

That Was the

# The CALIFORNIA Tech

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Week that Was

Volume LXXII

Pasadena, California, Thursday, November 19, 1970

Number 9

## Jane Goodall-Her Business Is Monkey Business

by Peter Beckman

Baroness Jane van Lawick-Goodall, PhD, otherwise known to millions of National Geographic readers as Jane Goodall, spoke to a standing-room-only house at Beckman Auditorium Saturday. The lecture and its accompanying film, "My Life Amongst the Wild Chimpanzees," was jointly sponsored by Caltech and the L.S.B. Leakey Foundation, which backs her research.

Dr. van Lawick, as she prefers to be called, began with a few opening remarks on her life with the chimpanzees. She then provided a running commentary to the film and afterwards answered questions from the audience.

She explained how her ten years of study have provided much new information on the life and habits of the chimpanzees. At first it was very difficult for her to study the chimps since they would always run away, but gradually they learned to accept her presence.

### Breakthrough

The first real breakthrough came when one chimp, called David Graybeard, began stealing bananas

from the camp. This led Dr. van Lawick to begin feeding the chimps, and some became quite friendly towards her. Unfortunately, the chimps began to congregate around the camp, and this led to a flareup in fighting and other social disturbances. To rectify the situation feedings were sharply restricted, and chimps went back to their normal wanderings although they would visit the camp regularly.

### Exciting Discoveries

Dr. van Lawick has discovered that chimpanzees use tools and will occasionally kill small animals for food. The chimps use thin blades of grass to grub termites out of their nests and use bunches of chewed leaves as sponges to soak up water. This sophisticated use of these natural objects indicated that the chimps have some degree of conceptual thought. They will also kill smaller animals, such as small baboons, and eat them, but they will not eat carrion. These two discoveries have caused much excitement and comment.

The chimps behave much like man. They greet each other with

Continued on Page Two



The fun and frolic of Interhouse Dance descends upon Caltech Saturday night.

## Harry the Horse

## Frosh Ride High; Win Mudeo

by Peter Beckman

"We was robbed," cried a disgruntled sophomore after the Mudeo Friday as he helped throw a junior class judge into the slimy gunk of the mud pit. This was an unusual attitude among the sophs most of whom took the frosh victory with their customary dignity and restraint. In fact, their words and actions afterwards could be rated no higher than "R".

It all began shortly before 3 p.m. when the participants and spectators began gathering at the mud pit next to Noyes. The judges arrived soon afterward and the two opposing teams began to form under their direction. The freshmen elected Celia Rivera their team captain while the sophomores picked Rik Conrey. The sophs won the coin toss and chose the north side of the pit while the frosh took the south.

The first event was the tug-of-war which the sophomores won quite easily. Although the frosh pulled desperately the superior strength of their foes asserted itself, and they were slowly pulled into the turbid water.

### Riot Call

This frosh fiasco was followed by a sack race in which score was evened. The sophomores crossed quickly and efficiently with a few of the falls, somersaults, and drownings that characterized the frosh effort.

They were clearly ahead when a

Skyline Photo Credits — H. van Lawik, left; A. Ctein, middle and right.

## Rhodes Returns; Speaks on Scranton Commission

by Ira Moskattel

In a recent issue of Time magazine, an article about Joe Rhodes was included in the national news section. A henchman of the former ASCIT president was heard, "You mean he's not on the cover?"

Rhodes was not on the cover, but the commotion his actions and words made more than made up for the news magazine's oversight. Joseph Rhodes is a commanding personality, a quick wit, and an experienced and able salesman.

The controversial Tech alumnus was here Tuesday as part of the "Practical Politics" course. In an Olive Walk Talk that afternoon, Rhodes discussed the nature of President Nixon, reactions to the

Report of the Commission on Campus Unrest, and ideas as to how Caltech could become successfully involved in getting significant changes made.

In a drop-in seminar at Winnett Center, Rhodes talked about the mechanics of Presidential commissions. His remarks centered around the conflicts within the commission. Rhodes was chosen for the commission and shortly thereafter released a statement highly critical of Administration policies. Vice-President Agnew immediately called him prejudiced and asked for his resignation. Rhodes' controversial position on the commission was established.

A Junior Fellow at Harvard and part-time lecturer at the University of Massachusetts, the youngest member of the nine man committee set up a staff of his own to investigate more deeply than the larger organization. A staff of almost sixty from Harvard and surrounding schools was put together, as Rhodes put it, "to provide the threat of a minority report, in case the commission report was bad." The threat may have worked; the final document was unanimously approved and promptly ignored by the President.

Rhodes did not expect the President to accept the results. "I would be suspicious," he said, "of

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## Number Grinders Grind On

## Clearing Mars Photos

by John Tristano

Combining Space Photography and Computers was originally thought of as "Cleaning your glasses with a sliderule," according to Thomas C. Rindfleisch, of the Space Sciences Division of JPL. He then proceeded to show how useful the technique really is. The show included several photos of Mars, demonstrating the before and after of various techniques used to analyze photos and obtain information from them.

The combination of computer and camera work in the following manner: take black and white picture with all the corresponding shades of grey and break them down into 255 equal contrast divisions. Then assign each section a corresponding number, black could equal 0 for argument's sake, then

white would equal 255. Then break down the picture into dots and analyze each dot by one of several techniques. After the dots are labeled the values are sent to earth where they are recorded on computer tape and played on a screen similar to a TV picture tube.

Representative problems that arise include noise, contrast, and imperfections of optical systems. The corrections of these problems are done within the computer system.

The lecture was concluded by showing other uses for the computer photography system. The examples shown included the colineation of x-rays to analyze the changes during a period of time and the type listing of chromosomes from a photo of their structure.

## News Briefs

## Take a Techer Home for Dinner

Any member of the Caltech community who wishes to invite undergraduate students to Thanksgiving dinner is invited to leave his or her name with the Master of Student Houses Office, Extension 2195. Students who are not going home for the holiday and who have indicated their willingness to accept such an invitation will be contacted.

### The Tech Won't Come Out Next Week

We hope all of our readers will have a happy Thanksgiving!

### Winnett Center Has Interhouse Plans?

The new Caltech Jazz Band will play this Saturday for the Interhouse Dance between 9:00 and 10:00 p.m. at Winnett Student Center.

### YMCA Holds Autumnfest December 4 - 6

The Caltech YMCA is sponsoring an Autumnfest for the weekend of December 5. The Fest will be all fun and games: painting, singing, dancing, sculpting, playing Psychology Today games, and general flicking away from Tech. The Fest

will take place at All Nations Camp on Mt. Baldy. Interested? Check at the Y.

### It's Coming, It's Coming!

There are twenty-seven days left until Ludwig Beethoven's Birthday.

### Population Control Expert To Give Olive Walk Talk

Dr. Willard Johnson, an expert in population control, will be here December 2 for an Olive Walk Talk at 12:30 p.m. and a Drop-In seminar at 4:00 p.m. His topic will be "Sterilizing the Stork." The Caltech Y and Zero Population Growth are jointly sponsoring his visit. Dr. Johnson is the executive director of the Planned Parenthood Association of San Diego and a member of the national board of ZPG.

### Coffeehouse Remains Open Over Thanksgiving Weekend

Although it will be closed Thanksgiving Day, the Caltech Coffeehouse will remain open 6:00-12:00 p.m. on Friday and Saturday and 9:00p.m. to 2:00 a.m. on Sunday.

Throop Beat

Informal Exchanges a Possibility

by millikan troll

The Dean's Office has received replies from several colleges to a letter calling for informal exchanges of students between Caltech and other colleges and universities without the usual formalities (ie: red tape). So far, most of the replies have been enthusiastic but vague. Nevertheless, Dr. Huttenback reports that he will continue his efforts in behalf of the plan.

We offer "lots of advice; very little coercion," says Dean Huttenback, especially concerning leaves of absence. "A leave is a student's right," he said, but some thought should go into a request for one. In all but obviously unwarranted requests, the policy on granting leaves is extremely liberal.

**Rehabilitation Continues**

Within the strictures of reality (ie: budgets), about as many rooms will be rehabilitated over this summer as were done last summer. About 25 rooms, a laundry unit, a kitchenette, and an RA suite should receive special attention this summer. At this time, the exact area to be rehabilitated has not been selected.

However, South Complex rehabilitation and the housing of women are now "decoupled" issues, according to Dave Smith. Probably, next September he will see another seven to ten women housed in Ricketts, giving them parity with Blacker and Dabney, and a fourth house having female residents.

Charles Lloyd may be back to give occasional seminars on jazz. Whether he will be here just to talk, or to jam, or bring his group remains for the future to tell (perhaps all of the above apply?!). . . . Larry Hagman may give occasional acting workshops. . . . A Gourmet Cooking class for second term has been termed a distinct possibility. Those interested should sign up in the Master's Office. A partial rebate on the cost of the course may be available to those who complete the course (main and otherwise).

This week's Etaoin Shrdlu Award goes to CPAir, for putting their stewardesses in midi's and expediting to make advertising capital of it . . . The Throop Three Thrumvirate (take that, Spiro) is organizing. . . ; Happy Turkey!

Sports?

Water Polo Picks Up Pace

After a poor start against non-league competition, the water polo team has posted a 4-4 record in SCIAC, with two games remaining. Much of the team's success is due to the extraordinary efforts of goalie-captain Ken Hanson. The backbone of the defense fills the goal so well that in each game he blocks at least one penalty shot in addition to the 15 to 20 saves he makes.

Senior Larry Watkins is the team's leading scorer, with 13 field goals and 10 penalty shot scores in league action. At Pomona last Wednesday he blasted five shots past the bewildered goalie to lead the team to an 8-2 win. Senior Bob Hall and junior Steve Sheffield helped Larry on offense, with six and nine goals, respectively. Juniors Tom Coates and Tim Hight and sophomore Jim Jakway, the other starters on the team, work on defense and move the ball from Hanson to the offense.

In SCIAC action the team has beaten Pomona twice and has also scored wins over Occidental and UC San Diego. The team's finest game was against Oxy two weeks ago, when the swimmers pumped in six goals and Hanson stopped 22 shots (including a penalty shot).

They also played a tremendous game against Claremont-Mudd on November 7, but intercepted passes in the third quarter cost Tech three goals in the 6-3 loss.

Performing before a capacity crowd on Saturday, the swimmers scored three quick goals against UCSD and held on to win 4-3 in a hard-fought contest. Ken Hanson's block of a penalty shot once again saved the game for the Techers.

The J.V. water polo team has had a remarkable season, with wins over Redlands and UCSD being their first victories in over two years. JV standouts include Ken Hanson, who regularly scores from half-court, and frosh Tom St. John, Steve Bitondo, and goalie Virgil Shields. In both the JV and varsity games the frosh are gaining valuable experience which will enable them to replace this year's seniors on next year's team.

Letters

Massey Criticizes Student Tactics in Frosh Chem

Gentlemen (and other assorted creatures):

In my relatively unhumble opinion, *student* behavior during the Thursday Chem 1 lectures has gotten a bit out of hand. I'm thinking mainly about the disruption of the customary festivities by the Hare Krishna group that wandered in last week, at some unknown freshman's (it sounds better than nameless idiot's) invitation.

For one thing, if something is to be funny it must be well timed. If they had wandered in, chanting, and had wandered right back out again, still chanting, it would have been funny. As it happened, all that was accomplished was wasting fifteen minutes, time which would have been considerably better spent by letting Dr. Gray run his own show/lecture. Similarly, if the Tom Lehrer record had been stopped after the first song it would have been funny — but letting it run on and on even when it became apparent that Dr. Gray had something else planned was not only not funny, it was rude.

Thursday lectures are quite funny enough without amateurs trying to botch things. (No, George, not the demonstrations.)

P.L. Massey

The opinions expressed in all by-lined articles are solely those of the authors and do not necessarily represent the opinions of the editors or staff. Only the upper left corner of this page contains the opinions of the editors. (The first signer of each editorial is its author.) The Tech welcomes letters but reserves the right to cut those over three hundred words if such cuts will preserve the original meaning of the letter.

Goodall

Continued from Page One

hugs, kisses, and other similar body contacts. Males strive for dominance in the group, and many are masters of the art of bluffing. This they use to a great extent, and real fights seldom occur among them.

All-in-all the talk proved to be both entertaining and educational. The audience responded to the humor inherent in some of the chimp's actions, especially those that displayed "human" attributes such as greed or envy, while Dr. van Lawick's commentary aided the audience in understanding the actions of these closest cousins of man.



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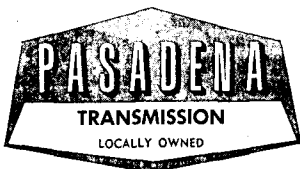
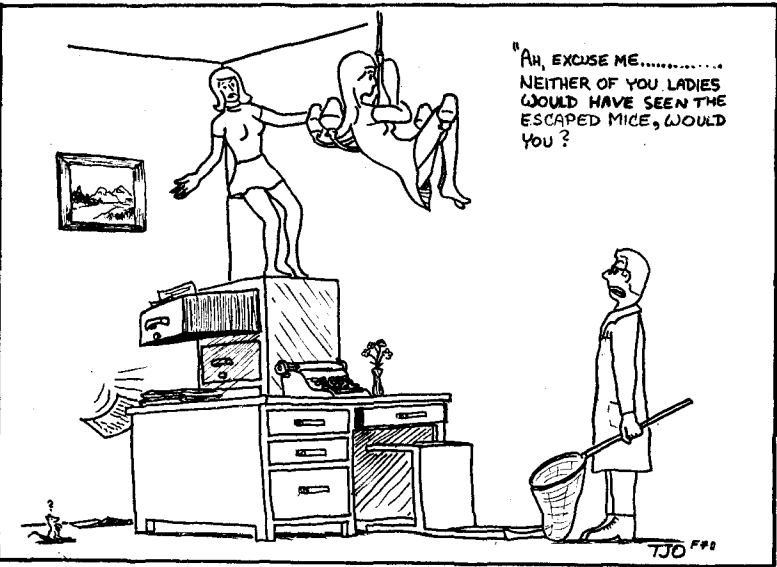
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Thursday, November 19, 1970  
Volume LXXII Number 9

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Subscriptions . . . . . \$1.50 per term  
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## Do Something About the Draft

Are you weary of reading draft advice columns in the *Tech*? Would you like to rid yourself of the Dear Abby's of the Selective Service System? Does merely avoiding the draft satisfy you? Or do you want an end to it all?

Draft resistance may be one answer yet breaking the law is not enough. One must seek to change it. Elections are over, but your influence upon the legislature is not. At the present time both chambers of Congress are considering proposals for a volunteer army. The bills being considered by the House of Representatives are HR 18613, HR 18614, and HR 18615. Although these bills preserve the machinery of the Selective Service System (i.e. registration), they are a substantial improvement over the present methods of military manpower procurement. They provide for an upgrading of the conditions

of military service (including higher pay), an increased use of civilian personnel in lieu of military personnel, and an expansion of military recruiting programs.

It is hoped that these actions will serve to increase voluntary enlistments and re-enlistments and thereby eliminate the need for inductions. Even in the event that this attempt to establish a volunteer army fails and the draft is reinstituted, at least the conditions under which the inductee will be forced to serve will have been improved.

If you object to the draft for any reason or you would like to see the soldier get just compensation for his personal sacrifice, I urge you to write letters to your representatives in Congress in support of a volunteer Armed Forces and an end to involuntary servitude in our military.

—Jeff Blair

## Honor System

## Guibas Presents Proposed Changes

Presently the Honor System booklet states, "willful failure to report an observed violation of the Honor System, or a reasonably strong suspicion of a violation, constitutes a direct violation of the Honor System" (p. 18). The Board of Control, over the past year, has had reasons to doubt the wisdom of this position. In fact, a recent precedent already exists, to the effect that the mere failure to report a violation is not, by itself, a violation. In an attempt to clarify the situation, the Board of Control has drafted a policy statement intended to replace the section of the Honor System booklet titled "IF YOU SUSPECT A VIOLATION HAS BEEN COMMITTED." This revised statement follows. The Board of Control would appreciate any comments or suggestions you may have on this document. It

expects to approve as official policy such a statement before the end of the present term. Please communicate your opinions to: Leonidas J. Guibas, Chairman of the BOC, Ruddock House.

One of the fundamental aspects of the Honor System is that no specific body is charged with policing it. The Board of Control and the Graduate Review Board are judiciary bodies, not investigation agencies. Thus, all the members of the Caltech community must share equally the responsibility of protecting and perpetuating the Honor System. This is indeed a heavy obligation. It involves not only personally refraining from actions that may damage the Honor System but also protecting it from any who engage in such actions.

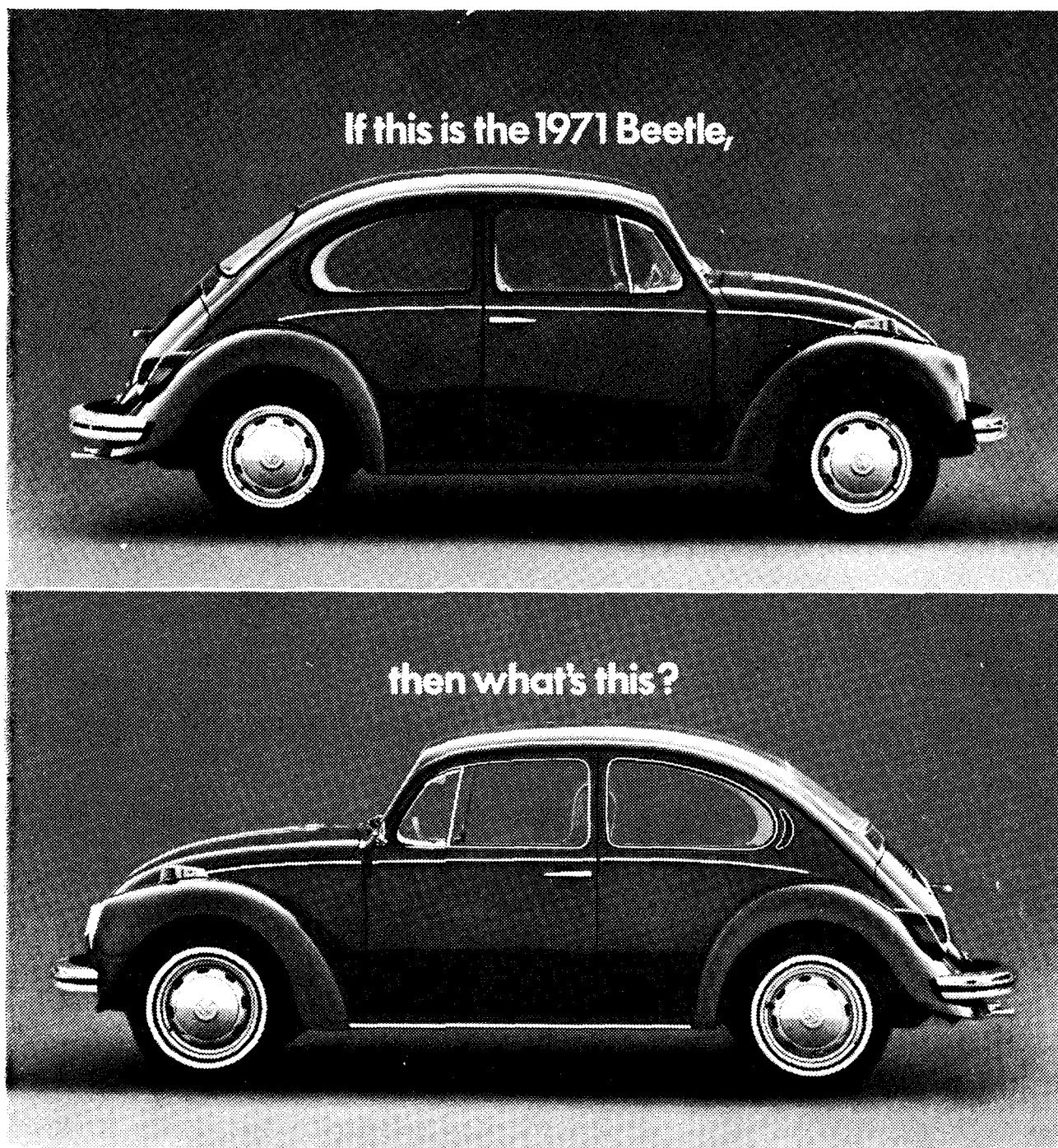
Unfortunately, this obligation

can lead to a conflict of responsibility, especially in the case of a person who has observed an Honor System violation or strongly suspects that such a violation has been committed. He is placed in the difficult position of weighing his obligation to the Honor System against his concern for the violator. He may be tempted to conclude that personally talking to the individual who has committed a violation and warning him of the seriousness of his actions represent a satisfactory solution to this dilemma.

The lone individual, however, must realize the position he is in, as well as his responsibility to the Honor System. He is neither aware of the past record of conviction another may possess nor is he in a position where he is likely to find out if the person he has warned ever repeats the questionable act. Further, in most cases, a few words spoken by a private individual would be no substitute for official action by an authorized body.

Finally, though the Board's main responsibility is to protect the Honor System, its obligations to the defendant weigh heavily in its

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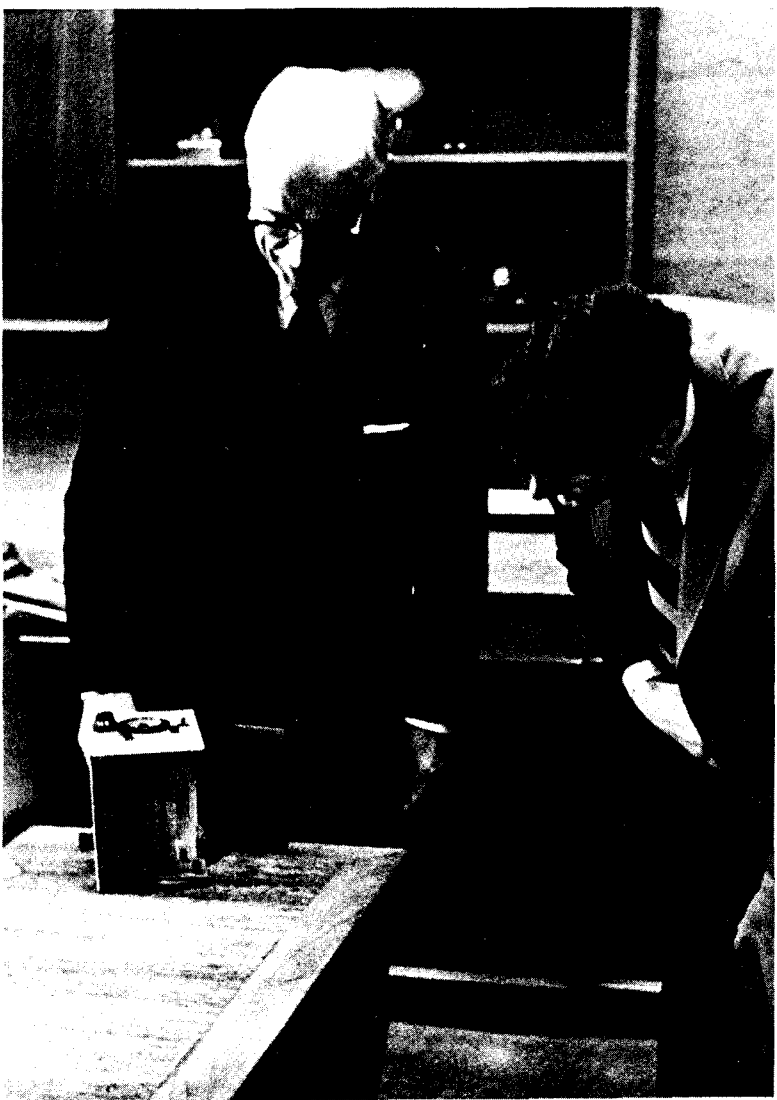
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DR. ARNOLD O. BECKMAN and Tech Editor Phil Neches examine the first Beckman Instrument: a 1935 pH meter. —photo by Levin

## Y-Program

### Speakers Discuss Religion in Japan, China

E. Gansner

As part of its Fusion of Religion and Politics in Asia Program, the Caltech YMCA is bringing several guest experts to campus to discuss religion as a contemporary social and political force in Asia. The guests will participate in a 4 o'clock seminar in Winnett and a dinner-discussion at 6 which will emphasize types of food native to the guests area of study.

Today Laurence Thompson, professor of Asian studies at USC, is visiting the campus. He will be primarily concerned with religion and its effects in China. Thompson, a graduate of UCLA and Claremont Graduate School, was born and raised in China. He later spent eleven years in Asia as a foreign service staff officer and a professor of music. During this time he stayed in Taiwan, Korea, the Philippines, Hong Kong, and Singapore.

George Totten, a specialist in Japanese politics, history, and political philosophy, will be on campus November 24 to discuss Religion in Japan. Totten, presently at USC, received his doctorate from Yale and has worked at Columbia, Boston University and MIT. Social movements arising and articulating with the political process are his concern particularly.

The series will be completed on December 2 with Ishwar Harris, a member of the History department of Claremont Graduate School, who will discuss modern Indian religion. Educated in India and Tokyo, Harris completed his theology studies at Howard University and Berkeley. He particularly wants to return to India to work in the area of religion and society.

If you are interested in attending the evening dinner-discussion, contact the Y for reservations.

## Talk to a Trustee

# Tech Interviews Arnold Beckman

by Phil Neches  
and Paul Levin  
Editors-in-Chief

Since the Board of Trustees meeting in Palm Springs two weeks ago, your intrepid editors have arranged to do a series of interviews with members of the Board. So, on the theory that one should always start at the top, we begin this series with the Chairman of the Board, Dr. Arnold O. Beckman.

Born in Cullom, Illinois, in 1900, Dr. Beckman received his BS and MS from the University of Illinois in 1922 and 1923, and PhD from Caltech in 1928. He spent the next twelve years on the chemistry faculty here. In 1935, he produced the first Beckman instrument: a pH meter. The company which bears the same name started in a Pasadena garage and grew from there.

In 1939, Dr. Beckman retired from the faculty to head Beckman Instruments full-time. He became a Trustee of the Institute in 1953, and Chairman of the Board in 1963, the year that saw Beckman Auditorium dedicated.

He serves as a director for Continental Air Lines, Security Pacific National Bank, Southern California Edison, and is a trustee and chairman of System Development Foundation. Among his extracurricular activities, he is a director of the Stanford Research Institute and the Automobile Club of Southern California, on the advisory board of Radio Free Europe, and a Founder of the L.A. Music Center.

**TECH:** How does someone get to become a Trustee? **Beckman:** A person is invited to become a Trustee. The Trustees have a nominating committee that is constantly looking for potential Trustees. They have criteria that are discussed and decided upon by Board. For example, we don't want to get overly heavy on any one profession or any one geographical district or things of that sort. We try to have a broadly-based Board. The Nominating Committee then

comes up with its recommendations to the Board of Trustees, and the Board votes on them. These votes are made before the candidate knows anything about it. The Board then votes to extend an invitation to a given individual, subject to his acceptance. And it's at this stage where we use the Trustees to go and try to explore before we actually extend an invitation, to explore with the potential Trustee the depth of his interest. If he does appear to be sufficiently interested then we extend a formal invitation to him. **TECH:** Why did you want to join the Board of Trustees? **Beckman:** Oh, I've always had a deep interest in Caltech. As you may know, I was there as a graduate student and received my doctorate and stayed on the faculty for twelve years thereafter. I had many friends on the faculty, so I was glad for the opportunity to become associated with the Institute again. I left in 1940.

When asked why he left his Caltech Professorship to go into industry, Dr. Beckman replied that while it was not an accident, it was not by design either. One of his classmates from the University of Illinois approached him one day with a problem: was there an easier way to measure the pH of a solution using a glass electrode. The answer was yes, use a vacuum-tube voltmeter. Beckman made such a device for the friend, who later asked for another because his colleagues were always borrowing the first one. If a small lab like his friend's could use two such devices, Dr. Beckman reasoned, just imagine what the total market must be. Beckman Instruments began as a small operation in a Pasadena garage. By 1939 it became apparent that running the business was a full-time job, so Dr. Beckman left the Caltech faculty.

"Hydrogen ion concentrations were just beginning to be recognized as being significant measurements. In fact, when we came on in 1935 our chief sales job was to explain to

people what pH was, not to sell the superiority of our instrument over competitors because there wasn't much competition at that time. But then pH rapidly came to be recognized as an important parameter, particularly in biological work, but in other things, too. We were fortunate to come in with our meter right at that time.

We came in with our spectrophotometer at a time when there was a need for measurements in the ultra-violet. There had been visual colorimeters, but we recognized that many substances didn't absorb in the visible, and there was need for an instrument that could measure absorption in the ultra-violet. Fortunately, our UV spectrophotometer came out right at the time that vitamin A and D were getting the public's interest. The method for determining vitamins was a biological assay method which is slow, took three weeks as I recall, and was quite inaccurate. If duplicate runs agreed within twenty or twenty-five percent, that was pretty good. With a spectrophotometer, one could cut the time down to a matter of two or three minutes with a relative accuracy of two or three tenths of a percent. We were fortunate to come out at that time." **TECH:** Then is it necessary to sell not only the product but the concepts behind it? **Beckman:** Yes and no. In the case of the spectrophotometer we could have sold almost any kind of "black box."

The war in Europe had shut off the sources of Scandinavian cod liver oil which was the primary source of the vitamins A and D. Shark livers, formerly worthless, suddenly became very valuable. The local fishermen suddenly wanted an instrument to measure the vitamin content of shark livers. They didn't care if it was a spectrophotometer or what; it was just a black box to them. Of course, when selling to chemists you have to have a sophisticated sales approach. As you get into more complicated instru-

Continued on next Page

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*"many people are becoming aware that you can't solve problems solely from the technical standpoint."*

Continued from previous page  
ments, not only the concept, but often training programs have to be sold, too. Take an ultra centrifuge. That can be a hazardous instrument, as you know. So we insist not only on proper training, but also on proper maintenance on such instruments. **TECH:**What is industry looking for in a prospective employee today? **Beckman:**It depends on the industry. A high-technology industry such as ours is looking for employees who have first-class training, but we also want them to have some other attributes. They should be innovative, imaginative, willing to work reasonably hard. We like to have people with excellent technical background, coupled with an appreciation of economics. The importance of economics in solving technological and social problems hasn't been taught in schools sufficiently well, in my opinion. Consider the current hullabaloo about environment. We'd all like to clean up the environment but we are beginning to realize how large the costs will be. For the first time many people are becoming aware that you can't solve problems solely from the technical standpoint. You must take into account economics and the political and social aspects of the problems.

*He also thought that people should be made to realize that life is compromises, not absolutes. He gave as an example some engineers who prefer to design only instruments that provide the highest attainable accuracy, widest possible range, etc., even though the cost would be prohibitive, and almost no customers needed the accuracy or range the particular design would provide. Perfection or near-perfection is nice, but most of the time one doesn't need it and usually can't afford it.*

*He gave as a further example Proposition 18, which was turned down by California voters a few weeks ago. It was not, he said, as some people would have had us believe, simply a matter of being for or against air pollution; it was being for or against a particular method of providing funds to combat air pollution.*

**TECH:**Do you think the education people are receiving at Caltech today could make them successful in business? Is there anything you'd like to see changed? **Beckman:**Well, you've got an assumption there, you see, that business success is dependent on education. Business success is dependent on many factors. Education should be helpful, but it isn't necessarily sufficient. We have many highly-educated people who are not great financial successes. What I'm trying to say is that in business many factors enter besides formal education. You have to have an understanding of your fellow man, and how to communicate with him. You have to have an understanding of economics, of course, but there are many other factors that shouldn't be overlooked, including timing and luck. **TECH:**Would you like to see the education at Caltech changed? **Beckman:**I think there should be a constant change, not necessarily a drastic change at any time, but a constant change to adapt the curriculum to the developments in science and technology and to a considerable extent also to the changing needs of the community.

I don't think that Caltech should attempt to emulate the large universities. I think Caltech's role is to serve as a small, specialized institution, and my feeling is that we should never deviate from the initial principles laid down by Millikan, Noyes, and Hale, that

Caltech should not attempt to embrace all academic fields, but should always strive to be outstanding in the fields it does enter. I think that should be a cardinal principle.

As you know, we've been broadening the base in the field of humanities. Here again I think we ought to be careful that we don't merely become another liberal arts college. My own feeling is that we should try to bring into humanities the same rigorous thinking that we have to use in the hard sciences. Economics, for example, is something that can be dealt with quantitatively. As we expand into behavioral biology, I think that the approach should be from the standpoint of physical chemistry, physics, and mathematics rather than from sociology.

In the past few years particularly there has been great concern on many campuses with the plight of humanity. I think we all share that concern, but I think we must be careful that we don't base our planning upon an emotion. It's not Caltech's role, someone said, to serve as the Red Cross for humanity's ills. We should try to apply our specialized knowledge to help solve society's problems, but we shouldn't get too deeply immersed directly in the implementation of the solutions. If we do, we are going to lose our unique standing as a great technical institution.

*Dr. Beckman also had some thought-provoking ideas on education in general. College and college degrees are merely status symbols for some people today. He would like to see both grades and degrees abolished. "Colleges aren't supposed to be screening agents for employers."*

*He suggested that if everyone had to take a year off between high*

*school and college, those who wanted to go to college for the wrong reasons might realize this and not attend. Not only would this let those people have the opportunity to do what is right for them, it would also free some of the congestion at the colleges. He commented that education should be interesting to the student or else the retention rate would be so low as to make it virtually worthless. How much high school history or geometry do people remember later in life? On the other hand, how many people would be interested in learning about these subjects later in life when they could relate them to their own life experiences and interests? We need places where these people can go when they wish to learn after they are past "college age."*

## Glee Club Invades Blacker House; More Concerts Forthcoming

by Roger Goodman

The Caltech Glee Club began its new series of on-campus programs with a short dinner interlude in Blacker House on Monday evening. Guests at dinner included Professors Robert Huttenback, George Mayhew, and Dave Smith. Director Olaf M. Frodsham began the series in order to acquaint the Caltech community with the Glee Club. The next performance will be in another House on November 30.

The Glee Club is working on plans for its tour in Europe next summer. This is the first international venture for a group which has sung all over California and in Arizona, the midwest, the east, and Hawaii. The Club will charter a plane. During the tour, members will give science demonstrations as well as sing.

The Club has begun to raise money for the tour, in addition to revenue from concerts. The first event will be a car wash on campus on Friday, December 4, from 11:00 a.m. to 3:00 p.m. Further details will be forthcoming.

## Athenaeum Drama Group Gives Great Performance

by Philip Massey

The audience was rather mixed—sixty or seventy old people, three or four students (including one intrepid Tech reporter), and a sprinkling of faculty members and their wives.

It was Jean Anouilh's *Antigone*, read by the Caltech Playreaders, starring Jenni-Joy LaBelle as *Antigone*, and Jesse Greenstein ... as *Creon*.

The reading was introduced by some member of the Caltech Women's Club who had perhaps best remain nameless. She stood on stage and read a highly inaccurate, boring, and assorted other things description-criticism of the play, brimming with poly-syllables. The only thing I caught with which I agreed was that the play was filled with anachronisms.

The play is a rehash of the third part of the three-play Greek Tragedy about Oedipus. It is a good rehash, filled with humorous comments, and it tells the story of *Antigone*, Oedipus' daughter, after Oedipus is dead. She feels it necessary to bury her brother's body, which the new king, Creon, has ordered to let rot in the sun. Creon either decides to, or is "forced to" (depending on whose side you were on, if you were) put *Antigone* to death for this, despite the fact that she is his niece and is engaged to his son, Haemon (played by John Bahcall).

The readers had only rehearsed once, and despite (because of ?) this it was truly great. Prof. Greenstein in the role of the "heavy" Creon, definitely made the play worth seeing, all in itself.

The Playreaders' performances seem to be very poorly publicized to the students, or else someone just doesn't want students there. Perhaps no one thinks Techers are interested in such activities. In December they are performing Nicolai Gogol's classical comedy *The Inspector General*.

## Graduate School of & Administration University of California, Irvine

The Graduate School of Administration (GSA) at Irvine offers programs of advanced study leading to the M.S. or Ph.D. degree in Administration. Through these programs individuals may prepare for significant roles in business or industry, in education, and in government.

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The M.S. program is intended to increase the likelihood that future leaders will be able to communicate effectively and move easily from one kind of organizational unit to another, thereby providing society with versatile managers and administrators. The Ph.D. program for the field of Administration has the usual academic and research objectives.

Consistent with its orientation to a general and interdisciplinary perspective of administration, the GSA seeks students from virtually all academic and professional disciplines. A variety of student backgrounds is considered an asset to the process of education.

If you are a senior or graduate student and would like to discuss our programs in relation to your interests and plans for the future, we would like to meet with you on campus on **Wednesday, December 2, 1970**. An appointment can be made through your campus placement office.

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Nov. 30

# Gonzales Gives Talk

by E. Gansner  
"I am Joaquin,  
Lost in a world of confusion,  
Caught up in a whirl of a gringo  
society..."

These words are from the poem "I Am Joaquin," a poem of Chicano despair and pride. The author, Rodolfo "Corky" Gonzales, will be on campus November 30 to talk about and discuss the Chicano movement. His visit, which will include a 12:30 Olive Walk Talk and a 4:00 p.m. open seminar in Winnett, is sponsored by the Caltech Y, and the Humanities Division as part of the H 40 program.

Basically self-educated, Gonzales has moved through a variety of fields, such as boxing, insurance, and bail bonding, to become a nationally-known leader of Mexican-Americans. When the war on poverty started, he was appointed director of the Neighborhood Youth Corps and was elected chairman of

the War on Poverty Board by the poor of Denver. Later he was appointed President of the National Community Relations Committee and a member of the Civil Rights Committee.

Continuing to preach the Chicano cause, Gonzales formed the Crusade for Justice, the first civil rights organization for Chicanos. From this group, he was able to organize demonstrations against police brutality as early as 1964 and to guarantee Chicano representation at the 1968 Poor People's March, on the request of Dr. Martin Luther King.

He is presently a teacher at the University of Colorado at Denver. Part of his time is spent writing plays, short stories and poems, including the nationally acclaimed "I Am Joaquin." He also sponsors sports activities for young Chicanos. In particular, he presses boxing, in which he was rated as one of the top ten in the world.

## The Critical Left Ear

## Food Service Grows on You Too

Down Home BoyThe Jerry Williams Group Columbia

This is a good piece of work. The cuts are original and very well done. The blend of good musicianship and studio production contribute greatly. The first side of the album is much better than the second, however.

This is one of those albums that grows on you. I highly recommend it.

-Elliot Tarabour

Nilsson, by Tipton, Warner Bros. No. 1867

This is a set of Nilsson compositions as arranged by Tipton. The key concept here is that of being lost in translation-Tipton tends to drum gentle music into your head with obnoxious Muzak-like tech-

nique which he apparently confuses with style. The entire album is painfully over-produced, in the Lawrence Welk tradition. Some cuts are merely lifeless variations ("Rain-maker," "Open Your Window," "Waiting") while others are obliterations of decent songs ("Think About Your Troubles," "Morning Glory Story"). Several of Nilsson's best are unspoilable even when rendered in nightclub-schmaltz, thus "One" and "Without You" are still excellent. "Maybe" is convincingly carried through by Howard Roberts on guitar. Thus, enclosed within embarrassingly corny graphics is a phonograph record recommended for extreme cases of insomnia or senility. If you like what Food Service does to food...

# Reporting Violations or Not Reporting Them

Continued from Page Three  
decisions. In recent years, the BOC has looked at case meetings more as opportunities to help individuals who, for one reason or another, have found themselves under pressures too heavy to bear, rather than as occasions to do justice for committed violations. Indeed, for the majority of cases, where the violation was the product of a moment of panic and not of conscious planning, having the violator confront the Board is one of the most effective ways of helping him come to terms with himself and thus build his future self-confidence on a sound basis.

In view of the above, the BOC has taken the position that it is the responsibility of every student to protect the Honor System. Conscious failure to do so will be regarded as a violation. This does not imply that the mere failure to report a violation will automatically be considered a violation in itself. The BOC will, however, have the right to decide whether the interests of the Honor System were accounted for if a decision not to report a violation had been made. In this respect, the individual making the decision may be held responsible to the Board to explain his reasons for not reporting a suspected violation. In deciding whether or not a violation has been committed the Board will consider such criteria as the significance and possible neutralization of the advantage taken, the likelihood of repetition of the act, and the advantage or disadvantage of having the violator appear before the Board.

Lest a misunderstanding arise, it should be made absolutely clear

that the Board will not fail to act if it feels that the interests of the Honor System are in danger. The distinction between an individual who carefully considers the interests of the Honor System and one who casually hears of a violation but fails to report it because he takes an irresponsible "none of my business" attitude should be obvious.

If you do suspect that a violation has been committed, but are unsure about what to do, talk to your house BOC representative, or to any member of the BOC or GRB. In doing this you should be aware that they, exactly like you, are under the obligation to protect the Honor System as they best see fit. You may therefore wish to discuss the case concerning you with them only in the abstract, and request their general advice. To report a violation, discuss the matter with the Dean of Graduate Students in the case of a graduate student, or the ASCIT Vice-President (or the Dean of Students who will relay it) in the case of an undergraduate.

In all cases consider your personal responsibility to the Honor System. It is almost always far better to report a strong suspicion than to allow it to grow and compound. As has been noted, a case which was closed without a finding of guilty vanishes from the records of all concerned. It can in no way prejudice the suspect's future.

Living under the Honor System can be one of the most rewarding experiences of a Caltech student's career. It is "the reasonable way to live," the way most of us would like to live if we could just trust the rest of the world. At Tech you can.

## Dance-Concert This Saturday

The Caltech Hillel is sponsoring a "Pre-Finals Mind and Body Rinse Out" on Saturday evening, December 5, in Winnett Center Lounge. The New World Music Society will be featured in a dance-concert. Refreshments will be served. Everyone is welcome, and the cost is only 50 cents, or 25 cents for Hillel members.

Tomorrow evening there will be creative services and Israeli dancing at the Westwood YWCA, with Moshe Keren as the guest speaker.

There is weekly Israeli folk dancing on Sunday evenings from 7:30 to 10:30 p.m., with one hour of instruction, at the roof-top penthouse of the Business Services Building. The charge to non-members is 25 cents. There is always a very favorable girl:boy ratio.

On the weekend of November 27-29, there will be a retreat at Camp Hidden Trails, sponsored by the United Jewish Appeal.

On December 1, Hillel Extension is sponsoring a theatre party at the Music Center, featuring the opening night performance of "Return to the Remote Asylum," with \$9.00 orchestra seats available for \$3.00.

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## ASCIT of Seita

# BOD Urges Outside Criticism

by Alex Seita

The B.O.D. spent most of its time considering ASCIT's future goals and operations at last week's meeting. Discussion arose concerning methods to channel more student viewpoints into the making of B.O.D. policies and activities. It was noted that ASCIT functions

currently include the operations of the *California Tech*, *Big T*, *Little T*, the coffeehouse besides academic influences by way of student representatives working with the Caltech administration and faculty. Questions generated, and left unanswered, asked "How ASCIT funds could be allocated more effectively

and equitably?" and "Whether ASCIT was providing necessary and beneficial services to its membership?" The outburst of the Board's self-examination culminated in an opinion urging outside, critical analysis of its actions and suggestions toward the betterment of student government-student relation-

ships in ASCIT.

For the next corporation balloting, a new procedure will be initiated concerning election procedures. ASCIT Elections Chairman, Carl Imparato, together with his sidekick Seita, will mail ballots out to ASCIT members one or two days in advance of the elections. Hope-

fully, this will encourage a more than cursory inspection of election proposals. As usual, voting by proxy will be acceptable.

ASCIT Secretary Ben Barker reported that he had spoken to Terry Sueber, Director of Physical Plant, and Dr. David Smith about the establishment of a student garage. It appears that the facilities for such a garage will be available for the second term and that the Board will soon appoint a student to take care of it.

With 200 spectators and 70 participants in the Mudeo, the junior class officers who organized the spectacle were highly applauded by the Board for their effort and nonpartisanship, they are: Robert Dullien, President; Thomas Matoi, Vice President; Peter Chau, Secretary; David Miller, Treasurer.

Another event held last week was *Synesthesia*, art through mixed-media, which was held in Lloyd House before an audience of 80. The ASCIT Activities Committee is presently thinking of bringing a flamenco guitarist to the campus, an event which like *Synesthesia* would be held in one of the student houses.

This week's meeting of the ASCIT B.O.D. will be held at 7:30 p.m. Thursday, November 19, in Winnett clubroom II.

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But, in addition, utilities are sponsoring basic research on the problem of heat exchange and its effect on aquatic life. More than 97 utilities have been financially involved in over 300 such studies. And each one adds a little to man's scientific understanding of the problem.

Some interesting things have already come of it. For one, it's been found that, in some cases, adding heat to water can actually be beneficial. Warm irrigation water has extended growing seasons. Warm water has created new wintering ponds along waterfowl migration routes.

Power-plant discharge water is reviving Long Island's oyster trade. Florida is using it to grow shrimp and lobster. In Texas, it's increasing the weight of commercial catfish by as much as 500%.

Listing these benefits is not to beg the issue. Thermal effects remain a tough problem to solve at some sites. Each plant must be considered

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GENERAL  ELECTRIC

# Nixon Is Dangerous

**Continued from Page One**

any President who willingly accepted a report saying that his idea of government was wrong, that his perspective was wrong, and that he had entirely misjudged the attitudes of the American Public." The crusading collegiate hoped for a reaction in the form of further probing by close Presidential advisors.

"Nixon's reaction was his latest campaign," declared Rhodes. He then outlined Nixon's support of Ronald Reagan and similar candidates. "Nixon is a dangerous man and should be watched." The Harvard historian termed the current President "Irresponsible, not realizing that the major responsibility of the President of the United States is to protect human lives."

The life and death issue was the focus of Rhodes' activities with the Commission. "I went to the FBI building and looked at the autopsy pictures for hours—the people are dead—a boy with his head blown off, a beautiful girl with a gaping, bloody hole in her shoulder, lying on the slab..." Rhodes recalled investigating at Jackson State: "The highway patrol was twelve feet away and fired 390-510 rounds of ammunition at twelve feet." While in Jackson, Rhodes made a statement to the effect that Mississippi was a police state. "The highway patrolman said he didn't care who he was shooting at..." A libel suit for three million dollars has been initiated against Rhodes for that statement. Rhodes shrugs it off, "If it gets to court, I'll have to prove Mississippi is a police state, and that could be more difficult."

Rhodes' life has never been ordinary. The son of a Black steelworker and a Filipino mother, he grew up in a company town in Pennsylvania. He studied violin and physics with almost equal intensity until he had to make the decision where to go to college — he was accepted at Juilliard and Caltech. Physics worked and Rhodes came to Pasadena.

Getting involved in ASCIT early, Rhodes was elected ASCIT president third term of his sophomore year. A By-laws ammendment had to be passed especially to permit the unusual early election. During the first year of office, Rhodes got the idea for the ASCIT research project and began to organize it. After a controversial recall attempt failed, Rhodes was re-elected ASCIT prexy and continued emphasizing Caltech students' roles in the outside world. His junior year found him switching to History option and his last year got him involved in national politics, being selected as a representative of student opinion by Nixon Administration advisors.

Rhodes is ambitious and a dedicated agitator. He knows how to get people involved. The commission was a struggle for him, a fight to keep information in view, to keep attitudes flexible. In one final remark, he appreciatively proclaimed, "I learned the tactics I used on the Commission while working on Faculty committees."

Ambitious Techers: Now you know where to start!

# Bravely Plunge Into the Mud Pit

**Continued from Page One**

one of the sacks.

The juniors soon restored order and, in their usual inexplicable manner, awarded the event to the frosh.

The third event, the wheelbarrow race, was won by the frosh although the usual argument ensued. According to the rules, the winner would be the first team to send five two-man teams across the pool and back in succession. This the frosh clearly did, but they accidentally sent a sixth team out after the fifth. This led to some confusion, and the sophs began chanting "Frosh can't count," while the now exuberant frosh replied "Sophs can't win."

**Harry-the-Horse Rides Again**

Next came the horse and rider joust in which a new frosh appeared—Prof. Harry (the horse) Gray. Teaming up with Lisa Anderson, Harry bravely plunged into the quagmire to do battle with those enemies of goodness and purity—the sophomores. This dynamic duo brought several horses

and riders down to the cheers of both frosh and chem trolls.

Unfortunately, for the frosh, the judges became aware of the fact that they had six teams in the pit to the sophomore's five. Thus, the two points that the event was worth were awarded to the sophs giving them a three to two edge.

## Cheaters Never Prosper

This meant that the winner of the last event, the tire grab, would become winner of the Mudeo. The rules of this last contest were simple: thirteen tires would be left in the pit, the team that possessed most at the end of an allotted amount of time would be the winner. The sophomores attempted to give themselves an edge by purloining a few of the tires beforehand, but this ruse was discovered by the frosh who placed these tires in the pit.

When all was in order the event began, and the frosh immediately made off with seven tires to the sophs six, but one sophomore infiltrated the frosh lines and threw one of the tires back. A tremendous fight developed over its possession. At last, when the whistle blew, the tire was still in the frosh half of the pit.

## Dere Goes Da Judge

After giving themselves a few seconds to seek escape routes the junior judges declared the frosh to be winners of the Mudeo. Unfortunately, no one had told the freshmen that the winners were supposed to protect the judges against the angry losers. As a result they joined the sophs in ceremoniously dunking the judges.

The frosh joyously celebrated their victory in various ways. One contingent washed off the stains of victory in Millikan Pond (which, incidently, had been cleaned by B&G only that morning). Others were content to limp off and nurse their bruises and cuts content in the knowledge that they really weren't as whimpy as everyone had said.

# The Critical Ear

## Synesthesia Has Potential, but...

As I watched Synesthesia, I could not help feeling that this was a new experience. As the freaks say, "It was far out." (But I come to bury Synesthesia, not to praise it.) Halfway through the performance I could have easily been persuaded to write a good review, but after thinking about it, Synesthesia as a new art form fails.

Let me recount for you, my loyal readers, what exactly Synesthesia is. It is good music, excellent photography, and a variable quality of poetry. The problem is the name Synesthesia implies some form of synthesis of these art forms. There was a noticeable lack of coherence between the art form.

The other bothersome portion was the poetry. The poetry, specifically during the "Kaleidoscope" piece, reminded one of the poetry of our very own poet laureate Jonathan Post. This type of brilliant hard-hitting but occasionally over-subtle type of poetry clashed terribly with the simple, beautiful photography. Each is an art form in itself, and attempting to synthesize the two forms is difficult enough without having diametrically opposed pieces in each field.

Synesthesia has potential, but perhaps a better selection of music and poetry might enhance the already fantastic photographic work. Possibly the already combined forms of poetry and music used by such performers as Van Morrison, Joni Mitchell, and Bob Dylan could be used to augment the art form. In any case, I wish the artists Chick and Anne Hebert the best of luck in this truly creative endeavor.

—Tarabour

1	2	3	4	5	6	7	8	9	10	11	12
A	B	C	D	E	F	G	H	I	J	K	L
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Y	Z	1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20	21	22
23	24	25	26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43	44	45	46
47	48	49	50	51	52	53	54	55	56	57	58
59	60	61	62	63	64	65	66	67	68	69	70
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83	84	85	86	87	88	89	90	91	92	93	94
95	96	97	98	99	100	101	102	103	104	105	106
107	108	109	110	111	112	113	114	115	116	117	118
119	120	121	122	123	124	125	126	127	128	129	130

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# To Understand Middle East, One Must Understand History

This was the Techer's reply to a statement that people are showing great admiration for Israel by wearing Aba Eban watches. In a two hour discussion at Winnett last Thursday, Al Melman, the Director of the Jewish Federation Council Commission on the Middle East, told a group of Techers about the Middle East emphasizing that "To understand the events of the Middle East one must understand the history of that region." He then discussed the history of the area from the time of David to the questionable future.

While discussing the current problems in the Middle East he stated that the United States considers Israel the best that we have in the world.

He also told how, if Israel had control of the Answan Dam, by using their ability in land development they could alter the entire Middle East.

Homemade cookies and cake, along with apple cider was brought in by two delicious looking women and served after the lecture. The evening was sponsored by the Caltech Hillel.

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