ASCIT Musical Plot Given Away

by Greg Simay

Sigmund Romberg's beautiful melodies come alive next weekend when the 1975 ASCIT Musical, The Student Prince, will be performed in Ramo Auditorium. Once again students and staff from Caltech, employees from JPL and students from other campuses have joined to make it all possible. A number of Caltech seniors have been involved in every one of the recent ASCIT musicals (Pinafore; Penzance; Kiss Me Kate) and so their latest effort has sentimental as well as entertainment value.

The Student Prince occurs in the kingdom of Karlsburg in the 1860's. Prince Karl-Franz, grandson of the king and heir to the throne, has received permission to leave the formality of court, and attend the university at Heidelberg along with his tutor. Dr. Engel; his valet, Lutz; and a footman, Hubert.

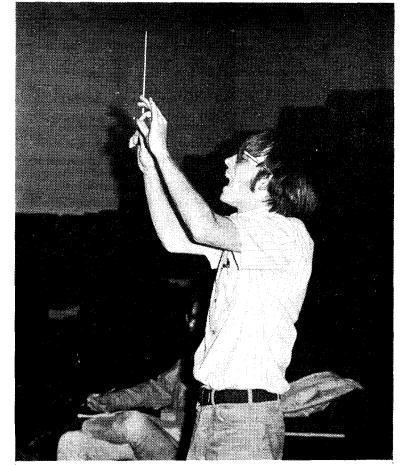
At their arrival in Heidelberg, at the Inn of the Three Golden Apples, they are greeted by the innkeeper, Ruder: Gretchen, one of the barmaids; Toni, a waiter; and Ruder's niece, Kathie. Also at the inn are students from the university, who ask the Prince to join their fraternity, The Saxon Corps. He accepts, and begins to enjoy the relaxed life away from court. Wonder of wonders, he and Kathie fall in love!

Some months later, the Prince is visited by his fiancee, the Princess Margaret, whom he has never met; and her mother, the Grand Duchess Anastasia. After the Princess leaves, Karl-Franz makes plans to elope to Paris with Kathie. As their train in departing, however, Prime Minister Von Mark tells Karl-Franz

that the King is dying. And so the Prince returns home, leaving Kathie with vows of his love.

At a court ball two years later, King Karl-Franz announces his betrothal to the Princess Margaret, who breaks off an extended affair with Tarnitz, the Captain of the Guard. Afterwards, the King is visited by Toni, who reminds him of his promises in Heidelberg. Struck by the memories which arise, Karl-Franz elects to return to Heidelberg.

Princess Margaret meets Kathie first, however, and convinces her to give up the King. When Karl-Franz arrives, he is greeted by Kathie, who tells him she is leaving for Vienna. The Student Prince ends as the King and the Princess plan to be



TIM ERICKSON, Artistic Supervisor of the ASCIT Musical, provides some enthusiastic musical direction. More photos on page 5.

The CALIFORNIA Tech

Volume LXXVI

Pasadena, California, Friday, January 31, 1975

Number 15

The Y Presents. . .

Drug Researchers Discuss Work

by J.R.T.

Drugs, especially those used and abused for recreational purposes, are still touchy subjects with most people. Perhaps that is why Winnett Lounge was only about half full Tuesday evening for the Y's panel discussion on the topic. The presentation by Dr. Brooks Carder and Dr. Ronald Siegal of UCLA was, however, done with a degree of scientific detachment and a wealth of data from their own primary research.

Drug research is a very wide field and the work of both guests has been extensive. To cover as much ground as possible during the two hours the discussion lasted, the researchers limited themselves to generalizing their results in an informal, nontechnical way. This approach still however, for each was reluctant to answer some questions on which they could not be certain.

Doped Rats

Dr. Carder spoke first, after both of them were introduced by Tech Staff Psychologist Nancy Beakel. He has done four years of research on the effects of marijuana on the behavior of rats. One of his conclusions is that the effects of marijuana depend heavily on the individual rat's history, environment, previous experience, and state of arousal, as well as on dosage. It was noted that generally rats became more aggressive while under the influence only during their first "trip", only if they were in a strange environment and were given adverse stimulus. Dr. Carder said that the main significance of his results is that left something to be desired, it would be desirable to pursue

the same line of research in humans; i.e., how circumstances affect effect.

In other tests, he discovered that rats wired for brain self-stimulation would stop administering it to themselves from ten to ninety minutes after getting stoned, depending on dose. Normally they will stimulate themselves indefinitely, and work hard for the pleasure. Also, Dr. Carder acknowledged the existence of the so-called "amotivational syndrome" of marijuana. In addition to a common next-day "hangover" or lethargy, persons and animals in stressful or competitive environments may experience lowering of motivation and drive for days after moderate use. The effect is often absent in passive lab experiments, but is very relevant to active situations, where a loss of interest can be marked.

Dr. Carder is currently engaged in research on the biochemical effects of cannabis, but

Continued on Page Seven

Flems Take IH Track, Page Leads for Trophy

Fleming collected 80 points to win the Interhouse Track competition this week. Page had 67 points for second, with Ruddock, Blacker, Lloyd, and Dabney taking the next four places. Ricketts apparantly forgot about

John Land highlighted the individual aspect of the meet with three first places, and the anchor leg of Fleming's relay team. Land started Tuesday with a first place in the pole vault, clearing 7-6. Steve Hurst of Fleming took second, and Mike Bandhauer took third. Bandhauer also placed third in the high jump, with Brad Page and Chris Cooper taking first and second for Fleming Both Page and Cooper cleared 5-8, and then tried for an Interhouse record at 5-11, missing on all attempts. John Pender took first for Page House in the long jump with a leap of 17-7. Jim Hickey took second for Fleming and Bob Tajima took third for Blacker. Ray Gildner and Leslie Peterson finished out the places.

Walt Beckmann and Dave Munro placed one-two in the shot put for Ruddock with Beckmann's heaving a wad of 38-7. Bill Sharman grabbed off a third for Lloyd, B. Page and Craig Broskow took fourth and fifth. Broskow won the discus for Page House with a toss of 110-11. Harvey Phillips took second for Ruddock, Sharman took third, Jeff Borders placed fourth, and Rich Gayle took fifth. In the javelin, Ed Rea came off the pitcher's mound to edge Sharman with a winning 153-6. John Best finished third for Ruddock, John Dilles and B. Page finished the field.

Another Day

Wednesday the meet began with the grueling 1320 yard run. Fleming's Jeff Poulin just edged Bob Higley of Blacker with a time of 3:27.3. Tom Kennedy took third for Blacker, Bob Rutherford and Jim Findley finished fourth and fifth. Poulin won again in the 660 with Joel Okazaki of Page, Eric Kaler of Ruddock, Duane Grey and Kennedy finishing next. Jack Stemple won the 330 for Page with Fleming's Ray Gildner and Blacker's Bob Tajima close behind. Young Il-Choo took fourth and Jim Hickey jogged in for a fifth.

Land edged Art Gooding, also of Fleming, by a hair to win the 220 in a time of 24.5 Joe Fahle

Continued on Page Three

News Briefs

Deadlines Approaching

Seniors please turn in your photographs to The Big T by February 28! Send them to the editor or c/o Flora in Winnett. Photos should be no larger than 3X4 inches.

House Presidents: Get an early start on your house reports (these should be not more than 14 or 15 pages but are subject to slight cuts if space does not permit). All photographs in this section will be printed in black and white so if there are any color photos of some activities give them separately to the editor.

Student Shop

To Meet

There will be a meeting of all Student Shop members Saturday Feb. 1 at 1:00 p.m. We will clean the shop and make plans for this term. New members wishing to join should show up at 2:00 p.m.; committeemen should be there at 12:30. If you have any questions see Lou Scheffer, 223 Page.

Music?

Anyone interested in a regularly practicing contemporary

music group contact either Jeff Mallory (796-0952, 214 S. Wilson) or Glede Vaughn (449-9971, Page 113).

Rule, Brittania

Once again this Saturday evening we shall delve into the wonderful world of watery warfare with another naval miniatures game, brought to you by those people who gave you the battle of Taranto on the anniversary of Pearl Harbor. The time is 7:30, the place is Dabney Hall Lounge.



Agony of de Feet

THE THRILL OF VICTORY AND THE AGONY OF DEFEAT as portrayed on the Tech soccer field. Photo by Chris Wheeler

Editorial

Pack the Musical

For the fourth year in a row, a group of interested students has joined together to produce a musical. Once again the success of this venture rides on the support of the Caltech community.

The road to completion has been rocky. The task of finding suitable singers, musicians, and technical help with the time to devote to the show is almost beyond comprehension. And yet, the work by all involved hinges on the performances next Friday, Saturday, and Sunday nights.

For the past three years, the ASCIT Musical has been presented before packed houses. The Student Prince will come alive in three performances this weekend, hopefully to the same-sized audiences. The continuance of the ASCIT Musical depends on its success this year. Let's do it again—support The Student Prince!

-Dennis L. Mallonee R. Gruner SMC Sweeney



from the cerebrum

In previous issues of the Tech I've blasted a lot of things around the campus, mainly administrative decisions and ASCIT. These blasts had a purpose, and I must frankly admit to frustration.

Caltech has a lot of potential: we could easily be the finest educational institutuin in the world if everybody would put his mind to it. But the lack of concern on the part of the administration coupled with the

Nobody on 55? Try 53—Save

,by Gavin Claypool

Completion of operatorassisted calls (person-to-person, collect, credit card, or bill-to-athird-number calls) will be speeded up during evening and Saturday switchboard hours by dialing "53" instead of "0".

Between 5-8 p.m. Monday somebody will care about through Friday and 10 a.m.-3 going on around here and p.m. Saturday, "53" will connect the caller to a Pasadena operator. somebody will care about going on around here and position to reverse the total caller to a Pasadena operator.

Continued on Page Eight

apathy of the student body will never bring about anything.

I had hoped to help bring some progress, either through constructive criticism or enough mudslinging that someone would pick up a shovel. Thus far nothing has happened. The most reaction I have gotten is a couple of "That was a good article" comments and a second-hand story that Jim Black (Public Relations) "wanted to talk with me." [I have heard nothing since, and thus have not spoken with him—'tis a pity].

Why nothing? A good question. Silence from the "powers that be" is commonplace in the 70's, and perhaps the students just don't care enough—and this is probably the root of the problem. Trustees and the like won't mind high-level bungling if the students don't

Give up? Never. The pen will get sharper, the research deeper, and the tact cut down. Maybe somebody will care about what's going on around here and be in a position to reverse the trend. I only hope it's not too late

-Dick Beatty

THE ASCIT FRIDAY NIGHT MOVIE

High Plains Drifter

7:30 p.m. & 9:30 p.m. in Baxter Lecture Hall

Admission: 50c—ASCIT members and their guests; \$1.00—anyone else

LAST WEEK:

Bridge Over the River Kwai

THE CALTECH FORUM

Money for 'Rocks' Could Go To Books

To pirate a phrase, it looks "as though some very large and untidy creature, perhaps a dragon, had quite recently suffered a series of disappointing bowel movements in the vicinity." "It," of course, is the landscape artist's latest hallucination, the Throopsite Fountain and papier-mache rock garden.

After a year of squinting under reduced lighting and of flushing only when necessary, I am insulted by the construction of this styrofoam wonder and by the squandering of energy in pumping sterile water through concrete ponds.

Meanwhile our library is in financial crisis. Over 10% of our journal subscriptions have been cut in the past six months alone, our book collection, already a disgrace, falls further behind, and

a \$70,000 shortfall in funds is predicted for the coming year.

Beauty is fine, but, Harold, what if I want to read while I loll in your plastic Eden? To Hell with Hollywood rocks!

-Mike Daily
Graduate Student Council

Financial Points Raised by Student

I think Richard Beatty's column "From the Cerebrum" (California Tech, Jan. 17, 1975) was helpful in that it summarized a good deal of financial information.

I followed up on the question with respect to student aid. The student aid question is particularly important since the recent announcement that Stanford plans to increase their tuition to \$3810 next year and to over \$4000 in 1976-77. What is Caltech going to do?



The Critical

Ey

Protector, Larry Niven. Ballantine Books. \$1.25.

Protector is not exactly a

Protector is not exactly a novel, in the usual sense of the word. More precisely, it is two novelettes, connected by one character but set two hundred years apart. The first part is a revised version of "The Adults" (Galaxy, June 1967); the second part and the bridgework are new material.

Part one opens in 2125 A.D. with the discovery of an alien ship entering the solar system. While the Belt, a political entity independent of Earth and based on Ceres, prepares to make contact, they are beaten to the punch by Jack Brennan, a Belter miner, who makes the initial contact.

He finds Phssthpok, a Pak,

coming from a planet near the galactic core. The Pak are one of the most believable, yet different, aliens to be created. Niven postulates that the development in humans from child to breeder (adult) is only the first of two transformations. The second, from breeder to protector, involves increased intelligence (a more highly developed brain), loss of sexual organs (after the peak of breeding age, and incidentally making radiation less of a concern), a secondary heart (where the two leg arteries and veins join each other), greater strength (larger moment arms, from swollen loints), and so on. These changes, he points out, correct the symptoms of old age. Pak is a world continually at

Continued on Page Seven

"FRANKLY SPEAKING" by Phil Frank

CAMPUS
VARIETY
SHOW

"GEE, THAT'LL BE A TOUGH ACT TO FOLLOW!

© COLLEGE MEDIA SERVICES BOX 9411 BERKELEY CA 94709

First, I found that the reason for the drop between 1971 and 1974 in student aid was attributable to the cancellation by NASA, DOD and other federal agencies of scholarship and fellowship programs. The amount of federal reduction was greater than the total reduction of \$694,000 between 1971 and 1974; i.e., Caltech's contribution increased.

Secondly, I found that Caltech's programmed tuition for 1975-76 is \$3375. The tuition increase percentage is about onehalf that of Stanford and many other schools. In this sense, Caltech seems much more concerned about tuition charges than other private schools. Let's hope Caltech does not decide to forge ahead to the leading edge in magnitude of tuition charges! In terms of direct scholarship aid to undergraduates, I find that Caltech provides more money per student than any other major private school in the country except Rice University, where student tuition is covered by a large endowment. One comparison that he did not make that I thought significant is that tuition seems to be only 10% of the total expenditure (= income) of the Institute. It seems that it costs ten times more to educate a Techer than he pays in tuition.

This is not written as a defense of the administration. It is just that I think it's often useful to look behind the raw data.

-Gregory Hoit

The CALIFORNIA Tech

Friday, January 31, 1975

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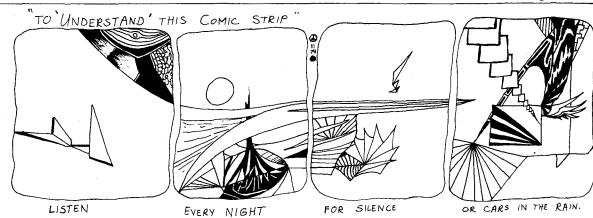
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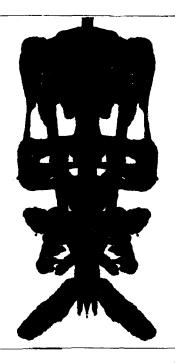
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Happy Birthday, Ed, you faggot





Dr. Brown To Get Degree

Harold Brown (and if you don't know who he is by now, you're reading the wrong paper) will receive the degree of doctor of science from the University of Rochester this weekend.

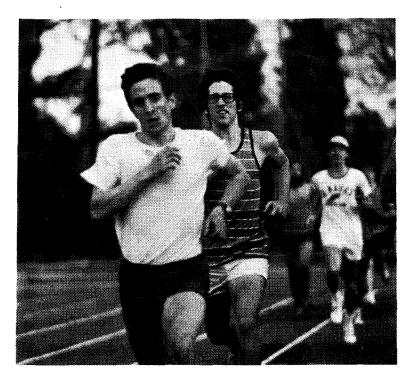
Dr. Brown is one of four chief executives of leading (edge?) universities in the nation who will receive honorary degrees this Saturday during the inauguration of Robert L. Sproull as president and chief executive of the University of Rochester.

The other recipients will include Chancellor Ernest L. Boyer, State University of New York, doctor of laws; President

Dale R. Corson, Cornell University, doctor of science; and President Richard W. Lyman, Stanford University, doctor of humane letters.

For those of you who really don't know, Dr. Brown has been President of Caltech since 1969, and for four years previous was Secretary of the Air Force. He has been active in the technical leadership of the SALT (Strategic Arms Limitation Talks) negotiations.

A specialist in physics and nuclear engineering, he was director of research and engineering for the Department of Defense from 1961 to 1965. He joined the staff of the Lawrence Radiation Laboratory's Livermore branch when it opened in 1952 and in 1960 he succeeded Dr. Edward Teller as its director.



INTERHOUSE TRACK action during finals early this week.

Photo by Bobby Bus

CCF Sponsors Conference

The Caltech Christian Fellowship will sponsor a *Student Conference on World Evangelism* tonight and tomorrow in Beckman Auditorium. Both large plenary sessions and smaller seminar groups have been planned with eminent speakers from around the world.

Registration is from 4 p.m. to 6 p.m. tonight at Beckman Auditorium, with the first session at 7:00. At 7:30 Dr. Ralph Winter (BS '45) will speak on World Evangelization—God's Plan, Our Responsibility. On Saturday afternoon there will be three periods with a choice of 25 specialized topics for more detailed study.

Don't miss out on this valuable conference—stroll on over to Beckman this evening and do something worthwhile.

IH Track

Continued from Page One

took third for Page, with Tajima and Gray following. Fahle took second behind Land in the 100-yard dash, with Al Sepulveda of Dabney taking third. Walt Beckmann came in ahead of Steve Vik to claim fourth. Mark Hueschen won the 70-yard high hurdles for Page against no competitors. Hueschen also beat Gildner and Stemple to win the 120 low hurdles. Gooding and Higley took fourth and fifth.

Fleming's relay team of Poulin, Gooding, Vik, and Land beat Page, Ruddock, and Blacker in that order to climax the meet.

Page currently holds a good lead in trophy standings with Fleming twenty points back.

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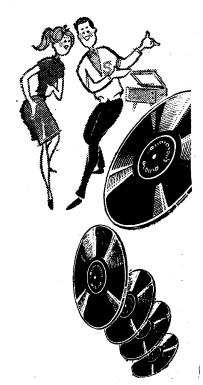
regular \$6.98 list price

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Special Student Offer

All Caltech students with ID card receive an additional 10% discount off our already-low discount prices (except special sale items).

This offer good through June 30, 1975.



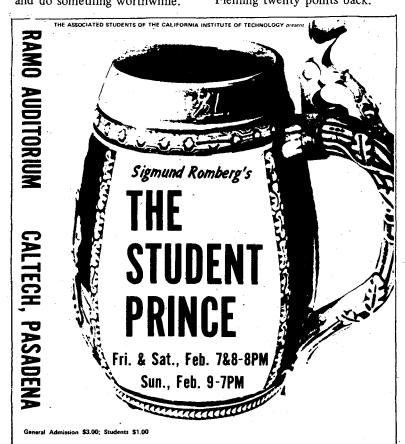
10%

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Shop daily 10-6

Friday evenings to 9





Welcome to the weekly diversion circus. There's quite a bit going on this time around. Sunday is the Coleman, *Music for a While*. At this writing, there are still a dozen freebies remaining for you. Come along and find out why the girl next door plays krummhorn.

The new Watson series opens soon, specifically with Sir Fred Hoyle speaking on the still-hypothetical "Emergence of Intelligence in the Universe" on Frebrary 17. This will be followed by Dr. Beakel's lecture on March 3, which will finally expose Caltech as a schizophrenic family. For the farther future, consult your eight-ball or a brochure.

Wednesday Joseph Campbell will deliver the second Leakey lecture in Beckman, "Mythological Thresholds: Spiritual Roots of Mankind." There are about 200 seats remaining, student tickets going for \$3.50. Armchair Adventures continue this weekend, with "Literary England" Friday 7 (effectively sold out) and the SCUBA-filmed "Chambers of the Sea" on Sunday the 9th.

Princeless

The main attraction next is The Student Prince. It will play in Ramo Friday through Sunday for a dollar. This show is worth seeing, besides its merits as a presentation of drunken students of the ages, as the the final fling of the current dynasty (beginning with HMS Pinafore), the dynasty

being the producers and directors who will finally (God willing) graduate this year.

Once you've recovered from your sojourn in Heidelberg (see previous paragraph) you can be amused by several events in the real world. Some are far in the future, but you can get good tickets now. And the Dean's slush fund is still going. Steve Gillette returns to the Ice House on the fourth. Joshua Rifkin will be at El Camino College on the fifteenth. For guitar freaks who can't wait for Carlos Montoya at Beckman March 14 & 15. Andres Segovia will be at the Pavilion on * March 5. An exciting event is the return to this area after a five year absence of Victor Borge. He will be coming to the Pasadena Civic on February 17 (which, in accordance with Finagle's first law, is the same night as Hoyle). Just for interest's sake, you can get a twenty percent discout at Mann's Chinese Theater to see Streisand's Funny Lady for groups of over five hundred.

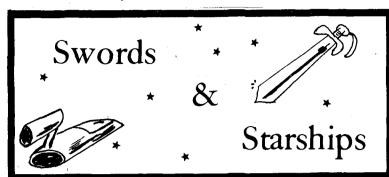
Let us not, before closing, forget to mention the American Ballet Theater. It is your last chance this season for good ballet, and features a very good program, with reasonably good seats still available.

As I've been so verbose this week, for a home entertainment package I leave you with only the suggestion that you take yourself (or a loved one) in hand, and think upon leather whips and quivering flesh.

Hexagons To Become Octagons

An unusual exhibit of the works of artists Tony Delap and Jay McCafferty is showing at Baxter Art Gallery here on

campus. The exhibit is open to the public Tuesday through Sunday, from 12-5, through Feb. 9.



The Hollow Lands by Michael Moorcock, Harper & Row Publishers, \$6.95.

This novel is part two of a sort of trilogy entitled "The Dancers at the End of Time". This trilogy, as the title implies, takes place a short time before the end of the world. (In fact, an estimated 200 years before the end of the universe as we know it, but that matters little.)

In the first volume, we saw our hero, Jherek Carnelian, fall in love with a kidnapee from the late 19th century, Mrs. Amelia Underwood. The fact that she is married and does not in the least love him is little deterrent, for in this far distant future, all things (literally) are possible. At the end of volume I, entitled An Alien Heat, the two were separated again by millenia, since it is impossible for someone from the future to remain in his own past for long enough to create a paradox (the famous Morphail Effect) or something.

The entire point of this trilogy seems to be to portray a "society" (if that term might be used for a loose confederation of individuals with unlimited power) that is, by our standards, both

totally decadent and totally mad. Where one person compliments another on creating a splendid sunrise, and death is as meaningless as it is temporary, at least most of the time. The entire world is the toy of these beings (they are scarcely people anymore, except by the loosest of definitions) and the universe might do their bidding, but they do not care for such things. They, as Bartleby the Scrivener. prefer not. Instead, they seek escapes of any kind from the boredom that accompanies immortality and total power. They see the antics of Jherek as one might view a particularly amusing work of art, and his love affair the same.

We see a little of the rest of the universe in its dying days, in the form of space travelers who make the mistake of visiting earth. One, who comes as a celestial Paul Revere with the news that the universe will end in two centuries, is met with amusement, complacency, and a cage for one of the menageries. Another group, this time marauders who intend to enjoy the last days of everything, become so enmeshed in the lunacy of this world that they end up in a slapstick fight in London in 1896, mistaken for Latvian anarchists, all because they annoyed the wrong senile robot. If that sounds confused, it seems that one of the persons from the End of Time has established at least two identities in 1896, including that of a magistrate in London, and another a contemporary of H.G. Wells and G.B. Shaw in the Cafe Royale.

Reading any Michael Moor-cock book is like doing a mental half-gainer into a mixmaster. It is impossible to understand just what is going on at any given moment, but whatever it is is most assuredly interesting.

The title, by the way, comes from a poem, "A Last Word" by Ernest Dowson, 1899:

Let us go hence, somewhither strange and cold/To Hollow Lands where just men and unjust/Find end of labour, where's rest for the old,/Freedom to all from love and fear and lust./Twine our torn hands! O pray the earth enfold/Our lifesick hearts and turn them into dust.

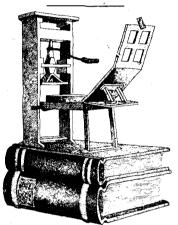
That's what it's all about. A difficult book to read and understand, but worth it in some ways. It is supposedly science fiction, but somehow, I just don't know. I suppose all things are until they happen.

-Nick Smith

Tony Delap, well-known California artist, (I assure you, you have seen his works before) has two pieces on exhibit. One, on loan from the Los Angeles County Museum of Art, is constructed of wood and canvas. The other one is one of his "floating lady" sculptures in which a large pillar of wood appears to be floating in the air.

McCafferty is a young artist who was the recipient of the New Talent Award given by the Los Angeles County Museum Fine Arts Council in 1974.

His works at Baxter consist of lines graph paper a yard square on which he has concentrated sunlight with a magnifying glass. He did this in the wind, turning the paper to produce a variety of abstract patterns with streaks of soot from the hot paper. This rather controversial art form has brought comments ranging from "Great stuff!" to "That's not art! That's graph paper with holes burned in it!" Decide for yourself. Go see it.



BOOKS

A Hole in Space, by Larry Niven. Ballantine Books. \$1.25.

A Hole in Space is Larry Niven's latest collection of short works. I say works instead of stories to avoid the confusion between short stories and novelettes (and novellas for that matter), and because the collection includes one of his nonfiction articles.

Compared with Niven's earlier collections, this one is disappointing. With three exceptions, the selections were published in the last year and a half. The three exceptions turn out to be the best of the lot.

"The Fourth Profession" is clearly superior to the rest of the book and was certainly one of the best novelettes to be published in 1971. Earth is being visited by Monks, an alien race that trades throughout the galaxy via light-propelled sailing ships. You may remember a brief mention of them in "Passerby," in the All The Myriad Ways collection.) To everyone's surprise--including the Secret Service, whose thankless jog it is to protect the aliens--a Monk shows up in a Hollywood bar. After sampling the wares, the quite high Monk gives the bartender (Ed Frazer) some of the aliens' stock-in-trade: RNA-based knowledge pills. Frazer and Secret Serviceman William Morris's attempts to determine what the bartender has learned--and its implications-are the basis of this

Continued on Page Eight

HELP WANTED

The following positions on The California Tech will soon be open:

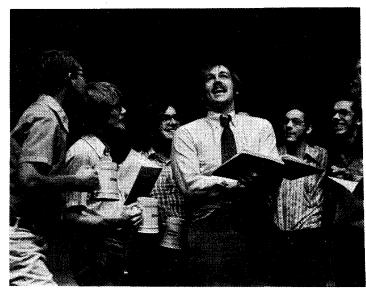
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 Editor-in-Chief x3
 Reporters
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 Cartoonists
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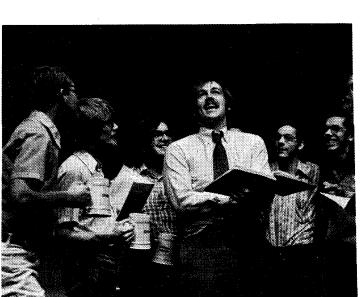
Anyone interested in serving in any of the above capacities should contact Rich Gruner (209 Page) immediately.

The Student Prince

Feb. 7, 8, & 9

RAMO AUDITORIUM



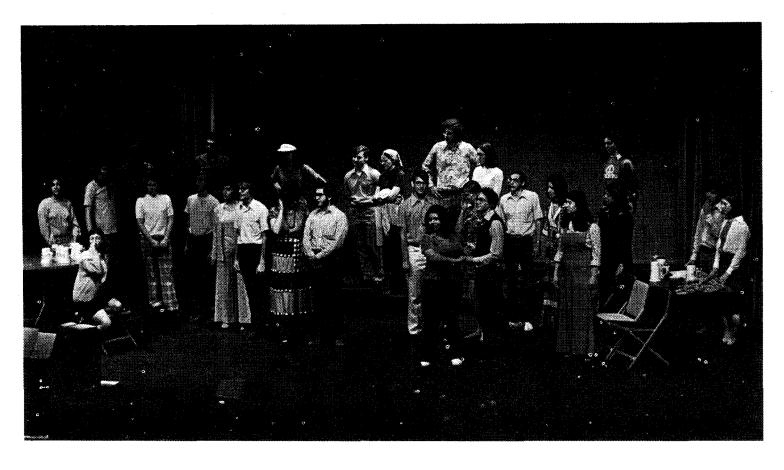




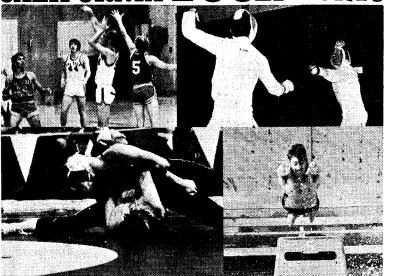


Photos by R. Gruner and K. Yoshida





The CALIFORNIA Tech SPORTS



Page Six

Friday, January 31, 1975

UCLA Tamed in Hockey

Tech Squeaks by Bruins, 5-4

Sunday evening, Caltech beat their fiercest competitors, UCLA, in the most exciting game of the season. The scoring began late in the first period when a Tach player, who out of modesty demanded not to be named in this article, (call him X), beat the UCLA goalie. Ted Gates, of cavitation fame, boiling all night, was set up beautifully in front of the UCLA net by his linemates. He bubbled the puck in, making it 2-0 Tech. Then, in the second period, UCLA fought back and scored.

The game went from fast, clean, smart hockey into chaos, the dark ages of the second period. For more than ten minutes, players from both teams floundered helplessly on the ice, as though it were their first skating lesson. Then, out of the darkness, Yates to Wood to X to 3-1 Tech. Following the renaissance spirit, Joe Sweeney blasted a shot from 40 feet which the UCLA goalie was unable to scatter.

With what seemed like a sure win, the Tech Hockey team skated pompously onto the ice for the third period. Their heads were as watermelons, but their brains were as peas. Bob Gardiner, who (as may be recalled) is a fighter, was penalized several times on several separate counts of violence directed against the opponents. In the resulting power plays UCLA was able to score three times, tying the game, 4-4. It was not Gardiner's fault for two reasons: a) the calls against him were questionable, at best; b) the rest of the Tech

team, with their watermelon heads, played remarkably poorly.

As the clock signalled less than a minute to go in the game, it looked like a sure tie. It was grim; the winning streak was over. But the face-off in the Caltech zone was taken by X who, gathering momentum, rushed up the ice, towards the UCLA net, across the blue-line, past the defensemen! The shot, the SCORE! Tech wins the game 5-4. It was wonderful. (Was it good for you too?)

Be sure to be at Pickwick Sports Arena in Santa Monica next Tuesday, Feb. 4 at 11 p.m. when Caltech will (hopefully) pulverize Occidental once more, just like before.

Page faces Fleming sometime this Sunday in Discobolus action

Wrestling Wins

The Caltech Wrestling team started its league season last Wednesday losing to a surprising La Verne team. That same afternoon they went on to pound out a win over Azusa-Pacific. They continued last Friday with a 36-24 win over visiting Redlands. And on Tuesday they swamped LA Trade Tech 48-12.

Tom Snyder is leading the Beavers with four straight pins, including the La Verne heavyweight. In pinning the Azusa 167-pounder, he reversed a loss to the same man in the Caltech Tournament that would have earned Snyder a place.

The Redlands match saw. besides Snyder, Vince Fratello and Steve Vik pick up pins. Vik, who weighs a mere 160 lbs., collected his pin in the 190 lb. weight class, while wrestling an opponent almost twenty pounds heavier.

In the Trade Tech meet, only four opponents were available, and not at the right weight classes. As a result, little Willy Moss and teensy Bobby Loveman had to wrestle much bigger men, with disastrous results.

Fencers Foiled by PCC, CSN **But Show Promise With CSLA**

by Lt. Brigade

Since we left you last, the Caltech Fencing team suffered the agony of defeat at the hands of P.C.C. and Cal State Northridge in foil competition, and in foil and epee, lost to Cal State

However, the team showed promise for the future in losing to Cal State L.A. in foil by a

score of only 5-4. New members of the team also did well against C.S.U.L.A. a week ago Thursday evening.

This week's meet with P.C.C. has been postponed until next week, due to final exams there this week. Maybe next article, I'll even tell you who's on the team. Until then, Support Your Local Swordsperson!

Darb Clobbers Flem

by Chris Russell

Fleming demolished Dabney last Sunday in Discobolus tennis. In first singles Tim Ahern came out of the Health Center (some people really do escape) to lead of Lee Aydelotte. In second singles Daryl Madura defeated John Ziegler 7-5, 4-6, 7-5 for another Fleming win. In third singles Big Red's Jerry G. Adams won 6-4, 6-2 over Doug Hager. Fourth singles—Rick Boettcher of

Dabney clobbered Art Gooding 6-0, 6-0. In the doubles match, the Fleming team of Frank Liang, and Ru-Chang Kung blasted Dabney's Alaudin Bhanji and Mark Lamkin 6-0, 6-0.

This week Page challenged Fleming in basketball, tennis and ping pong. The question is-can Fleming complete an unprecedented second consecutive Discobolus sweep with a win in basketball? The answer is a resounding "probably not."

Fleming with a 6-0, 6-0 defeat

Track Coach Expects Building Year

by Dave Sivertsen

"This is the year we'll concentrate on the development of the individual." That was the dominant theme of an interview with track coach Leroy Neal on teh just aren't enough bodies to prospects for the coming season. come up with a win.

He felt that Tech would not The graduation of several stars season ahead.

The Magnificent 12

currently working out for track. Coach Neal said that the staff hours, 35 minutes.

will concentrate on the individuals in this small squad, and give them opportunities to compete in their best events rather than sacrifice for team score-there

In spite of the cloudy forehave an incredibly strong team. cast, there are individual bright spots. Larry Wise has done a 9.9 last year, few returning letter- 100 and a 48'6" triple jump. men, and a dearth of new Doug Herbert has already broken trackmen all add up to a difficult his own school record with the discus in practice. Greg Griffin broke the school's marathon There are only twelve people record at the NAIA District III races with a fifth place time of 2

Coach Neal's training rules are non-specific: just conduct yourself naturally. Everyone is welcome to come out for the team. And anyone who qualifies in his/her event will have funds available this year to go to the Nationals.

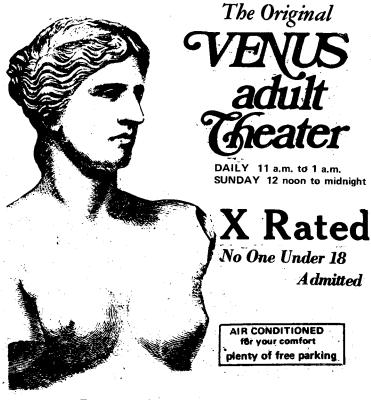
This year's first meet is away on Feb. 15. There's a home meet the last Saturday in February at 1:30 p.m.

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TRANSMISSION

AUTOMATIC TRANSMISSION SPECIALISTS

Continued from Page Two

etically implanted objective is to protect their bloodline. When this is wiped out, they lose their appetite and eventually die. except for those fortunate few who succeed in adopting the entire Pak race.

Faced with personal extinction, Phssthpok found his Cause: looking for surviving descendants of an ill-fated expedition, launched some 2½ million years before. Its protectors had all died, because the "tree-of-life" root needed to transform protectors and to keep them alive would not grow on the new world. The breeders continued to breed, and over the intervening developed intelligence. tree-of-life.

The second half begins in 2341 A.D. when Roy Truesdale awakens to find four months missing. He sets out to discover who is responsible, ignoring a substantial bribe from the "Snatcher" not to do so. The

Baskethall

Tennis

Wrestling

Basketball

Wrestling

JV Basketball

8:00 p.m.

3:00 p.m.

4:30 p.m.

6:00 p.m.

8:00 p.m.

4:30 p.m.

Jockey Sports Menu

Saturday February 1

Tuesday February 4

Wednesday, February 5

Whittier

La Verne

La Verne

Claremont-Harvey Mudd

Friday, February 7

Ambassador

Azusa-Pacific

trail leads to Brennan, since transformed into a protector, on an artificial planetoid at the edge of the solar system. With his increased intelligence and Pak technology Brennan has made "Kobold," his planetoid, a virtual disneyland. Next to the Pak itself, this is the best example of Niven's imagination at work. Kobold itself looks like a doughnut, with a sphere in the center. Generated gravity is used for all sorts of strange effects, including a Moebius strip to walk forever on, and a three-dimensional model of Escher's Relativity.

When Brennan discovers the Pak are sending an evacuation fleet toward Earth, he and Truesdale take off for Earth's interstellar colonies. Most of the remainder of the book deals with Then Phssthpok arrived, with preparation for battling the Pak scouts and the fleet. It's a different kind of space battle than those Doc Smith was famous for; I found it boring, but it improved with rereading. It was the only mar in otherwise pleasurable reading.

-Gavin Claypool

Home

Home

Home

Away

Away

Away

Siegel, who has accomplished a very large amount of research on the visual effects of about ten different hallucinogens in human trained observers and in animals. At present there are only two federal LSD research licenses in the country; he holds one of

He said that a problem that has plagued drug researchers is that they deal with "plastic experiences". One means of overcoming this is the 'specification principle': any data referring to drug tests must contain precise information about the type of drug, dosage, preparation, history of the user, environ-

Researchers

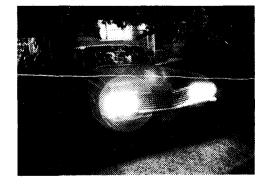
Continued from Page One declined to speculate on his data at this time. However, he did answer some direct questions about THC. At this time about 29 cannabinoids are known, but 80% of that found in nature is delta-9 THC, which is what he uses for his research. THC does cross the blood-brain barrier, and forms of it remain in the blood for 8-10 days after use. Chemicals which block the effects of THC may be possible. And for you Toklas types, he confirmed that eating dope is slower and less efficient than smoking it, with only about half the THC

ingested being effective. Hallucinogen Research

Next the floor went to Dr.

+E/kT

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In the time it takes to drive your friend home, you could save his life

If your friend's been drinking too much, he shouldn't be driving. The automobile crash is the number one cause of death of people your age. And the ironic thing is that the drunk drivers

responsible for killing young people are most often other young people.

Take ten minutes. Or twenty. Or an hour. Drive your friend home. That's all. If you can't do that, call a cab. Or let him sleep on your couch.

We're not asking you to be a doctor or a cop. Just a friend.

DRUNK DRIVER, DEPT. Y* ROCKVILLE, MARYLAND 20852 I want to save a friend's life. Tell me what else I can do. City. State

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ment of the experiment, and the route of administration.

Dr. Siegal explained that visual effects from the hallucinogens, among which he included marijuana, may be classified as illusions, pseudo-hallucinations, or hallucinations according to severity. The first involves visual distortions of real surroundings. An hallucination is seeing things that aren't there; but in the pseudo-type, you know they aren't real. All of the visual effects result from excitation on the nervous system by the drug.

In a series of experiments, Dr. Siegal showed that a variety of animals, including rats, cats, dogs, and apes, showed physical signs of visual imagery from various drugs while in darkness. To get an idea of the precise nature of pseudo and real hallucinations, he conducted elaborate and lengthy tests on well-trained human observers. In the typical experiment, a young volunteer was taught a whole new language by which he could quickly describe any visual stimulus by one of eight classes of form, color, and motion. Then every week for a year, the volunteer was administered one of 11 different drugs or a similar placebo (fake), without knowing exactly what he was receiving. The observer spent six hours in a dark isolation chamber describing any visual effects that occurred.

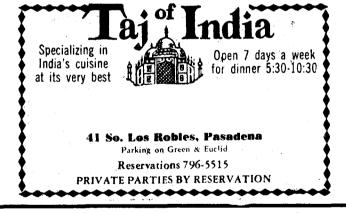
Dr. Siegal discobered that everyone has a natural "base-line level" of imagery in darkness, and that drug-induced visuals above this base tend to follow typical patterns. He showed several slides of these kinds of hallucinations as reconstructed by artists following the objective descriptions of the observers. Common were grids, latticeworks, stripes, spirals, tunnels, and pulsating white lights in the center of the visual field. Also frequent were complex images

derived from memories. The visions tended to be localized at normal reading distance and follow the turning of the head, but noc necessarily of the eyes. That is, different parts of the scenes could sometimes be inspected, or the whole picture projected on a real view.

Few Effects

Many, varied questions followed the brief slide-shows and presentations by each guest. Although they never specifically praised or encouraged the use of any drug for recreation, the impression emerged that in general the researchers considered the side-effects of almost all of the drugs under discussion to be minimal. One exception was Ketamin, more potent than LSD, which produced some mental problems in the cases they considered. Another was marijuana, which Dr. Carder said he would be reluctant to do experiments with in the future if for no other reason than the prolonged presence of THC in the blood and the possibility of long-term mental effects. On the other hand, they thought LSD and cocaine are very safe, if used infrequently, but pointed out that their tests were conducted under ideal conditions. Also, research on cocaine has been scarce till now. In any case, genetic damage from the hallucinogens appears to be a myth. Dr. Siegal told of visiting a remote tribe in Mexico which has used peyote for religious purposes for three millenia, yet seems to be none the worse for

People who went to the discussion to find out "what am I doing to myself" probably discovered that the answer was, "very little." However, the researchers could not and did not speak with absolute certainty for or against the use of any of the hallucinogens.



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difficulty for the great pianist,

bringing his left hand high above

the piano for the seven opening

chords. Virtually every member

of the audience sat forward in their seats to hear Rubinstein,

who was, by this time, playing

almost in a frenzy of emotion,

And, at the close of the

performance, he received yet

The first encore, played after

Rubinstein had twice returned to

the stage, shading his eyes with

another standing ovation.

Hoppity Hoodlums Hold Lab in Terror

by Tyrone Shoelaces

A security guard has been seriously wounded and three secretaries assaulted in separate incidents recently by members of what police describe as a group of sexually aroused kangaroos.

The kangaroos, said to be numbering fourteen, have been hiding in the ventilation ducts of the Keith Spalding Business Services building, and have been terrorizing employees since early Wednesday morning.

One of the victims recalled: "I was walking down the hall when this...grill...fell to the floor in front of me and this kangaroo jumped out. It said its name was Moses and that it was going to lead me to the promised land, and then it ... " At this point the victim became distraught and was unable to continue.

Police are at a loss as to what to do about the creatures. It was hoped that Tech biologists might be able to provide a clue to the kangaroos' origins and motivations, but no progress has so far been made.

The National Guard has been called out for an armed assault later this weekend.



Books

Continued from Page Four intriguing story.

"Rammer" uses the old theme of the terminally ill cheating death by undergoing suspended animation to await a cure. But what if society later declares you legally dead? This is the situation Jerome Corbett faces--he has no legal existence, the trust fund he set up for himself has been confiscated. His only chance for citizenship is to be useful to the State; the State decides: starship pilot, on a bizarre planet-seeding mission which will take two hundred years, subjective time. Corbett, however, makes plans of his own. The only flaw in this story is how simple they are to put in effect.

Louis Wu, the protagonist of Ringworld, appears here in an earlier story, "There is a Tide." the only one from the known space series in this collection. Louis is on one of his sabbaticals--alone in space nearly forty light-years from Sol--when he comes across a mildly enigmatic planet, an unknown alien race (the Trinocs), and a ten-foot sphere of neutronium (somehow stable). A little deeper background on part of Louis's character is brought out, as compared to Ringworld; both



Receiving no less than five standing ovations, Arthur Rubinstein appeared in a private performance at Ambassador College recently. On the program were some of the Rubinstein favorites, such as the Sonata in F Minor, Op. 57, "Appassionata" by Beethoven and Chopin's Polonaise in Ab "Heroic", as well as

Rubinstein, as always, walked on stage with a vigorous stride and bowed to the tumultuous applause and ovation. Known worldwide for his interpretation of the "Appassionata", he did not hesitate to play the opening double arpeggio, and developed the difficult theme with nearly perfect accuracy, incredible for a man his age (he will be 88 on January 28). Beethoven's sonatas have been called "mighty dramas in which Herculean conflicts alternate with contemplative moods", and the "Appassionata" is described well by this labeling. Usually a pianist cannot or will not perform the piece to make the most of these contrasts, or if so, does it in such a fashion as to make it almost a stereotype of previous performances. But Rub-

Louis and the aliens are supporting figures to the physical phenomena. Niven never does reveal the planet's significance, although the title seems to be a giveaway. In view of Ringworld, however, it would appear that the enigma remains--for now.

"Bigger Than Worlds" is a reprint of the science fact article in the March 1974 issue of Analog. In it, Niven speculates freely on the different forms of artificial worlds: hollowed asteroids, Ring Cities, Ringworlds, Dyson spheres, Cosmic Macaroni (aegagropilous topopolis). It's serious, it's fun, and it's huge!

"The Hole Man" is a first attempt to play with a new cosmological toy: quantum black holes. "\$16,940.00" is a mystery short-short about a cross-ruff in a game of blackmail.

The remaining stories emerge from the background of "Flash Crowd" (The Flight of the Horse) and deal with the effects of teleportation on society. All are fairly straightforward pieces; the only one that seems inspired is "The Last Days of the Permanent Floating Riot Club." But fear not. With 150,000 words of known space on its way (starting with "The Borderland of Sol" in the January Analog) things should improve.

-Gavin Claypool

instein is unique amongst these performers-he has brought out several major interpretations of this piece, and probably will bring out several more. Rubinstein's record for doing the fantastic is lengthy--he has played seventeen concertos in five evenings and ten recitals a monthwithout repeating the same piece twice, he appeared 115 times in his eightieth year, and has never cancelled a performance to this

In keeping with his ability to do the fantastic, he played a new interpretation to the next piece on the program, the Fantasiestucke, or "Fantasy Pieces" by Robert Schumann (Op. 12). The pieces alternate between what Schumann called Florestan (the passionate self) and Eusebius (the dreamy self). Rubinstein's vigorous expression of each piece kept the audience attentive until the end, when the two parts join in the last work, called "Ende von Lied" or "Song's End", or, as Schumann wrote, "...in the end it all resolves into a jolly wedding". After came the close of the first half of the program, a standing ovation, and intermission.

Next to be played were selections from those of Claude Debussy, called Ondine, La Plus que la Lente, and the Prelude in A Minor. A change from the music played earlier, the works of Debussy are renowned for their revolutionary departure from previous "classical" styles, with their daring tonal juxtapositions and unusual harmonies, all of which combine to make them extremely difficult to play. Ondine, one of the Twelve Preludes written between 1910 and 1913, has a smooth, flowing character, typical of a water scene. Rubin-

stein seemed to bring out this character with great dignity and ability, as well as in the next piece, La Plus que la Lente. But the performance of the last piece, the Prelude, must be accorded tremendous praise--it was probably one of the best performed pieces in the program.

And now came the part of the program that much of the audience had waited for. Rubinstein, known worldwide for his interpretation of Chopin, now began to play several of his favorites. He first played the Scherzo in C Sharp (Op. 39, No. 3) composed in 1839, followed by two Etudes, then the Nocturne in F Sharp Major (Op. 15, No. 2), composed in 1831, and winding up the program with the extremely well-known Polonaise in A-flat, (Op. 53), "Heroic", composed in 1842. The Polonaise, one of Rubinstein's longstanding favorites, seemed to receive special attention. Rubinstein leaped from his seat twice in order to play two of the chords especially loudly, once halfway through the first theme, then again at the very end. The famous second theme, with the virtually unplayable "march" in the left hand proved little

Switchboard

Continued from Page Two When the switchboard is closed, "53" can also be used to place station-to-station calls on Institute accounts.

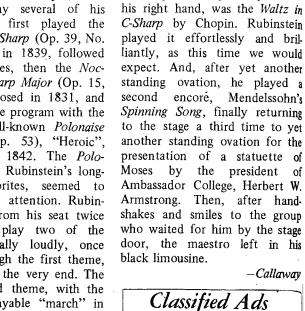
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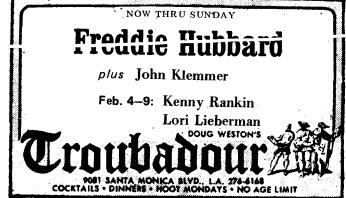
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