

What Does the "H"  
Stand for in  
Jesus H. Christ?

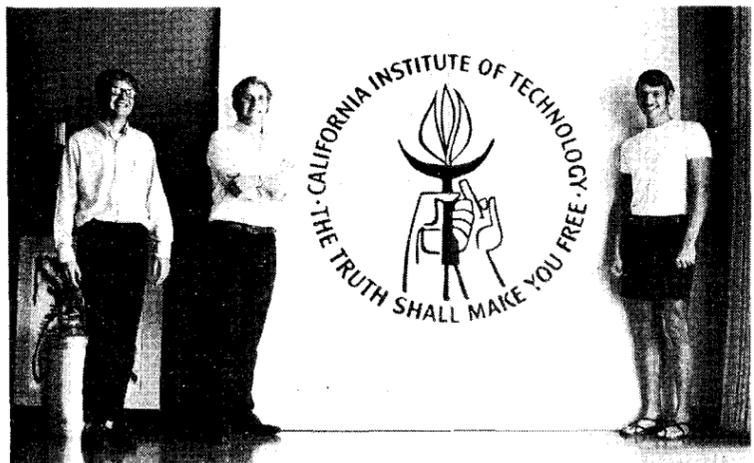
# The CALIFORNIA Tech

H is for Hallmark...  
God Cares Enough to  
Send the Very Best.

Volume LXXI

Pasadena, California, Thursday, November 6, 1969

Number 7



—photo by Dash

THE CALTECH SEAL was duplicated (almost) as an entry in the Inaugural Paint-In contest. The creators of this serious artwork are (left to right): Ron Horn, Chip Smith, and Bob Hall. The seal was the official Page House entry.

—photo by Fisher

"LEAVING ON A JET PLANE, don't know when we'll be back again," took on special meaning for Harper's Bizarre. After playing at Beckman last Thursday the group boarded a plane which was subsequently hijacked.

## Like Resistors

# Profs Are Colorcoded

by Paul Levin

An Academic Procession like last Thursday's is something most students will not see until their commencement, but at that time they will probably be too preoccupied to notice the details, being content to merely get out of those hot robes. The gowns, hoods, and caps, though, have much tradition behind them and, if properly interpreted, can show much about the wearer.

The gown and cap come from the ecclesiastical dress of the Middle Ages. At that time almost all educational institutions in Europe were in the hands of the Church. The original round cap evolved into the square mortar-board.

Either because of tradition or a desire to remain aloof from the common man, academic dress did not change in the 16th century when it was becoming fashionable to wear trousers, breeches, and

plumed hats. The hoods, too, are relics of these times. They descended from the cowls attached to the gown which were used mainly for warmth. They were made of different colors to differentiate between the various monastic orders and schools.

### What a Mess

Today there exist separate gowns for Bachelor's, Master's, and Doctor's degrees. Most appropriately, the Bachelor's gown is the least full and it also has pointed sleeves. It is worn closed. The Master's gown is a little fuller and worn open. The sleeves on this gown are a bit unusual: the arm comes through a slit at the elbow. In some schools the Master's candidates wear Bachelor's gowns instead. The Doctor's gown is really impressive. Besides its fullness, it has three panels of velvet on each sleeve and a long strip of velvet draped over the neck and extending the entire length of the

## Brown Crowned in Smooth Ceremony

# Inauguration Comes Off

Beneath a hot sun and unexpectedly smogless sky, more than 4000 people watched Dr. Harold Brown don the academic hood of Robert A. Millikan and with it formally assume the administrative reins of Caltech. Among the members of the audience were representatives of more than 200 centers of learning from all over the globe.

Listing in the program for the day's events were the oldest and newest institutions. First on the list was Oxford and last was Moorpark College, established only two years ago. Under the graceful canopy suspended from the roof of Beckman Auditorium, sat the trustees, administrators, and most distinguished guests.

The ceremony began promptly at 10:30 a.m. with Chief Marshall Robert P. Sharp leading a color guard and academic procession. Within the processional were the faculty, the Nobel Laureates (one more than originally planned), the representatives of other schools, and the official party.

Leading the program was the Caltech Glee Club with the National Anthem followed by an invocation by the Reverend Donald P. Merrifield, S.J., a Caltech graduate and, as evidenced by his golden yellow hood, a D.Sci. in physics.

Dr. Arnold O. Beckman, chairman of the Board of Trustees, officiated and read greetings from the various governmental officials

and a speech prepared by Howard Johnson, president of MIT, representing all the Academic Institutions and Learned Societies.

Robert F. Christy represented the faculty in wishing the new president good luck. Speeches by Stephen Horner of ASCIT, Richard Nielson of the Grad Council, and Craig Elliott of the Alumni, followed. Horner admonished the participants and guests to keep up the high standards, warning that institutions usually die or evolve: If we do not go forward we will go backward.

Dr. Brown was introduced by Thomas J. Watson, a member of the Board of Trustees and president of

IBM. Watson's speech was somewhat preoccupied with student unrest, but was quite humorous in content. Dr. Brown's address followed.

Dr. Brown's speech included his evaluation of Caltech's future and the changes which could be foreseen. He restated his plans to create advisory boards on all levels—administrative, faculty, and student.

Particularly noteworthy was his prediction of graduate studies in the humanities. While he expressed doubt as to whether Caltech would ever grant a doctorate in English literature, he felt certain that degrees in psychology and perhaps economics would be given.

The day activities cost the Institute, it has been estimated, approximately \$80,000.

## Huttenback Rebates

Continuing his policy of encouraging "culture," Dean of Students Robert A. Huttenback has announced rebates on Caltech students' tickets to live performances and cultural events. The rebates, of one-half the price of one ticket per event, are available to Caltech undergraduate students, both those living on campus and off.

Requests should be accompanied by the ticket stub and given to Dr. Huttenback's secretary, Mrs. Ned Hale, in the Dean's office in Throop.

According to Huttenback there will also be a subsidized speed reading course second term.

Also, Dr. Huttenback will continue his regular "Dean's Office Annex" on the Olive Walk every other Wednesday at 11:00 a.m. Come and see a real live dean!

## Feynman Praises Gell-Mann

"This event marks the public recognition of what we have known for a long time, that Murray Gell-Mann is the leading theoretical physicist of today. The development during the last twenty years of our knowledge of fundamental physics contains not one fruitful idea that does not carry his name. If further confirmation is needed that some scientists can be as sensitive and as active toward human problems as any humanist, we are proud to exhibit Gell-Mann."

Statement by Dr. Richard Feynman, Caltech's 1965 Nobel laureate in physics, regarding the award of the 1969 Nobel physics prize to Dr. Murray Gell-Mann of Caltech.

## UPPERCLASSMEN!

The  
**BIG T**  
Will Be Distributed  
On the Olive Walk

This Friday at 11:00 A.M.

Be Sure To Pick Yours Up!

Continued on Page Eight

## EDITORIAL

## Congratulations for Big T Editors

The *California Tech* takes this opportunity to congratulate *Big T* editor Chip Smith and Business Manager Pete Zassenhaus on a prompt and expert job on the Caltech yearbook. The job of taking a publication with almost seven months dead time and finishing it only two months off schedule was gigantic at best. With few exceptions the layouts are sharp. The cover design is impeccable (a compliment from a normally prejudiced observer.) The choice of moon shots for the flyleaf and endplates were appropriate. In general, the book is one of the finest in recent years. Congratulations to Chip and Pete and the others who contributed in a tight situation!

—Ira Moskatel  
Craig L. Sarazin

## Throop Lives On!

### Problems Worked Over

by Etaoin Schroedlu

Contrary to popular belief (popular in physics anyway), the *Tech* did not have "absolute, advance knowledge" of the Nobel Prize award to Professor Murray Gell-Mann. We merely pretended we were good journalists. . . .

ASCIT is awarded the Etaoin Shrdlu Award, soon to be re-named the Ira Moskatel Memorial Moskatel Award, for blowing elections above and beyond the call of duty. . . . This correspondent spotted seven election violations.

Rumors are rampant that the Institute will hire a specialist in the field of minority relations, with emphasis on the Pasadena area. An announcement may occur in a few weeks. No disrespect is intended for Jim Black, new Institute appointee. Sorry if all this is news to you, Dr. Brown. . . . Certain faculty committee members have been heard to complain plaintively that they don't

understand the organizational structure of the Administration work in all the fields touching on the minority situation, and would someone please draw them a nice scientific diagram of it. Dr. Roger Noll, econ prof, came to the rescue. ASCIT, you are not alone.

Students are still being avidly sought by the Admissions Committee for trips to local minority schools. Last week a notice was to appear in the *Tech* but an unidentified cog in the copy machine rejected the copy that the Business Manager marked for insertion. Beware, cog, lest the wrath of Dr. Miller descend upon you. . . . Call the Admissions Office if you are interested.

For that matter, if you are interested in sitting on the regular Admissions Committee, you may get a chance if ASIT ever gets off its ass and establishes its Committee-Appointing Committee. Here it is November and what's happened?

## Phil Neches

### Rough Draft

President Nixon gave a speech on the Vietnam War. So what else is new? As readers have doubtlessly noticed, Mr. Nixon's speech contained little that could conceivably be called new or unexpected. The groups which would be offended anyway have been offended; the groups which would support the President anyway continue to support him.

One way of viewing the television speech, which is least conducive to hypervisceral reaction, is that Mr. Nixon sought to gain as much advantage as he could without doing anything controversial. Mr. Nixon sought to clarify his position rather than define a new one.

#### Offense

Probably the most significant feature of the speech can be found in Nixon's taking the propaganda offense, which represents a major change from all previous policy. He lambasted the Hanoi regime as being the stumbling-block to peace,

which seems only reasonable. The mind boggles at some of the vituperation to which our negotiators in Paris have been exposed. The think that diplomacy, which brings to mind images of deceptively polite wording concealing the trap, could degenerate into name-calling which would make any self-respecting *Pravda* editor cringe!

Just how effective the Nixon counter-attack will be remains to be seen. The world could well be convinced that Hanoi has shown bad faith, and perhaps certain powers would be somewhat more inclined to compel Hanoi to bargain, if not in good faith, at least in good form.

#### Political Act

I found Mr. Nixon's remarks about former President Johnson both ungracious and nakedly political. Nixon tried to blame Johnson for getting the United States into its present mess in Vietnam. The facts

Continued on Page Seven

## EDITORIAL POLICY

The opinions expressed herein are solely those of the writers under whose by-line they appear. Only the upper left hand portion of this page represents the editorial opinion of the CALIFORNIA TECH and the undersigned writers. All letters received by 6:00 p.m. Monday evening will be considered for publication on a FIRST COME, FIRST SERVED basis; the CALIFORNIA TECH reserves the right to cut letters to a maximum length of 300 words if the context of the letter can be preserved. We disclaim all responsibility for errors in editing, printing, or timing of the letters received and/or printed. Letters received from off-campus as well as all stories will not be returned.

—The Editors

## LETTERS

## More On Moratorium . . . .

Dear Sirs,

On October 30, last Thursday, what we believe to be a dangerous precedent for education at Tech was set. It was not set maliciously—those who asked for and got a no-attendance-taken policy on Thursday wanted the day set aside in a sincere gesture of student approval of the new administration. But did their support, no matter how honest, entitle them to cripple the teaching process for even one day?

By getting the decision on tests and attendance that they did, those who organized Harold Brown's Inauguration placed great pressure on instructors to teach effectively nothing on that day. In fact, no professors attended their classes. No tests could be given and students could not be held responsible for things taught on that day, for nothing was taught at all. It was a paid holiday for Institute teaching; the implication being that the Inauguration Day spectacle was more important than the class material.

Was that so for all of us? Did we all pay over \$28 for one day at Tech to hear the Glee Club sing or see the grand procession on the Beckman Mall or hear a group of speakers recite numerous identical congratulatory messages? If you felt that these things were worth your \$28+, that is *your* decision. It was not *our* decision.

Somehow an apparent majority made up their minds that it was worth my \$28, too. Shall that majority make up its mind that the next few days are fit days for ourselves and others of our beliefs to spend celebrating Thanksgiving or even Saturdays? We fear that they might, and we do not want their idea of an "irrelevant education" rammed down our throats repeatedly.

Twice was enough.

In PEACE,  
Dave Dixon  
Bob Abarbanel

Dear Sirs,

On October 30, last Thursday, what I believe to be a dangerous precedent for education at Tech was set. It was not set maliciously—those who asked for and got a no-attendance-taken policy on Thursday wanted the day set aside in a sincere gesture of approval of Tech's new administration and its policies. But did their approval, no matter how honest, entitle them to cripple and maim the teaching-process for even one day?

By getting the decision on tests and attendance that they did, those who organized the Inauguration here placed great pressure on instructors to teach nothing on that day. No tests could be given in case any professors were confused and thought this was midterm week, and students could not be held responsible for things not taught on that day. It was effectively a paid holiday, for Institute teaching, the implication being that the Inaugur-

ation was more important than class material.

Was that so for all of us? Did we all pay over \$28 for one day at Tech to hear the president of some eastern school tell us to think, an illegal act? If you felt these things were worth your \$28+, that is *your* decision. But it was not my decision (note the mixing of tenses). Somehow an apparent majority made up their minds that it was worth my \$28, too. Shall that majority make up its mind that tomorrow is a fit day for me and others of my beliefs to spend another day celebrating J. Christ's birthday, or the Sabbath. Indeed, they already do; the conspiracy grows; I am being conditioned by forces beyond my control. I fear their idea of "relevant" education repeatedly.

Once were enough.

Cough. . .

Speaking of paranoia and fear, I note that someone, using the name of a Caltech student, has again raised the spectre of an Institute bankrupted by thieves. From his statistics, approximately \$28+ is being stolen per day. Now who is stealing this? A student? No? An OUTSIDER? Oh my, someone who is not a student, a member of that "outside" world (which) is not run on the Honor System." So what's this got to do with the Board of Control? Are they supposed to try this non-student thief and suspend him? Does such a person even threaten the Honor System? Hardly. The honor system, as was pointed out in a letter several weeks ago, is threatened precisely by the sort of people who want to expand its jurisdiction to include non-academic matters; the thing that needs "protection" is Caltech's atmosphere. But no, Boswell bemoans our emasculated campus cops; what does he envision? A daring-daylight-robbery thwarted by the blazing guns of the campus insecurity staff? Give me a break: according to Boswell, the thefts total less than the guard salaries, particularly since we now have two people to do Fig's old job (which as we all recall, was guarding the donut box in Winnett). And spare us the lecturing; I seriously doubt the head of the BOC needs Mr. Boswell's advice on the proper conformation of police-states.

Or so I hope. With all my write-space-filling sincerity,

—Jim Gould  
Div. of Biology

### Jackson Proposes that Alpine Club Be Re-Organized into Forum for Outdoor Activities

Dear Sirs,

Many people have complained that they can't find other people when they want to go hiking, scuba diving, or what ever. It appears that Caltech needs a forum for those people interested in activities. As it stands now, people interested in

hiking, desert camping, skiing, ski touring, scuba diving, caving, etc. have nowhere to turn.

I propose that the Caltech Alpine Club be reorganized into such an organization. Such a club would serve as a meeting place for people to plan outdoor activities. By having one organization serve a variety of interests, cross fertilization could occur. Maybe some cavers want to hike in the desert.

Continued on Page Three

## Without Respect To Sex. . . .

by Etaoin Schroedlu

The Admissions Committee is looking for interested students to accompany Committee members to one or two local schools (L.A. area) with significant minority populations. The visits are designed to acquaint students at these schools with Caltech, and to make them aware of our current efforts in minority admissions programs. Interested students please get in touch with the Admissions Office as soon as possible.

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Campus  
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Three Barbers to Serve You  
7:45 to 5:15 Monday - Friday  
Paul A. Harmon

## The CALIFORNIA Tech

Volume LXXI Number 7  
Thursday, November 6, 1969

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NOTICES

**CALTECH OUTING CLUB**

If you haven't heard of it, read the letters section of this issue. Scheduled Genesis: Wednesday, Nov. 12, 8:30 p.m., Winnett Clubroom 1.

**GUITAR MASS**

The Caltech Newman Club will hold a guitar Mass in the Y lounge (upstairs Winnett) this Sunday, Nov. 9, at 7:30 p.m. All are invited.

**THE RACE IS ON!**

The low pollution car project is underway. Committees have been formed. If you are interested in participating in the race, contact Mike Lineberry, 327 Thomas, ext. 1113.

**JEWISH SERVICES ORGANIZING**

Jewish faculty and students are still desperately needed to help organize regular Saturday morning services on campus. Please contact Larry Goldman, 107 Page, if interested.

CALENDAR

Thursday, November 6, 1969

"What do I do?" and other provocative questions will be answered by Dr. Robert Huttenback, Dean of Students, in another of the Grad Sack Lunches in the Y Lounge at noon.

The Clairmont Colleges will hold their regular Thursday dance tonight from 9:30 to 1:00.

Friday, November 7, 1969

"An Evening With Oscar Wilde" comes to Beckman Auditorium. Special student rates available.

Flems-Wine and Candlelight Dinner at the Ice House.

Dance at L.A. County General Hospital, Guys 50 cents, girls free; 8 p.m. to 1 a.m. For information or directions, call 223-4141, ext. 450.

Saturday, November 8, 1969

P.C.C. Homecoming Dance, P.C.C. Campus Center, 8:30 p.m. (subtle hint).

CINEMATECH rolls on with two of Luis Bunuel's early films: "Los Olvidados" and "El." Admission is still only \$1 or Cinematech Series Card.

Sunday, November 9, 1969

Athenaeum Event, "She Done Him Wrong" starring Mae West. Reservations needed.

Monday, November 10, 1969

Aeronautical Seminar on Mariners 6 & 7 in 306 Firestone at 1 p.m.

CALTECH LECTURE SERIES presents "Radio Astronomy of the Planets," to be given by Caltech's Dr. Duane O. Muhleman, Beckman Auditorium, 8:30 p.m.

Tuesday, November 11, 1969

SPECIAL CALTECH LECTURE on "Racial Crisis, an American Dilemma Revisited," given by Dr. Gunnar Myrdal, Swedish statesman, Beckman Auditorium, 8:30 p.m.

Nuclear Engineering Seminar on "Micro-Instabilities in Hot Plasmas" in 206 Thomas, 1 p.m.

Electrical Engineering Faculty members will report on their doings in 102 Steele at 4:15. It promises to be a shocker.

"Managing to Survive," which is what every member of the Caltech Management Club should know, will be explicated by Frank Hoffman in the von Karman Auditorium, JPL, 5 p.m.

Wednesday, November 12, 1969

Poetry Reading by Donald Moffat, Center Theatre, in Winnett Lounge at 11 a.m.; sponsored by ASCIT.

Continuing

Art works by Corda and Jack Zajac will continue through November 14 in Dabney Lounge.

The Music Center: The Stuttgart Ballet, an internationally acclaimed group, will perform ballets by Tchaikovsky, Prokofiev, and others in the Chandler Pavilion through November 14. . . Hadrian VII continues through November 22 at the Ahmanson Theater, watch for the Tech review in the next issue.

Results of the Harold Brown Inaugural Paint-In of October 25th are still on view on Beckman Mall. Dr. Dave Smith will announce the results of the judging in next week's Tech.

# Broaden Your Horizons

by Zoltan Tokes

There will be a meeting for those who are interested in studying abroad in Clubroom 1 on Thursday, November 6th, 7:40 p.m. in the Winnett Student Center.

As a result of last year's student poll, which indicated a substantial interest in foreign studies, a summer study was conducted by Zoltan Tokes, Leonard Moss and Joseph Sayhawk. The results of this study were recently published and distributed to all voting faculty members.

The report recommends one of the most up-to-date concepts in international education, so far lacking at Caltech. It emphasizes the need to make the overseas study experience available to science and engineering students, rather than to history, are and language majors as has traditionally been the case. The engineer is as much a creator of social change as social scientists are. Indeed science has become a driving force of environmental and social change in a truly international scale.

The program is designed to broaden the students interest and extend his perspective, complementing rather than supplementing the home university's regular academic courses.

One of the unique aspects of the proposal is the concentration on non-Western locations. This is the first program of the kind which recognizes that the participants are the product of the Occidental culture and therefore concentrates on the Oriental and other non-Western cultures.

The proposal is currently under review and the proper administrative channels are being mobilized for a hopefully quick action. Learning involves interaction between the learner and his environment, and its effectiveness relates to the frequency, variety, and intensity of the interaction, and a well planned overseas study experience could become a great learning value for Techers. All interested in participating are invited to attend the meeting this Thursday in Clubroom 1 at 7:30 p.m.

## WAR IS NOT A HEALTHY GAME FOR

## CHILDREN AND OTHER LIVING THINGS

# PME Strikes

The Caltech YMCA's Political Military Exercise is alive and well. Under the control(?) of Bob Jackson, the creation and birth of this annual event has begun.

Players in the game are usually Caltech undergrads, grads, and faculty, along with students and faculty from other schools including Scripps. Each person represents a specific person in the real world. These people work as teams representing various countries. For example, the U.S. team has people representing the President, Vice President, etc.

At the beginning of the game, each player receives a scenario which extrapolates the present events up to a future crisis situation. Play starts and each team reacts to the situation. The teams communicate with each other by messages and personal meetings. Periodic news bulletins are issued to

summarize the situation.

In the past the game was held during the first or second weekend in third term. Play has usually lasted through Friday night, Saturday morning, and Saturday afternoon. Past games have centered on Southern Africa, the Mid-East, and Europe.

In order to get a feeling about what are people's preferences as to time and locale, fill out the questionnaire and return to the Caltech YMCA.

There will be a meeting Tuesday, November 11 at 8:00 p.m. in the YMCA lounge, for all people interested in helping to formulate the specifics on how the game is to be run and in helping to set up the game.

Anybody interested in helping with the game can also contact the YMCA or Bob Jackson in Blacker House.

# Letters

Continued from Page Two

On Wednesday, November 12, in Winnett Clubroom 1 at 8:30 p.m., I would like to have a meeting of people interested in such an organization and what it could accomplish. Such an organization could bring order out of the chaos.

-Robert Jackson

Blacker House

449-9631

## Falk Replies to O'Neil on Moratorium

Dear Sirs:

I was disturbed by the letter which appeared in the October 30th issue of the Tech, and feel obliged to present a rebuttal. Mr. O'Neil objects to Caltech's participation in the Moratorium on the grounds that his \$28 tuition fees covering that day's education were expended fruitlessly, since whatever classroom instruction held was largely "cultural" and non-essential, due to wholesale absences. Therefore he deems the Moratorium inexplicably wasteful.

This strikes me as being rather naive and inaccurate. Firstly, the Moratorium was rewarding educationally for those attending. It is remarkable that any event on this campus could attract between one-third and one-half of the student body, especially one whose unifying factor was political, not scientific, in nature. And yet, several hundred Techers opted to devote their academic day (and forfeit their \$28 tuition) in order that they might be engaged in a most singular involvement.

Secondly, in electing to honor Harold Brown with all the regal pomp of an official inauguration as President of the Institute, the administration has told you, Mr. O'Neil, that you are to be denied the right to educate yourself and must instead choose between their ritualistic ceremonies or nothing at all! If that does not gall you similarly, then I am most amazed: the two situations form a strong parallel. In one instance the administration determines how the Institute will be conducted, and in the other, a segment of the student body offers an alternative. Think about it.

### Who Really Decides?

And finally, do you, an individual undergraduate, really have any voice in the distribution of your \$28 by Caltech? The Institute selects instructors to be hired, establishes pre-requisites which cannot be waived, and divisional restrictions which in many cases will guide the choice of course material; i.e. They offer you a Caltech education which is certainly an excellent scientific preparation for research or industry, but does not present a bevy of enticing opportunities in lieu of their basic undergraduate plan of study. It is, in effect, a "Love It or Leave It" curriculum. I, as an individual, cannot demand, or even ask of the Institute, that this be drastically alleviated. Many here, including THE COMMITTEE, have instructed me that committees of faculty and administrators will determine how and what the Institute will teach, and that if it does not satisfy my needs, I am free to leave at any time. I have grown to accept this reality as The Way It Will Be, that they, not I, will choose where my \$28 goes. I urge you, Mr. O'Neil, to acknowledge this fact also.

I relish any variety in my education, since the Caltech cur-

Continued on Page Four

# The Coffeehouse

Coffee

Open

Sundaes

Nitely

Soda

9:00 PM

Hamburgers

- 2:00 AM



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*Vincent Canby, N.Y. Times*



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**Dan O'Neill  
D  
BODKINS**



**STILL MORE LETTERS...**

Continued from page three.  
riculum certainly will not provide it. Thus I welcome opportunities through which I might obtain a fuller education, regardless whether there is administration sponsorship. Since you cannot determine who spends your \$28, you might be better advised to worry about how to spend your time, which is yours to allocate as you wish.

-Jack Falk

**Schroeder Strikes as  
ASCIT Does It Again**

Dear Sirs,  
As I write this, it seems uncertain if ASCIT will let the election of last Wednesday stand. As there were an unusually large number of election violations in this election even for ASCIT, I assume that it will not stand. Therefore, I am writing concerning the ASCIT By-Law.

I am voting against it.  
The reason that ASCIT wants this by-law passed, as I understand it, is to enable ASCIT to get tax-free grants directly. As most of you have noticed, ASCIT has gotten grants, large ones, before now. This was done by having the grants given to us through the Institute. Why can we not continue this system in the future? Because the Research Center is worried that that evil ogre in Throop Hall, Dr. Harold Brown, may decide not to let them take a grant. Brown has insisted on personally approving all grants before they can be accepted by ASCIT. How evil of Dr. Brown to wish to have some say over the actions of a group of individuals whose organization's title includes the words "California Institute of Technology." As the students no

longer seem to have any control over these individuals, I actually find myself comforted by the thought that Dr. Brown still does.

Then there is the matter of bookkeeping. Currently that is done for the Center on Center grants by the Institute. If the Institute were to be cut out of the processes of running the Center entirely, there is no reason why the Institute should continue to pay for the bookkeeping for the Center. This makes it necessary that the Center do its own bookkeeping. Speaking as a former Chairman of the Fiscal Policy Board of the Center, I can only state that that would be disastrous. Nobody in the Center, while I was there anyway (which was as long ago as third term 1969), paid any attention to such mundane things as keeping good financial records. The inevitable result of one grant from someone, dealt with in this way, would be that no further grants ever be forthcoming from such source to any student group at Caltech, ever. Foundations don't ask much, but their request for decent bookkeeping seems more than anyone in the Center can handle.

I wish the Center well, as long as they don't water down the worth in the external world of the words "California Institute of Technology," so I must vote against a proposal against the best interests of both the Center and the Institute.

-Ed Schroeder

**Belafonte Protegé  
To Delight  
Beckman Audience**

by Pearl Fles

Harry Belafonte, who travels a great deal, has been known to bring back with him very special gifts in the way of talented performers from around the world. A few seasons back, he introduced the lovely Greek songstress, Nana Mouskouri, to delighted audiences at the Greek Theater here in Hollywood.

Caltech's Faculty Committee on Programs and Hurok Artists will present Nana Mouskouri in her Southern California solo debut performance on Wednesday, December 3, at 8:30 p.m. in Beckman Auditorium.

**Discovered**

The composer of "Never On Sunday," Manos Hadjidakis, was so taken by her exquisite vocal quality, that he has composed a large repertoire of folk ballads especially for her. A native of Greece, Nana trained for classical music, but her love of popular ballads and folk songs of many lands in many languages, is what she does best. Last March, her New York debut performance was sold out at Carnegie Hall. More than five million of her records have been sold in America alone.

Nana is married to a musician, George Petsilas, whose group, The Athenians, will accompany her at the December 3 concert in Beckman Auditorium. For further information, call ext. 1653 or 793-7043.

**HELP WANTED  
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*The Critical Ear*

In the Moog

by Pearl Fles

For over fifty years, the Oscar Wilde tales have bewitched the young and charmed the adult. Four of Wilde's best known short stories will be heard in a concert reading to be presented in Caltech's Beckman Auditorium next Friday and Saturday, November 7 and 8, by the State Repertory Theatre. Curtain time is 8:30 p.m.

Included in the program are "The Selfish Giant," "The Nightingale and the Rose," "The Happy Prince" and "The Remarkable Rocket."

The first part of the evening will be devoted to "A Picture of Dorian Gray," adapted by William Barton, directed by Robert Laning with special music score by Howard Davis. The talented harpist, Catherine Jackson, accompanies songs by Eleanor Harder.

Some tickets remain for both performances. For information, call campus extension 1653 or 793-7043. Specially priced tickets are available to the Caltech family.

WALTER CARLOS AND THE WELL-TEMPERED SYNTHESIZER: *Virtuoso electronic performances of Bach, Monteverdi, Scarlatti, Handel; Columbia MS 7286.*

This record is the sequel to SWITCHED-ON BACH, issued last year. Whereas the previous recording on the Moog Synthesizer included only Bach, this record has works by four composers: four sonatas by Scarlatti, three excerpts from Handel's "Water Music," two pieces by Monteverdi, and, of course, one of the Bach Brandenburg Concerti.

First, the technical aspects of the record are good. I noticed very little noise or distortion on the record. Also, since much of the effect of the music played on the Synthesizer depends on the position of the listener, a "stereo test tone" is provided at the beginning of the first cut so that you can balance your speakers. This is the first time that I have seen this done outside

of the so-called "demonstration" records. Overall record quality was good.

The four Scarlatti sonatas did absolutely nothing for me. I have heard very little Scarlatti, but there seems to be little enhancement, using the Moog, over what I think the Sonatas would sound like when done by an orchestra. Those who enjoy Scarlatti may have different opinions.

The "Water Music" excerpts, in general, sounded very good—despite the fact, as someone else who heard this record pointed out, that one misses the trumpets. I would be interested in hearing the entire "Water Music" as played on the Moog Synthesizer.

The "Orfeo Suite," by Monteverdi, is randomly blah—there are no outstanding merits of the piece as played on the Moog. "Domine

Continued on Page Eight

EVEN DR. GOMEZ AGREES, IT WAS

Very Bizarre

by Alan Lederman

There was something special for everyone at Caltech Thursday. For the faculty, a Nobel Prize presentation; for the administration, an inauguration of a new President; and for the students, a concert by the popular rock group, Harper's Bizarre." I list these in rapidly decreasing order of significance.

It is difficult to determine the image "Harper's" was trying to project, or the artistic level it was attempting to reach. From the Beckman performance, one would necessarily conclude they are a commercial product, who have discovered a niche for themselves in the world of "soft" rock music. This niche is musical regression to the era of the late fifties, a time marked by simplicity and forthright musical techniques. In addition, the group performed renditions of various contemporary songs, but never with appreciably more finesse

than the original artist. The filler used between songs was so banal as to flout the intellectual caliber of the audience, never quite reaching the point of charm. Of course, one should expect this, for the group is committed to give an entire performance, while it possesses for its own only two staples, "Chattanooga Choo-Choo" and "Feeling Groovy." However, on the whole the performance left one with a quite satisfactory impression. For "Harper's" successes in creating a carefree, simplistic mood which the audience could not fail to enjoy.

Adequate

At a superficial level, the group performed quite adequately. "Vatican Rag," "There Ain't No Mountain High Enough," "Poisoning ing Pigeons in the Park," and "Folsom Prison" were performed during the first act. These renditions were in no way superior to those done by the original artists, but they were adequate. When the group took to presenting a more difficult but significant piece, Rod McKuen's "The Art of Catching Trains," the results were a poor, electronic rendition. The failure sent the group reeling back to "I Love You Alice B. Tokkas," a piece as vapid as the movie it was written for. And from that point on, no other attempts at serious music were made.

But within the framework of simplicity, "Harper's" is master. Gyrating on stage to multi-colored lighting effects, they succeeded in captivating the audience in such oldies as "At the Hop" and "Twenty-Six Miles." This second act medley of 1958 songs included all the favorites of the group, and was very well received. They were a welcome change from the surrealistic "hard" rock which is prominent today.

Train of Thought

A colleague mentioned the performers seem to have a fixation on trains, noting the first act alone contained three songs mentioning trains: "Chattanooga Choo-Choo", "The Art of Catching Trains," and "1943". I aver this is due to the fact the group looks on itself as an ephemeral entity, due to fade as so many rock groups fade. They thus try to resurrect various older groups in the hope, someday, some group will be gracious enough to revive "Chattanooga" and remember Harper's Bizarre. But I doubt it, for the choo-choo of success is chugging quickly away from Harper's Bizarre.



by Nick Smith

Last week, the Ice House featured a group about to be known as Juarez. This in itself was not much, but Juarez is the Decca recording name for a group formerly known as the Baker Street Irregulars. That's right, the same group who played at Beckman last year. Juarez consists of a girl vocalist and two guitar players, the old Peter, Paul and Mary formula, but otherwise the resemblance is not great. In fact, I now like Juarez better.

Most of the songs done by Juarez were written by the group, and most are scheduled to go on the forthcoming album. There were several very beautiful songs, including "The Dutchman," "Fly Away on Angel Feathers," and "Mary and Michael MacRae." They also did "Join the Klan," a favorite of many who saw the Beckman concert. They finished their act with the aforementioned "Dutchman," which contained the beautiful and sad lines, "Let us go to the banks of the ocean/ Where the walls rise above the Zuyder Zee./ Long

ago, I used to be a young man/ And Margret remembers that for me."

Also featured on the bill was George Hopkins, a TV and nightclub comic, whose delivery is good, but his material could be improved. The most outstanding feature of his act was a suit paisley beyond belief.

The third feature on the bill turned out to be excellent. A folk singer named Carol Kristy did two beautiful sets. The first set began with a forceful version of "Jericho," followed by "Tear Down the Walls." She also did much softer songs, such as "Try to Remember" and "Scarlet Ribbons." To me, the high point of her sets was when she sang a pair of Leonard Cohen songs, "The Story of Isaac," and "That's No Way to Say Goodbye." I am a devoted Judy Collins fan, and compared the two versions in my mind. Judy Collins has the better voice, but Carol Kristy really got more feeling into the songs. Carol Kristy is being held over this week, so if you go, don't just go for the main act.

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A FUNNY THING HAPPENED  
ON THE WAY TO  
SAN FRANCISCO

by Ludwig Boltzmann

The day after their concert at Beckman Auditorium, Harper's Bizarre climbed aboard a plane bound for San Francisco. It was promptly hijacked. They were let off in Denver, and the plane went on to Italy. Their final song at Beckman included the line: "I'm leaving on a jet plane/don't know when I'll be back again."



# Kneches Knocks Knixon Knoises

Continued from Page Two

do not support such an accusation. President Eisenhower did not want to commit combat troops, stating at the time that the U.S. would become too deeply involved by progressive escalation of the commitment, although he did not use those words, which have since become stereotyped.

The situation worsened. President Kennedy reversed Eisenhower's policy and sent "combat advisors." Even this move did not help. Shortly before Johnson's decision to send combat troops, the C.I.A. reported to the president that the Saigon government would be over-run within two months if drastic action were not forthcoming.

By that time, Johnson found himself in a trap not of his own making. He could either give up South Vietnam or escalate the war: he had no middle alternative. Johnson knew what he was doing and knew the stakes involved. Mr. Johnson is a student of history: he no doubt anticipated that the war would be difficult, and that a military solution in the classical sense would not be the goal.

### Haltbright

Sometimes, critics of the war are loath to forget that in its early days, the war enjoyed immense popularity. Even Senator Fulbright supported it. However, the war ground on, and the public became increasingly disenchanted with it. Johnson became the symbol of the war, and has apparently earned the hatred of liberals, despite the impressive record of liberal and humanitarian reforms which his Administration enacted.

I do not mean to imply that Johnson's policies represent the most sagacious statecraft. I simply feel that Johnson sincerely tried his best at a job which would have made Lincoln or Washington shudder. He displayed a sense of grave dignity while in office, and a great deal of personal bravery by withdrawing from the 1968 Presidential race.

### Nixon vs. Johnson

So far, Nixon's Vietnam policy has been a logical extension of Johnson's, just as Johnson's was a logical extension of Kennedy's. The only difference seems to be that Mr. Nixon is not Mr. Johnson, and thus enjoys 20% more support in the polls. I feel that Nixon acted unfairly in castigating Johnson while following his policies. I can see no motivation for this beyond simple political advantage.

As Mr. Nixon said, if his "plan" ends the war, then what the critics said will not matter. So the issue then becomes whether or not Mr. Nixon's plans will end the war. After much brain-picking, I have not come up with any better ideas. The Nixon-Johnson-Clifford Plan gives Hanoi a simple alternative: either bargain with the United States now, or fight it out with

Saigon later. Hanoi must be aware that better, more flexible terms can be had over a conference table with the United States than from Generals Thieu and Ky.

### Complex Variables

The situation in Vietnam probably constitutes one of the most complex problems in American history. The continual application of emotional solutions to the problem, or rather, the attempt to do so, only makes the problem that much worse. I do not think that Nixon should have called for anything resembling artificial unity, as he did Monday night. Most "discussions" of Vietnam generate more heat than light, but his is no reason to suspend discussions.

War comes hard to America. To what degree must we do so to ourselves to win, especially when the victory must be measured in political rather than diplomatic terms? How much is it worth in terms of men and dollars? What will the consequences of this or that action be?

If I had answers rather than half-baked speculation, I would not merely be writing columns.

FILLER

## Ramparts Reprint

# AT&T: Dial-a-Bomb

by Joseph Goulden and Marshall Singer

The American Telephone and Telegraph Company has managed to keep well-subdued, if not an absolute secret, the fact that she is the prime contractor and chief profit-maker for the anti-ballistic missile system.

Through the end of fiscal year 1968, according to Pentagon figures supplied to the Senate Foreign Relations Committee, Western Electric Company, AT&T's wholly-owned supply and manufacturing subsidiary which is actually performing the ABM work, had received "about \$3.5 billion in research and development contracts for Nike-Zeus and Nike-X," lineal forebearers of the ABM.

### World War II

During World War II, Western Electric's military contracts totaled \$17,091,819—fifth behind MII (\$116,941,352) and three other educational institutions. On February 8, 1945, the Army issued Western Electric its letter order W-30-069-ORD-3182 for "investigation and research and development work required to produce a suitable guided missile." This initial contract was for only \$181,450, but it set a significant precedent: Thereafter AT&T, through Western Electric, had anti-aircraft defense as its share of the defense spending boodle.

AT&T's progress was steady: The Nike-Ajax, first fired in 1949 at a drone B-29 bomber at the White Sands, New Mexico, proving ground; next the Nike-Hercules, equipped with a nuclear warhead to give it the capability of "destroying entire fleets of incoming aircraft" (the Pentagon's words, not mine); the Nike-Zeus, designed as "the bullet to stop a bullet" (once again, the Pentagon); and currently, but by no means finally, the Sentinel "Safeguard" system.

### Army Procurement

At one stage of the work, Army procurement officers suggested that Western Electric profits were so high they might attract unfriendly attention, and suggested a reduction. Fred Lack, a Western Electric vice president intimately involved with Nike, didn't like the idea. A civilian employee of the Army recorded Lack's reaction at a meeting in offices of the New York Ordinance District, which was handling missile procurement: "Mr. Lack stated that Western is regulated by the Federal Communication Commission, who constantly looks over their shoulders. If the government

profits were reduced, the Commission might suggest that telephone profits be reduced. . . ."

AT&T went unmentioned in the debate in the Senate and elsewhere during the first half of 1969 over the wisdom of deploying ABM. Her anonymity was a matter of deliberate corporate choice: Once ABM flared into a national controversy, discretion decreed that AT&T step aside and permit less vulnerable parties to wage the fight. AT&T's reasons were several: First, and foremost, Bell was under severe seige by the F.C.C. in rate hearings which resulted in a fairly stringent ceiling of 8.5% being imposed on its earning. The ABM is important to AT&T; nonetheless, domestic telephone profits are what Bell is really all about, and she doesn't want to imperil them.

Secondly, Bell didn't want to risk public attention as a member of the military-industrial complex. Let other parties take the public embarrassment of being called "militarists;" AT&T will take anonymity—and profits.

## Assemblymen, Lawyers At USC, ACLU Students' Law Confab

State Assemblyman Leon Ralph (D.—Los Angeles) will join with ACLU volunteer attorneys and three law professors to discuss students and the law at an all day conference Saturday, November 8.

Co-sponsored by the Associated Students of USC and the ACLU of Southern California, the conference will cover new state laws dealing with the rights of high school and college students.

Ralph will discuss the implications of the news laws, adopted by the state Legislature earlier this year. Mitchell Shapiro, chairman of the ACLU Lawyers' Division, will deal with the special effects of the laws on politically active students and how the new statutes may be effectively challenged.

Attorneys Paul Abram, Arthur Grebow, Stephen Kalish; UCLA law professor Monroe Price; and USC law professors Francis Jones and Martin Levine will lead discussions dealing with specific campus problems at public and private schools.

ACLU board member Phillip Chronis is chairman of the conference, to be held at USC's Hoffman Hall in the School of Business Administration.

Admission is free; students attending are urged to bring lunches.

For further information, call the ACLU, MA 6-5156.

## NOTICE

Under the new bill which is being considered by Governor Reagan, stating that Topless - Semi Nudity - Complete Nudity entertainment will be left up to the adult people of the community, The HI LIFE (1758 E. Colorado) is now conducting a poll to find out what the adult people of Pasadena want to see as entertainment.

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## Cal Tech Interviews Nov. 17 (PhD)

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## PROFILE OF TECH

The revision of our Profile in Depth of the California Institute of Technology is of great importance because the Profiles series must retain its accuracy and currency. We hope you can supply the comments and updating requested by the end of November, since we must print the revised edition no later than January, 1970.

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# Inductive Resistors

Continued from Page One

Ph.D.'s all wear hoods with blue borders (the color for philosophy) because no matter how much science they learn, they are still receiving a Doctor of *Philosophy* degree. One might think that it would be more appropriate for them to wear golden yellow (science) or orange (engineering), but it doesn't work that way. The lining of the hood identifies the wearer's school. At Tech this lining is orange with a white chevron (v-shaped stripe) near the bottom. Practically all other schools have a symbol with one or two chevrons.

### A Still Bigger Mess

All of the above descriptions pertain to schools within the U.S. Since 1895 there has been an Intercollegiate Code, which is followed by nearly all universities. Outside of the U.S. chaos reigns. Some of the German universities use beret-like hats instead of mortar-

boards. The University of Paris has each Doctoral candidate wear a scarf trimmed with ermine. The British "system" is so messed up that it isn't a system at all.

\$\$\$\$\$

Not only does this garb look impressive, but the price tags are also very impressive. The cap, gown, and hood for a Bachelor's degree rent for \$10.75 per day. The same equipment will cost a Master's candidate \$11.75, and will set back a Doctoral candidate \$13.25. If for sentimental or other reasons the new Doctor wishes to purchase his outfit, the bill will be between eighty and one hundred twenty dollars! If anyone ever complains that professors are underpaid and thus can't afford the simple luxuries, just remember that Linus Pauling has a whole cabinet-full of caps, hoods, and gowns!

(THIS SPACE NOT FOR DOODLING)

## Ad, Ad, What?

Continued from Page Five

Ad Adjuvandum." from 1610 Vespers, is a different story. Carlos attempts to insert "voice-like articulation" into parts of the piece. Although one is a little hard-put to recognize words, the attempt is truly impressive, especially considering that the Moog is effectively a keyboard instrument.

Bach's "Brandenburg Concerto No. 4 in G Major" comes across reasonably, and it is well worth hearing. However, my personal preference, as far as an interesting arrangement, is for the "Brandenburg Concerto No. 3," which appears on the earlier album.

All in all, Walter Carlos' "electronic realizations" are strikingly different—may he continue to shake the music world. I would recommend this album to anyone interested in electronic music, or for that matter, anyone interested in classical music. However, if you don't already own SWITCHED-ON BACH (Columbia MS7194), I would suggest that you hear that album first.

—Bruce Britton

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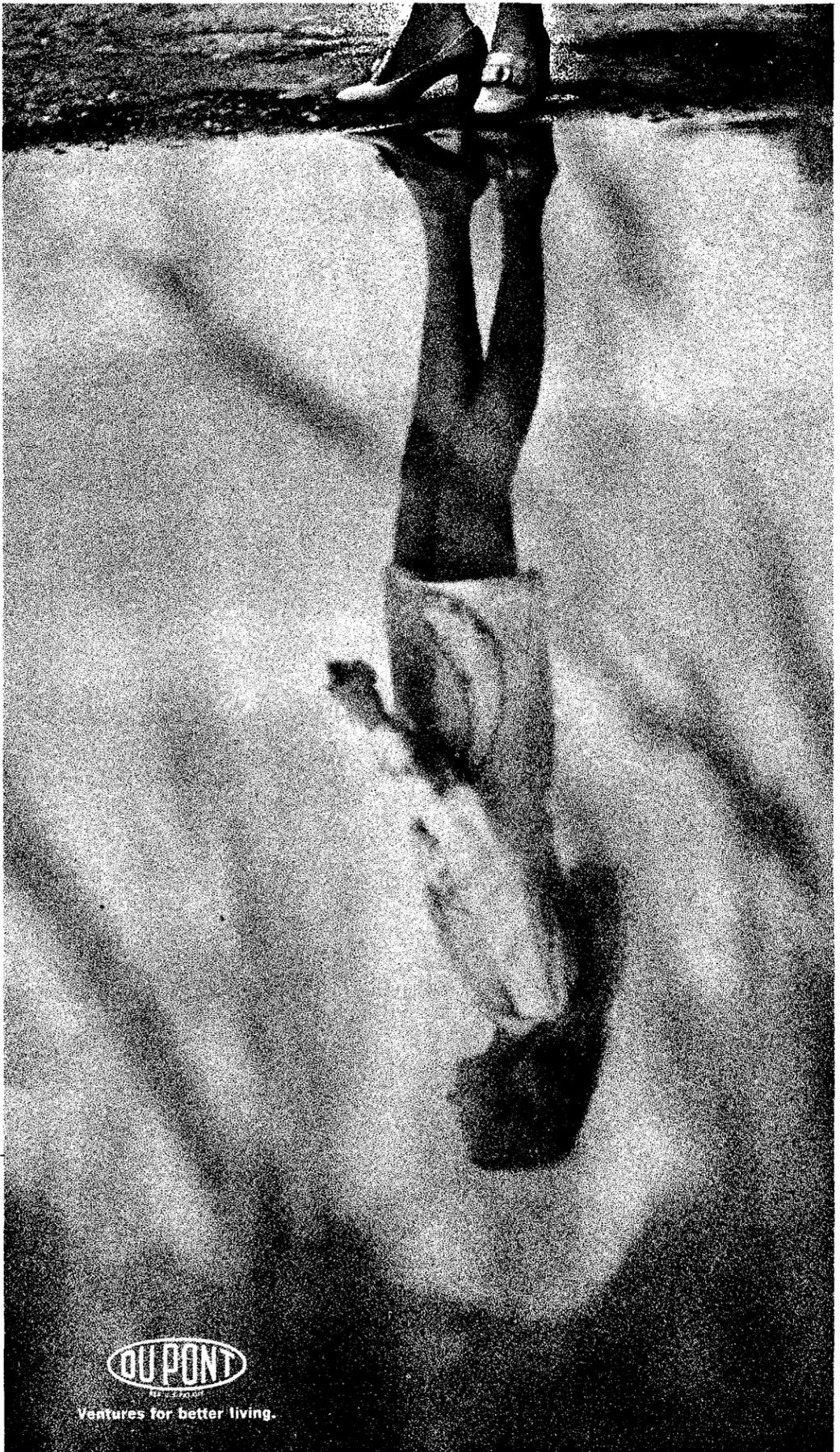
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