Both times he played the Big Club, Schenken played effectively against the World Champion Italian Blue Team.

All the tricks

Today's hand, taken from the 1967 World Championship, illustrates the difference between American and Italian styles of bidding. Both pairs had identical auctions up to North's six heart bid. At this point Kehela passed and D'Alelio gambled by bidding seven hearts. There is an excellent play for seven hearts, since even against a diamond lead, declarer has the chance of a three-three split in spades, a doubleton queen of diamonds, or a squeeze against West. Neither declarer had any difficulty making seven after the club lead, simply drawing trumps and ruffing out the spades. The Italians won ten imps for their gamble.

Schenken is one of America's greatest players and theorists; his system and book are accurate reflection of his standing. No bridge player should miss this book.



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Szolovitz Changes Tech

(Continued from page 2)

"Here we have a really strange philosophy about the EPC polls — they are confidential in the sense that faculty members may not look at them, except they are told how their own course came out or how they themselves came out — which is ridiculous. We are protecting the faculty from some other faculty member knowing that he is a crummy teacher. That's not realistic! If he is, he ought to be concerned about doing something about it." There are bi-weekly seminars (open to all) being conducted by the faculty committee on undergraduate student relations to examine teaching techniques at Caltech. There have been discussions of specific courses. This is a good place to air gripes.

Lead on, mascot

"ASCIT must lead even if students don't follow," says Pete. "Ideally ASCIT should represent the student body, but I think anybody will recognize that at Caltech the student body is not particularly clued in on what's going on and is not particularly interested in changing anything or in looking into the quality of its own life." But is this a unique Caltech problem?

Pete encourages students to talk to him. "What ASCIT has to do is to look for any ideas at all that come out of the student body and try to work on these. In addition to that I feel an obligation to lead. I expect that some of the ideas that I might come up with will be useful enough or popular enough

Fisher New YMCA Prexy

Bob Fisher is the new president of the Caltech YMCA. He was elected at the Y elections, held Thursday evening, March 6. Other officers elected were: Ben Barker, Vice President; Alan Stein, Secretary; Tom Joseph; Treasurer; John Bean and Dave Lewin, Representatives-at-Large.

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Faculty Student Staff

that people will want to do them. But I have to try."

Orchestras Not Too Many Cooks For Gabrieli

by Paul Levin

The Virtuoso Brass of Three Great Orchestras Performing the Antiphonal Music of Gabrieli. Columbia MS 7209.

It has been said that too many cooks spoil the brew, but as this recording shows, too many musicians don't spoil the music. This recording of Gabrieli's music was made by the brass ensembles of the Chicago, Cleveland, and Philadelphia Symphony Orchestras, and while the performance time is not divided equally among the groups or among the players, it is still safe to state that this is a three-way project.

Gabrieli, a late sixteenth-and early seventeenth-century composer, wrote mainly polyphonic music. Stereo is a great boon to this type of music as it allows the listener to hear music as it is actually performed: with two separated groups answering each other. In conjunction with this the record jacket lists for every individual number the channel (left, center, or right) on which every performance is heard. The music is performed by brass instruments entirely, though I have on other occasions heard it performed with organ as well as brass. I like this organ arrangement much better as it produces a fuller tone without detracting from the brass.

All in all, for a person who appreciates polyphonic music this would be a very good buy.

Baker St. to Parisdena

Irregulars Play Saigon, Fleming

by Alan Lederman

Imagine a folk group less pretentious than Simon and Garfunkel, less naive than Peter,

Beavers Downed by Pomona 91-54

On a slow track, Pomona used its depth to down the Beaver trackmen, 91-54. The Beavers won four events and only one of these was in track.

The Caltech weight team was again very strong as they won their events. Blaschko put 45' to win the shotput while Burton won the javelin with a 187' throw. McDonald won the discus with a throw of 132'.

Pomona swept all of the jumping events except for the pole vault where Graham and Holmes were second and third with 11' vaults. Ruth came through with a clutch put to take second in the shot.

Tarjan led the Beavers in a quarter mile sweep as Andrews and Watkins followed him in. The Teckers dropped both relay races by small time separations. Watson of Pomona won the 880 and mile as Antaki and Tardiff tried to catch him but could only take second. Mason and Smith both ran well as they finished second and third in the 2-mile.

Butterworth and List took second and third in the 220 and then switched places in the 100. Both events were decided by judge's decisions. Burton and Gregg both ran well as they took second and third in the 110 high and in the 440 intermediate hurdles respectively.

Paul, and Mary, and less adolescent than Spanky and Our Gang. Then you have the Baker Street Irregulars, appearing in a Fleming House concert. The Irregulars are a relatively young group, having been together only one year. Formed in Miami, the group then traveled to such exotic places as Saigon and Da Nang. Said Barbera Smith, female vocalist in the group "We were booked into Service Clubs; the guys there only want to hear rock'n'roll that was five years old; we found that just a drag, we were booked for six months and left after two weeks; but I guess you can't blame the soldiers." Her husband, Mike Smith, writes about ninety per cent of the group's material. Most of that presented Friday was very good rock, with not quite enough content to make it a serious folk concert, but with enough spice and satire to make for an enjoyable evening. The group suffers from a lack of professionalism, which I think could be overcome in a matter of a few months. The Baker Street

Irregulars will present a concert at Beckman Auditorium third term; it should be a worthwhile event. For those who would like to see the Irregulars sooner, they will be appearing at the Ice House starting April 8.

J P O ?

Those of us in the international Tech set then proceeded to Beckman. Pour les etudiant de Caltech who cannot parle francais, there was a most unenjoyable evening ca nuit. La Comedie de Bourges, which claims that it is "the INITIATOR of unique and TRULY ORIGINAL dramatic research," presented the play "Phedre," which was written in such recent times as 1677 by Racine, who simply based it on a work by Euripides written in 640 B.C. (not quite contemporary.) Moreover, the play was presented in rapid-fire French. The program notes were as incomplete as possible, so that the total effect was to alienate anyone who was not proficient in the language, including almost all C.I.T. undergraduates. One can say, though, that nothing was lost in the translation.

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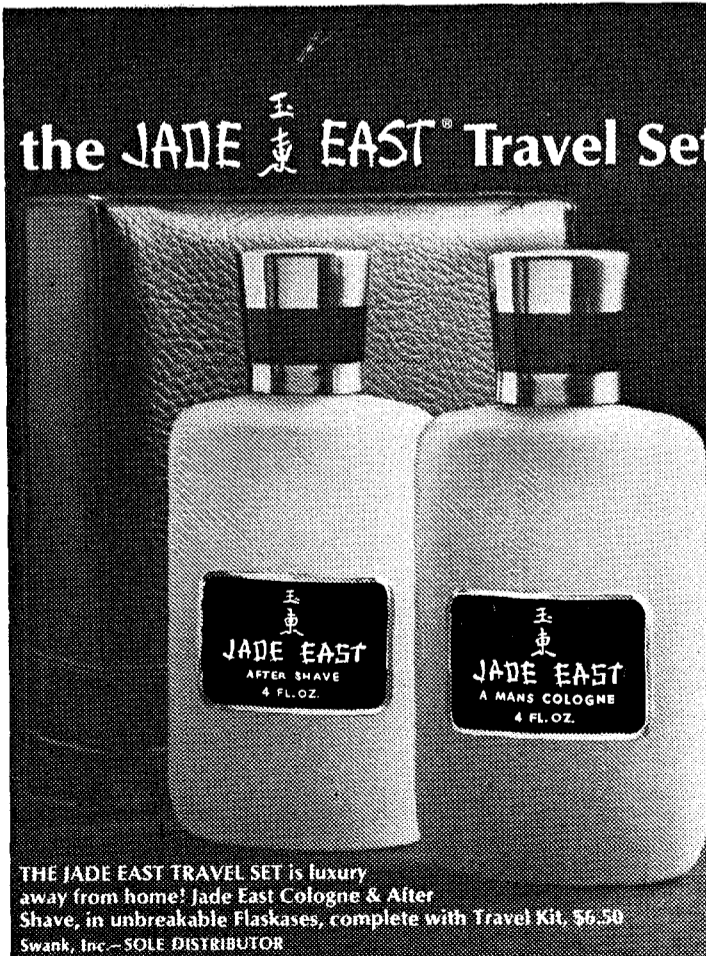
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TECH Sports

Racqueteters Improve

by Coach Lamb

The Caltech tennis team has a season record of three wins and six losses as they go into the Loyola match. The squad has played with wonderful spirit and have had two close losses; one against Azusa-Pacific 5-4 and another against Cal Lutheran 6-3. A win in either one plus an expected win against Loyola would have given them a .500 season.

Ken Pischel, at number one, is improving with each match and will score more upsets as the season develops. John Healy has been playing strong matches and has the best game-won record. Greg Evans has run into strong opponents and has yet to hit his full potential. The balance

of the varsity squad, Andy Chow, Jean Crawford, and Jon Smith are very close in skill and do give us good depth. Doug Fay has moved up into the number seven spot and looked quite impressive in his win at Cal Lutheran.

The team opens the second half of the season with a match against Pasadena College on April 1 and has a return match with Cal Lutheran on April 3, where the home court advantage could tip the scales in our favor.

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Swimmers Take Third In Meet

by Coach Reck

Coming off a solid third place in the SCIAC meet last Friday at Claremont, Caltech's ever-improving swimming team is now pointing for the National Association of Intercollegiate Athletics (NAIA) Championships March 20-21-22 at George Williams College, near Chicago, Ill.

I was well pleased with the Beavers' showing as they wound up with 233 points on the final day.

Caltech was the only conference team to win any events from SCIAC champion Claremont-Mudd (CHM) as Capt. Greg Wright won the 200 Backstroke in a time of 2:12.1 and Mabry Tyson pulled the upset of the day in the 200 Breast, by defeating defending champion and previously undefeated Karl Graeber, with a new school record 2:27.2. Frosh star Steve Sheffield also set a Caltech record in the 200 Fly with a 2:06.9, and barely was nosed out by senior David Tempkin of CHM. Marten Kalisvaart swam to his lifetime best in the 200 Free with a 1:56.0 and also scored in the 100 Free.

Other Caltech swimmers who scored points in the champion-

ship were Tim Hight in the 200 Free, 100 Free and 400 Freestyle relay which he anchored with his best 100 of the year, 51.9; Tom Davis in the 200 Free, 200 Fly, and 200 Back; Ed Mickowicz in the 1000 Free, 50 Free, and 500 Free; Tom Coates in the 100 Free, 50 Free, and 400 Free Relay; Larry Watkins in the 50 Free and 400 Free Relay; Robert Hall in the 200 Individual Medley, 200 Fly and 200 Breast; Mike Stefanko in the 400 Medley Relay, and 200 Breast. Senior Larry Hunt had his best 200 Breast of his career as he finished with a 2:34.5. Tom Miller teamed with first year swimmers Tom Wells and Richard Hjelte to a 4th place in the Medley Relay.

Caltech Divers Steve Johnson, Gary Reedy, Arnie Richards and Allan Harstein placed well in both the 3 meter and 1 meter diving events.

In its last 4 meets before the championship Caltech defeated PCC 77 to 36, Cal Poly Pomona 64 to 49, Mt. San Antonio 38 to 35, and Redlands 62 to 51, to finish the season with an 8 and 5 record.

This year's Caltech team is one of the best in the school's history and has taken or will take practically every record except for NAIA champ Henry Dewitt's sprint records in the 50 and 100.

Next Wednesday, All-Americans Greg Wright, Maarten Kalisvaart, Mabry Tyson, Steve Sheffield and I will leave for the NAIA championships with hope of winning the 400 yd. Medley Relay, and placing ahead of archrival Occidental.

Beagle Takes 6th In Wrestling At NAIA Tourney

Alan Beagle attended the NAIA National wrestling Tournament and took sixth in the 190-lb. class. He won his first three matches and then lost to the eventual second place winner, 3-0. He lost his next two matches and took sixth. Beagle gained 7 points for Caltech as Tech placed 31st out of 70 competing schools.

Fisher of Biola who was second in the 177-lb. class and gained 14 points contributed with Beagle to give the NAIA District 3 their 21 points. Coach Gutman commented, "He is Caltech's and SCIAC's best wrestler. He needs more experience against good wrestlers and if he had this, he would have taken at least second place."

Scientists Study

(Continued from page 1)

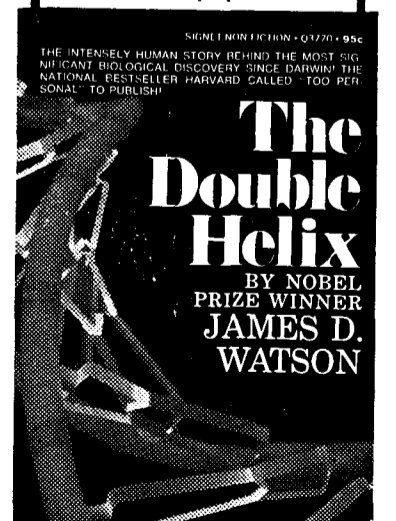
from here? The committee hopes to broaden its constituency in the next few weeks, and follow developments at other institutions. Comments and suggestions can be directed to Dr. Meiselman (Thomas Lab), John Smart (Kerekhoff), or Chris Dede (YMCA).

More Notices

(Continued from page 2)
HAPPENINGS NEWMAN

Caltech's Newman Club will have a guitar Mass this Sunday, March 16, at 6:30 p.m. in Winnett Lounge. Come and pray for grade points! Also, USC Newman is having a mixer tomorrow, March 14, from 8 p.m. to midnite. Address is 3207 University, USC campus. All are invited.

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Dick chose manufacturing engineering when he joined IBM because he was interested in producing core planes for memory components. He says, "After the component has been designed, I coordinate the tooling and all the other manufacturing processes. I initiate basic ideas on the design of tooling and work closely with the

people who design and build the machine tools and install the production machinery.

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