

Active
is strong,

California Tech

Associated Students of the California Institute of Technology

Passive
is weak.

Volume LXVII.

Pasadena, California, Thursday, April 14, 1966

Number 24

Recommendation Pending

No-Grades Policy to go to Committee Tomorrow

by Rich Flammang

The Ad Hoc Committee on the Freshman Year, led by Dr. Ray D. Owen, chairman of the Biology Division, will meet tomorrow to discuss the successes and failures of Caltech's no-grades program for freshmen, and to recommend action to the faculty on the continuation of the experiment.

The program was begun, as today's sophomores will remember with delight, in the academic year 1964-65 in an effort to make enjoyable an otherwise toilsome freshman year. The system has been in operation for two years; and the Committee, armed with an imposing collection of statistics and testimonies, is now ready to make an evaluation of the experiment.

Soon

In an interview last week, Owen said he hoped the committee would agree upon its recommendation by this coming Monday, and that the entire faculty would consider the recommendation in the beginning of May.

Many of the results of no-grades are already familiar. The attrition rate dropped from 21% to 14%, and—more important—the losses were from the bottom of the class under the pass-fail system, whereas losses formerly occurred even at respectably high levels of class standing. Also, the present sophomore class did slightly but appreciably better, not worse, than previous sophomore classes, belying the fear that students without grades are ill prepared for further work. Incidentally, great pains were taken to show that different classes could be compared; for instance, data were weighted by class CEEB scores where appropriate. Even in mathematics, pass-fail appears to have been no disadvantage to preparation for further work; no one failed Ma 2a this year and only three failed Ma 2b. Finally, freshman honors work has ap-

proximately doubled since the advent of no grades.

Jocks up 2%

Extracurricular activities, for some reason, seem to have been affected very little. The one extra-curricular area where statistics are available is athletics, where the fraction of the student body participating went from 70% to 72%.

There is one statistic which indicates a real, but perhaps easily remedied, failure of the no-grades system: the number of F's given to freshmen has doubled. This large increase is mainly due to Ma 1. Whether students preferentially slacked on math or the mercy and patience of the Math Department grew shorter, remains to be seen.

Ask, and ye shall receive

What about the freshman who becomes so upset with things that he decides to seek professional help—has no-grades helped him? Dr. Kenneth Eells, Institute psychologist, reported no change in the number of visitors he receives but less "deep anxiety about grades."

The most recent development in the pass-fail program is the compilation of data from the teachers of the freshman courses. The committee circulated a questionnaire, asking for opinions on no-grades and for the reasons behind these opinions. Teachers and teaching assistants were asked to indicate whether no-grades for freshmen should be discontinued, continued for a limited period of time, continued indefinitely, or extended to other classes. The results were com-

(Continued on page 2)

Von Braun Blasts off

Dr. Wernher von Braun, rocket and missile scientist, will speak in Beckman tonight at 8:00 p. m. on "The Art of Decision Making in Launch Vehicle Development." Von Braun is the director of NASA's Marshall Space Flight Center in Huntsville Alabama.

He has headed development of the Saturn I, Saturn I-B, Saturn I-B/Centaur and the Saturn V space vehicle projects. Since he became head of the Marshall Flight Center in July of 1960 the Saturn I has been launched from Cape Kennedy ten times out of ten tries.

In February, 1956 von Braun became director of the Development Operations Division, Army Ballistic Missile Agency, also in Huntsville, Alabama. He was director when the Army was requested to launch the first American earth satellite. Von Braun put up the Explorer I in one hundred days.

Tickets are not necessary for the lecture; however students will need to have their ASCIT student body cards handy, and faculty members and JPL personnel will have to pick up a Management Club badge at the Athenaeum sometime before the lecture.



At the recent dedication of the Harry G. Steele EE Laboratory, President Lee A. DuBridge with Mrs. Harry G. Steele and her son Richard Steele stand in front of the building, thus hiding it from probing camera eye.

Millikan Library Rises up-Campus

by Tim Hendrickson

Donning a white helmet to ward off falling iron, wood, and workers, one finds a lot going on behind the motley Millikan Library fence. Everywhere sweating workmen are weaving rebar into matrices for the walls and the eight columns; are finishing freshly-poured concrete or curing burlap-covered walls with water spray, and are groaning under the nine-story job of lifting into place, and later tearing off, the wooden concrete forms.

Water and Sani

Still others are cutting, bending, threading, and running conduit and pipes to be cast into the concrete walls; sawing carpenters are readying more concrete forms; and there are the busy water cans and Sanikans. Including subcontractors, Turner Construction Company has some 50 men working on Millikan. (Enough men, if laid end to end, to extend 20 rods and be much more comfortable.) The work crew puts in a 7:30 a.m., 12 noon-with-half-hour-for-lunch, 4:00 day, with quitting time and lunch shrieked out by the "job stuart's" police whistle.

Supervising construction is Don Granger for Turner Construction Co., in consultation with Caltech's Inspector Jack McClintock, a sort of liaison between what is on the architect's blueprints and what Turner wants to build. McClintock described how certain "little bugs" cannot be helped; for example, electricians and plumbers, both familiar with only their own specs, have wanted to run their pipes and conduits through the same aperture. In such cases McClintock checks the specs, and if necessary, consults with architect Lloyd Mounts from Flewelling & Moody.

Unique job

Mounts himself is no stranger to the Millikan site. Solid and friendly, Mounts commended Millikan as a "unique job, in that detailing is almost complete. Which is a good thing, too, in a small building with not much room to jump around." Thus there is already active construction on three stories. But even with "detailing almost complete" many annoying problems remain, such as the columns.

Dedication of Steele EE-lab Gift to Caltech

The Harry G. Steele Laboratory of Electrical Sciences became an official part of the campus earlier this month as President Dr. Lee A. DuBridge briefly dedicated the five-story structure.

27,500 square shoes

The building, a gift of the Harry G. Steele Foundation, is named in honor of the late president of U S Electrical Motors, Inc. It takes up 55,000 square feet just north of the Booth Computing Center and has two stories underground with the remaining three projecting skyward.

The edifice will be devoted to research: both physical — solid state physics, plasma physics, electro-magnetic radiation, magnetism, and lasers; and systems — transmission and detection of signals and automatic control of devices, vehicles, and computers.

Infinite grads

Of the \$1,978,900 cost, the Steele Foundation contributed \$1,139,900 and the National Science Foundation \$842,000. It contains 43 faculty offices, 40 laboratories, 38 combination office-laboratories for grad students, conference and lecture rooms, a library, and a dark room. There is room for 40 to 50 faculty and staff members and 100 graduate students.

Langdon and Wilson of Los Angeles evolved the structure and Ray Gerhart, general contractor, completed the erection.

Exiled South African To Depict Apartheid

Mr. Robert Resha, a spokesman for anti-apartheid elements in the Republic of South Africa, will speak at 11 a.m. next Wednesday, in the Winnett Lounge on "The South African Revolution." He will be the second of two speakers presented by the Caltech YMCA on the South African race problem. The first speaker was the South African Consul-General in San Francisco, John Mills.

Tells why

Mills spoke yesterday in Winnett Lounge at 11 a.m., giving his government's reasons for their internal and external policies. The most controversial of these is apartheid, or enforcing racial separation. A question period followed his speech; he then spoke at the YMCA's Athenaeum Luncheon Forum.

Resha heads the International Department of the African National Congress, now banned in South Africa. The American Committee on Africa is sponsoring his tour of the United States.

He has been a leader of the opposition to apartheid since 1944, and was one of the 156 defendants in the Treason Trial of 1956-60. Earlier he served as



Notices

BUDGET REQUEST DEADLINE

for all campus clubs and organizations requiring money during the next year is April 18, 1966. Submit all requests to Sam Logan, ASCIT Treasurer, Ricketts.

VIETNAM

Recently back from Vietnam, Dr. Bob Wyman will speak to the Frosh Dinner Forum at 6 p.m. in Chandler about "A View from Vietnam". Everyone interested is welcome to attend.

MAKE MONEY

The Drama Club needs (1) a Business manager (2) Advertising Salesmen. Guaranteed leads, 10% commission. See Chris Dede, Ricketts, or J. K. Evans, Winnett Office.

TODAY IS THE LAST DAY

to register to vote in the primary election on June 7. The Caltech YRs will provide an opportunity for you to register on the Olive Walk this afternoon from 1 to 2 p.m. If you don't make it try the Pasadena Republican Club HQ at 104 South Los Robles anytime until midnight tonight.

Editorial

Meollian Philosophy

Now the Middle Ages knew God. They suffered enormously, the men of those times, and their religion made suffering the only way to get to heaven, to achieve salvation and live in everlasting bliss. A poor serf, with only enough to feed himself and his family, had a better chance to save his soul and reach Paradise than the rich, lordly Baron who indulged himself in wenches, wine, and wars. The serfs' heaven may have been more remote than the Baron's castle, but it was an integral part of his daily existence.

Today Paradise, or at least material Paradise, is here. Look around—perhaps there are four per cent of the population without jobs, but everyone is better off than he ever was before. More important, the times are getting lusher and more luxurious, a trend which started with the Renaissance and continues into the indefinite future. We have or the possibility exists of our having in the future every **thing** we could possibly want.

Innocent III returns

The oppressed people of the world are not content to contemplate a distant afterlife which rewards their souls for their travails here on earth; they want **our** Paradise, and they are working hard to get it. In one third of the world, the Communists reach out for an economic heaven in exactly the same manner that the medieval Popes steered Europe to a Catholic one.

Where is our Christian God in this world dominated by stock tickers and synchrotrons? Modern theologians talk about the Death of God as if it were a fairly recent event, but no one has had the old, true, unwavering faith since the Enlightenment, since the astronomers put the sun where the earth was said to be. Before then, one only talked about the miracles wrought by faith in God; since then, the spotlight has shifted to the miracles of science. Reason has brought about this land of plenty in which we live, a world that would be inconceivable without modern technology. Scientific technology has resulted from the application of the scientific method, and nowhere has belief in God been much of a help.

Public belief

Western society, however much it owes to rational analysis, is still based on a system of values which proceeds from a belief in unreasonable justice. Charity, for one, is irrational. So is mercy. In fifth-grade history books diagrams depict the foundations of our government, and the block holding up the entire pyramid is always labelled, "Fundamental Belief in God."

Private

Individual action also requires some irrationality, and it is at this point that Caltech students often waver. Too much imbibation of the Pierian Spring has left the majority of us with an unwavering faith in the power of reason. It is misplaced when applied to life in general, for rationality is not the entirety of reality. Many times science students will expect to reduce every decision in their lives to a rational choice; this is hopelessly impossible. The only result is a warped sense of values.

All too readily the Caltech student, fresh from intoxicatingly beautiful physics and math courses, decries the narrow religion he learned in his mother's lap. Too encompassingly does he condemn unreason and embrace pure, virgin Reason forevermore. Sometimes he learns too late how sterile said virgin is as a private consort; sometimes he doesn't learn at all. The public does well to take note of the one-sidedness of many scientists, even though it wrongly stereotypes us all as absent-minded geniuses. The freshman's violent embrace of rationality is probably aided by the small social circle he meets at Caltech, but this is no excuse. It seems a simple way to model one's life, so he adopts it. Indeed it is too simple.

There's more

Those decisions in life which reduce to a choice that can yield to a rational analysis are not decisions at all; the rational path should be taken without hesitation. The most important decisions, the Existentialists say **all** the decisions, are those which must be made without recourse to reason. Suppose during World War II a Frenchman felt a need to fight in the Underground, but he knew that if he left home his mother would die of a broken heart. Whichever evil he picks, to go to war for his country or stay with his mother, the choice is an irrational one. A Robert E. Lee would choose honor and duty, but such a choice would not be based upon Reason, but an irrational adherence to an arbitrary code. A St. Francis of Assisi would stay home, but his is an equally irrational love of all living things. One who acted only by Reason would be lost and confused.

Inevitably, a civilization based entirely upon Reason would dispense with God. Unfortunately, it might also dispense with humanity as well, both as an emotion and as a species. Pure reason is the only recourse in the sciences, but Robespierre's Rule of Reason proved its disastrous effects when forcibly applied to every facet of life. Let us as scientists strongly resist any attempt to seduce us as leaders down the primrose path to a state ruled only by Logic, Marxist or otherwise. Let us in our personal lives retain a saving measure of unreasonable emotion.

— Mike Meo

Editorial

The Limits of Jurisdiction

The honor system at Caltech has always been one of the more respected aspects of the campus. However, many relationships between students and faculty or companies which serve the campus in some vital manner, which do not directly fall under the "unfair advantage" clause, could conceivably fall under the jurisdiction of the BOC.

It is a little-known fact that the BOC has jurisdiction over practically every part of student affairs at Caltech when they feel that such action is duly warranted. This extension of jurisdiction has, in the past, been used very infrequently if at all.

Furthermore, the use of the extension implies, by the very meaning of the honor system, that once a certain jurisdiction has been firmly established, it is up to the student to report suspected violations within this jurisdiction.

Thus the existence of certain "gray areas" where BOC jurisdiction is not-so-well defined is a liability to both the victims and the witnesses of a potential violation. Furthermore, the victims of violations in the "gray areas" have virtually no recourse to any disciplinary force except the BOC, the civil authorities, or the administration, which has no real organized disciplinary body, with the possible exception of the deans.

Hence the origin of the recent Student Opinion Questionnaire on the Honor System and the BOC. The results of this questionnaire may have a profound effect on the future applications of the honor system at Caltech.

We of the **California Tech** think that the BOC should have full jurisdiction over unauthorized entry into private areas such as offices or labs when they are locked; and in the case when these are unlocked, the issue should be treated by the BOC at the recommendation of the faculty. Locked buildings are often popular snake-dens and those now used as such should not be held as off-limits to students without very strong reasons such as security.

Teckers should remember, as the BOC must consciously recognize, that the power to compel a student to report a violation is an awesome one. The BOC's official jurisdiction should therefore be as precise and as limited as feasible. We do not want to stretch the honor system so beyond its limits that it is no longer respected. The recent breakdown of the Air Force Academy's honor system should serve as a proper warning.

—Middleditch and Meo

Letter

Commissions in Air Force Recommended

Editors:

I feel that in your article on draft status in the last issue of the **Tech**, you are guilty of painting the student body into the proverbial corner. You indicate there are only three alternatives open: 1) I-A and a probable draft call, 2) II-S with the help of class standing, test scores and a little luck, and 3) IV-F. It would behoove the Caltech student to research another possibility before succumbing to the draft status syndrome.

By disregarding an Air Force commissioning program on your own campus, you are eliminating a fourth and quite possibly the most desirable alternative. Our recent graduates, commissioned Air Force officers, are very enthused about the Air Force's technical competence, intellectual atmosphere and research facilities. Names and addresses of these graduates are available, and I think the student will be surprised by the responses from most of these people. The broad range of assignments and educational possibilities provides room for any and all ambitions of any Caltech student.

If you are serious about presenting the alternatives to the student body it would help to present all of them and a true analysis of each. A military career? Maybe not. A short tour in a productive capacity? Possibly. A narrow perspective? Absolutely not!

Donald L. Stearns, Capt., USAF

Five Scientists Now Enjoying Unrestricted Sloan Fellowship

by Villani

Five Caltech Scientists were among 90 in the United States and Canada to receive unrestricted research fellowships from the Alfred P. Sloan Foundation. Dr. Everett C. Dade, associate professor of mathematics; Dr. Roger F. Dashen, assistant professor of theoretical physics; Dr. Kip S. Thorne, research fellow in physics; Dr. George Zweig, assistant professor of physics; and Dr. Don L. Anderson, associate professor of geophysics were honored.

The grants, effective next September, are for fundamental research in fields such as chemistry, mathematics, and physics, and interdisciplinary fields such as geophysics. Caltech led other western colleges and universities in the number of grants received.

Dade will use his fellowship for a trip to Europe; he will visit some people in Germany, then attend the conference on group representation in Warwick, after which he will teach for a term at King's College. He commented, "A lot of people have visited us here, and now I'm paying them back."

Dashen, whose main interest is theoretical elementary particle physics, has no particular project in mind at present. He intends

to use his fellowship for travel and living expenses during the summer.

Thorne was unavailable for comment, as he will not be on campus until this summer. Zweig and Anderson also could not be reached.

California Tech

Published weekly during the school year except during holidays and exams by the Associated Students of the California Institute of Technology.

Editors: John Middleditch and Mike Meo, Editors-in-chief; Bob Firestone, Features; John McCord, Managing; Joe Jeffrey, Copy; Peter Balint, Sports.

Staff: Jerry Austin, Steve Boone, Bill Boyd, Les Fetting, Rich Flammang, Kim Gleason, Tim Hendrickson, Jeff Hecht, Fariel Hinkle, Bob Pelzmann, Dan Villani, Jim Woodhead.

Business: Bob Berry, Manager; Embarrassed, Circulation Manager; Anonymous, Disgusted.

California Tech, Publication Offices: 1201 E. California Blvd., Pasadena California, 91109. Second-class postage paid at Pasadena, California. Represented nationally by National Advertising Service, Inc. Subscriptions: \$1.50 per term, \$4.00 per year. Life subscription: \$100.00.

Printed by Bickley Printing Co., 25 South Fair Oaks Ave., Pasadena, Calif. Volume LXVII, Number 24, Thursday, April 14, 1966

No Grades!

(Continued from page 1) piled both individually and by department.

Decision not obvious

Although leery of starting premature rumors, Owen did state that a numerical majority of all the teachers, including assistants, approved continuation of the pass-fail system in some form or another. He cautioned that on the negative side were people "very much concerned with freshman instruction" at Caltech, however. Furthermore, there was a fairly wide divergence of opinion by instructional department; so the issue is not decided yet.

One thing is certain though: Owen and his committee deserve recognition for a worthy experiment, imaginatively conceived, well implemented, and scrupulously evaluated, which has had no purpose save the enhancement of the student's happiness and educational benefit.

HOMES FOR SALE

Two story English
Five bedrooms — three baths
Large playroom upstairs
Large family room downstairs
Hamilton—Caltech area
\$258 per month including taxes
Owner will carry 10% loan
Price: \$38,450

Authentic Spanish Hacienda
Four bedrms — three baths
Four fireplaces
Built around large patio
Built-in kitchen with breakfast rm
Separate dining room and den
Completely charming, in A-1 cond.
Allendale Elementary School
Asking \$44,950

Cynthia Rusch
John Grech Realty
449-1181 799-9482

Two Locations

at the ICE HOUSE (S)

GLENDALE
234 S. Brand
Reservations Phone
245-5043

PASADENA
24 N. Mentor
Reservations Phone
MU 1-9942

FOLK MUSIC and COMEDY
Twice the Music
Double the Fun

THE GREENWOOD COUNTY SINGERS
FATS JOHNSON

THE IRISH ROVERS
THE UNCALLED FOR 3
STEWART CLAY

Letter

Totem Damned

Editors:

The following is an excerpt from the mimeographed information given to applicants approaching the Gate of Heaven to be tested for entrance.

"... The gate keeper (who should be addressed as "Sir") will give you a machine-scored answer sheet and test booklet. There is no time limit on the test, so you may begin at once. You must supply your own number 2 pencil . . . Applicants who have attended Caltech must also submit written proof of having done something worthwhile."

A couple of conclusions can be drawn from this information: 1) The one thing you should try to take with you is not money but a number 2 pencil. 2) Since reliable sources report that writing a short story or poem or anything literary satisfies the "worthwhile" requirement, it would be to your advantage to write something literary as soon as possible.

And since you'll have this written before April 20, why not submit for the next issue of Totem?

Dick Rubenstein



Stouthearted Latin students advance hauling formidable catapult with redoubtable range of five feet.

Letter

Latin Catapulters Throw Challenge at Teckers

The students of second-year Latin (Caesar's Gallic Wars) challenge the ingenuity of the students of Caltech to a duel of Catapult Ballistics — the goal being to construct an authentic Roman catapult capable of launching a payload of 70 pounds farther than the launch of five feet achieved by our machine on nation-wide and international TV.

"I can't get no . . ."

This challenge is extended to you and to other highly charged student bodies, knowing that upon your acceptance we will drive ourselves to perfect our present machine and bring forth its true abilities. In no way can the satisfaction of watching accumulated tension being released after a dramatic catapult countdown be matched — on any playing field, in any demonstration, in any riot, or in any space age race.

Odd, all right

Clearly, the sophistication of our age demands that such endeavors assume the form of contests or races — so as to give them purpose and increased expense.

The odds against us in pitting ourselves against the greater size, more obvious venerability, more awesome acumen, and more abundant resources of a tested and accomplished institution such as yours are indeed staggering, but we request no consideration other than our own field.

RULES FOR CATAPULT COMPETITION

1. The source of tension must be from wood or from rope. Steel cables and metal fittings are allowed only as safety devices.
2. The pay load must weight a minimum of 70 pounds.
3. The device must be capable of being cocked from a safe distance.

Park School Latin students Indianapolis, Indiana

Editor's note: We're sorry, but if you're studying Bellum Gallicum Caesaris, you must be sophomores in high school. Don't you know we can't stoop so low as to compete against sophomores ignorant of even the Maxwell equations? Seriously, though, we hope our (gasp, gag) "highly-charged" student body takes you up on this offer.

Supercalifragilisticxpialidocious

"Well, old bean, this will be the best concert ever!" So Myron Mandel, manager of the Caltech Band, announced the Band's annual Spring Concert, which will be held Friday, April 29, at 8:30 p. m. in Beckman.

Ribaldy Vivaldi

This year's Concert features Sibelius' "Finlandia" and the First Movement from "The Unfinished Symphony" by Schubert. Steve Clamage, a senior in EE, and Jim Toeves, a graduate student in physics, will be trumpet soloists in Vivaldi's "Concerto in B-Flat for Two Trumpets and Symphonic Band."

The red-coated musicians will also play numbers by Sousa,

From Other Campuses

by Parker

From Michigan State by way of Worcester Poly, we have a rewritten version of the Twenty-third Psalm which ought to comfort those who are four weeks behind already.

The Curve is my shepherd.

I shall not worry.

It maketh me to sleep through physics lectures.

It leadeth me to believe in false intelligence.

It restoreth my self-respect.

It leadeth me in the path of hard courses for prestige's sake.

Yea, tho' I walk through the valley of F's.

I shall fear no draft.

For the Curve is with me.

Thy median and thy mean, they comfort me.

It prepareth a grade scale before me in the presence of the Administration.

It anointeth my grade point with B's.

My honor points runneth over.

Surely goodness and my transcript will follow me all the days of my life,

And I shall dwell in the house of the Curve forever.

This must bring back to all present-day juniors the two-humped curve a very puzzled freshman dean once sketched on the blackboard.

Timeless Orient

Now, dear friends, it behooves us to journey to the east, for a look at a timeless problem that besets the best of schools. The Worcester Poly Tech carried an editorial last week complaining of the apathy around their campus. The editor commented that the Tech spirit followed its traditional sinusoidal function with time.

Sue Martin for ASCIT bod

He noted that only 42% of the student body bothered to come out to vote, that he basketball game held between the students

and faculty was very badly attended by some of the awardees. At least our elections awards are given out, was not tended, and that the honor assembly, where the Worcester were well attended, which probably had something to do with the fact that an honorary ASCIT member showed up the night before.

Holy cow, Batman

Following the trail of an R. F., we now switch to Boulder, Colorado, to pick up a story from the U of Colorado Daily. Seems there was this cow. A 700 pound cow. And it had taken up a temporary residence on the eighth floor of the girl's dorm at the U of Maryland (wonder where U Colorado got this?). The time, of course, was 4:40 a.m. The housemother (translate RA) called the campus police (why?). The police called some people from the School of Animal Husbandry, who removed the cow.

Is she stacked?

The U of M janitors removed all evidence which the cow left behind. The Dean of Women said that evidence suggests that the cow was brought in via the elevator, but how whoever did it managed to get in without tripping the burglar alarm remains unanswered. (Well, you take this piece of strap steel...) No action was planned against the cow, since it was a female cow in a girl's dorm.

Beware, Superman

The final comment of the day is from the Hilltop to the north, the University of San Francisco. The students there are planning a humor play, lampooning all aspects of campus life. This is a Jesuit school, and the play "will be the funniest thing since the last compulsory convocation . . . We even have a Super Jesuit." Well, now we know what SJ stands for. It's a bird, it's a plane, it's SJ . . .

On Beautiful Scarps And Earth Tremors

A scarp is a line of cliffs or steep slopes produced by faulting or erosion; a beautiful scarp is also a line of cliffs or steep slopes produced by faulting or erosion, only in this case it is viewed by a geologist. Dr. Clarence R. Allen, professor of geology and geophysics at Caltech, displayed many examples of fine scarps (or is it scarp?) in conjunction with his Monday Night Lecture on "Great Earthquakes and Great Faults," given this week at Beckman Auditorium.

"The Los Angeles area has

many beautiful faults but, through prudence, the Chamber of Commerce will never publicize them." With this and other similar comments, Dr. Allen created a pleasant atmosphere which permeated the auditorium throughout his lecture.

What is a right-hand fault? If two people stand on opposite sides of the fault when it takes place, they both see the other move to the viewer's right. One prime example is our own San Andreas fault which stretches along the coastal region of California.

When will scientists be able to predict earthquakes? "Perhaps within our lifetime," said Dr. Allen, without making any specific predictions.

After the lecture many people expressed their regard for the safety of those living in California, since our state is a center of earthquake activity. Dr. Allen reassured those with their luggage packed that California may be the most aearthquake-safe state in our country because we are aware of the danger and are continually preparing for such tremors.

MILITARY COMMAND TECHNOLOGY

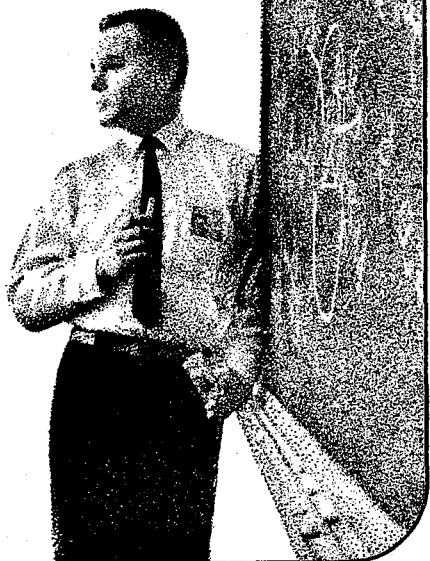
MITRE is chief technical advisor and systems engineer to the Air Force Electronic Systems Division of the Air Force Systems Command. In this capacity, we design and develop such global, computer-based systems as the NORAD Combat Operation Center and the Back-Up Interceptor Control System. Other commitments: development of a future air traffic control system and supporting the Defense Communications Agency in the development of the National Military Command System. We call this Military Command Technology.

For the young systems engineer, this is uniquely rewarding work. You associate with the top men in your field. You work in an atmosphere that allows you to extend your capabilities professionally and academically.

At MITRE, men trained in single disciplines are encouraged to grow beyond their original fields of interest. Systems designers learn to work from an increasingly broad base.

You may work in such diverse areas as information theory, computer design, display techniques and propagation. You may analyze. You may synthesize. You may deal with systems or individual components. At the highest levels you may have to consider political, economic and social factors . . . as well as the available and predictable technology.

If you have a B.S., M.S., or Ph.D. in Electrical Engineering, Physics, or Mathematics and want more information regarding opportunities at MITRE, call collect, James L. Glinos (617) 271-2078 or write in confidence to College Relations Coordinator, The MITRE Corporation, Box 208 CNL Bedford, Massachusetts.



PAT'S LIQUORS AND DELICATESSEN
 1072 E. Colorado SY 6-6761
 Open to midnight daily,
 1 a.m. Fri. & Sat.
 Keg Beer Party Supplies

TECH Sports

Cricket Clearly and Explicitly Explained

As mentioned last week, cricket has begun. Caltech's first home game will be this Sunday, April 17 at 12:30 p.m. in Tournament Park. Those of you who are totally snowed about cricket, but would like to learn, gather 'round, because here is a long-awaited explanation of the "sport of gentlemen."

Take your wicket . . .

The game of cricket is played on a large grass field with two sets of three sticks near the center. The three sticks are in a line, about two inches apart, and are collectively called a "wicket." The two wickets are 66 feet apart. Team A has two batsmen on the field, one at each wicket. Team B has 11 men on the field: a bowler (corresponding to a pitcher in baseball), a wicket keeper (catcher), and nine fielders.

. . . and stick it

The bowler is at one wicket and tries to throw the ball so as to hit the other wicket. The

batsmen tries to keep him from doing this by hitting the ball with his bat. The batsmen can score runs when the ball is hit far enough for them to run back and forth between the wickets. A run is scored every time the batsmen exchange positions at the wickets.

CS batsmen

The batsmen may be put out in three ways: by the bowler hitting the wicket, by catching a batted ball in the air, or by getting the ball to a wicket before the runner gets to it. (The batsmen don't have to run when the ball is hit.) Each team has 11 men; 10 outs constitute an "inning," so that one man is "not out," i.e. is still at bat.

If this article still leaves you confused, talk to a cricket player — you can usually tell them by their British or Australian accents. Or better yet, come to the game, bask in the sun, and enjoy yourself.

Frosh Tennis Team Triumphs Over Oxy

The Caltech frosh tennis team scored a victory over Oxy's frosh with the help of two defaults. Martin Frost at third singles seems to be the hottest frosh as he and Bill Fertig won their singles matches. They then combined to score the decisive doubles victory. Frost and Fertig journey to Whittier for a match this Saturday.

The Caltech varsity tennis team absorbed two more losses, one in league play to Occidental, 8 matches to 1, and one to Cal Poly by a similar score. Roger Davidheiser is currently strongest in his position of third sin-

gles, winning both of his matches to score the only two points for Caltech. Jeff Pressing is improving all the time but his opposition in first singles is just too experienced. The next league opponent will be Whittier at Caltech this Saturday at 1:30.

Dabney, Lloyd, Page Win In Interhouse

Interhouse basketball started with a bang this week as two teams won by overwhelming scores and a third upset the favorite. There was also a bit of mechanical difficulty which forced the postponement of one game.

Lloyd, one of the favorites for the basketball title, met Ricketts in the season opener. It was no contest from the start, as Lloyd's tough defense completely stifled any offense the Scurvs might have had. The Lloydies played their zone-defense very tight, never allowing any of the opposi-

tion to get away free shots. They also stole the ball often which led to fast breaks and easy lay-ups. Grey Jennings completely dominated the backboards, thereby shutting off Ricketts even more. The scoring was led by Lloyd's Bob Vance with 15 points and Jennings with 10 more. Frank Potter managed to put in 10 points for a losing cause. The final score of 53-23 indicates that Lloyd has to be reckoned with in future games.

Upsets started off early this season as Fleming, considered one of the contenders, lost to Dabney 36-32. The Flem's sorely missed their center, Cliff Tedder, who was an all-star selection last year. With their rebounder gone, Fleming gave the ball to the opposition too often to win. Dabney ran their patterns beautifully, always setting up an open man and capitalizing on their opportunities. The game was very even through the first half, with Fleming holding a slight edge throughout. In the third quarter John Eyler made a couple of long jumpers to put Dabney ahead to stay. The Flems, a fast team, fought back using running tactics, but a three-point play by Eyler in the last two minutes put the game out of reach. In the

end he Darbs won by keeping cool and not panicking at Fleming's reputation.

Page also won its first game easily over Ruddock by the score of 51-24. Ruddock was out of the game in minutes, as they trailed 6-16 by the end of the quarter. Page then started playing its second string, but they only continued to mount up the points. The tight man-to-man defense plus the complete domination of the boards by Craig Maxwell kept Ruddock from getting any kind of attack going. Page's team is tall overall and they outrebounded the opposition 58-21. This statistic tells the story of the game. Page got several chances at the basket, while Ruddock got at most one. Maxwell led the scorers with 18 points, though he only played for three quarters, while Ruddock's Hank Thacker had 10.

The Ricketts-Blacker game was postponed because the board holding up the structure upon which the backboard and basket rests was cracked, and it was feared that the whole thing would topple. The thing should be fixed soon, so the games can resume safely.

Cal Poly Nips Water Babes

The Caltech swimming team suffered a 51-43 defeat at the hands of Cal Poly, Pomona last Thursday in another down-to-the-wire contest. As in the previous meet, the outcome was not decided until the very last race, the relay which Cal Poly won.

Following the initial loss in the medley relay, the Webmen quickly evened the score when Henry DeWitt took the 200-yd. freestyle in 1:58.7, Larry Anderson, the 50-yd. free in 22.8, and Greg Wright, the 200-yd. individual medley. For the rest of the meet the lead changed hands several times.

Wright also won the 200-yd. backstroke for high-point honors. Other winners for Caltech were Jon Haviland, who easily took the 200-yd. butterfly and Jim Woodhead, who barely took the 200-yd. breast stroke.

The Wetbacks get another chance at Cal Poly here next week, and they hope to turn the tables next time. Tomorrow the team travels to Oxy for a league dual meet there at 4:00 p. m. Why don't you come and watch; it's a great excuse to look at the girls.

A&H DISCOUNT RECORDS

SPECIAL SCHOOL DISCOUNTS

50c

This coupon entitles bearer to an additional 50 cent discount off our already discounted prices on all long-playing albums priced at \$2.00 or more.

50c

50c

This coupon enables bearer to purchase any 45 rpm record either in our stock or on special order at

59 cents each

ALL ALBUMS ARE SEALED AND GUARANTEED AGAINST DEFECTS
A&H DISCOUNT RECORDS

1766 E. Colorado Blvd. — Pasadena

SHOP DAILY 10-6 MON. & FRI. EVENINGS TO 9

SY 6-7436

—paid ad

FOR SALE — Beautiful 3-bedroom house in La Canada hills near JPL. Newly decorated, luxury drapes, carpets. Bookshelves & storage space abound! Large living room leads through sliding glass door to huge covered patio. Picture windows overlook foothills, above smog. Lovely landscaping. Near schools and LC Country Club. \$34,500.

TREND REALTY
26 N. Lake, Pasadena
449-8892 684-2151



FARAH®

World's Finest Dress Slacks

at Casual Slack Prices!

SLACKS, JEANS and WALK SHORTS with FaraPress® NEVER NEED IRONING
FARAH MANUFACTURING CO., INC. • EL PASO, TEXAS

**Achtung!
Attenti!
Pozor!
En Avant, Marche!
¡Alto!
Stanna!**

**Berlitz Gives You A
Command of
Any Language!
Berlitz**

170 South Lake Ave.

Pasadena

SY 5-5888

Horsehidiers Win Two from Life Tracksters Lose to Cal Poly

The baseball team cashed in Saturday with a doubleheader win over Life College before a thrilled crowd of spectators that included a sizeable contingent of female rooters from Life. Admittedly, these final games of the practice schedule (it'll be all SCIAC starting with Claremont at TP Wednesday) pitted a less than championship quality team against the Techers, but nevertheless they put on quite a show of clutch ballplaying.

First Game

The first game, a seven-inning contest, can best be described as an efficient job of winning a ballgame, the Beavers coming out on top by a 5-2 margin. Frosh Craig Helberg went the route for his first win of the season, and did an impressive job of holding down the Life stickwork.

A scratch run in the third summed up the visitor's attack. Although the Caltech offense left a little to be desired against Life's junkball hurler, it was more than adequate to sew up the game, scoring a pair in each of the second and fourth innings and another in the fifth. Stump Chapyak came out of an absurd hitting slump with a pair of well-timed hits.

Second Game

The second game, a nine-inning battle, kept up the best traditions of exciting baseball, going right down to the bottom of the ninth before being decided. Three quick unearned runs crossed the plate against Caltech in the first

Life added four more in the second, and one in the third, to built up a dismaying lead. Les Fettig started and finished the game, keeping a fine form, after the initial outburst, racking up several 1-2-3 innings and well-placed strikeouts. Meanwhile the Caltech nine whittled away at the slow curves of Life's southpaw hurler in frustrating fashion. After scoring four in their half of the second, the gooseeggs started popping up along with Life's on top as the game moved along with an 8-4 score.

Catch up

Going into the Caltech ninth, the score stood 9-7 against the Beavers. At this point special thanks should be extended to the Life shortstop who proved such an invaluable asset to Caltech run-scoring opportunities throughout the game. With one run in, men on first and third and one out, Fettig's grounder at the pulled-in infield loaded the bases, setting the stage for the Great White Stag of the North. Clean-up man Linus Martin cracked the second pitch over the leftfielder's head to send the winning run across the plate and conclude a really fine performance on the part of all of Coach Ed Presisler's boys, including even Bob Firestone.

Paine at Third

Other highlights of the set had Gramma Paine back at third base for a curiously short time

where he competed, muff for muff, with the Life shortstop for the title Human Hannel. Tom Resney, the team captain and basepath speedster, sat out the first game but contributed his batwork to that of Chapyak and John Frazzini at the crucial moments of the second game.

This Wednesday afternoon had the dust flying once again with the fired-up team taking on CHM in a conference game. As this issue went to press, no information was available.



The start of the mile run in last week's track meet. The unrecognizable runner is Mike Meo; he has just taken a bath. Incidentally, he came in third.

Caltech suffered a 93-52 defeat at the hands of a strong Cal-Poly track team last Saturday. The Caltech team, still out of shape from an over-restful spring vacation, was not up to the par it had established for itself before the end of second term.

Doug Gage, who high jumped 6' 2" against Biola, mustered a meager 5' 10" against Cal Poly. (His performance was good for first place, however.) Pete Cross, who bruised his heel on the cement bottom of a steeplechase pit in the Claremont Relays, was forced to pull out of the mile

when his injury became too painful. Dennis Schneringer, Mike Meo, and Jim Stanley put in performances which were far from their year's best.

Pete Wyatt put on the most outstanding show of the day. Perhaps angered by assertions made in this column that he was growing feeble in his old age, Pete turned in a 56.0 second performance in the 440 intermediate hurdles. The time was 2.4 seconds faster than he had ever done before, and is a new Caltech record. Freshman John Cummings also ran well, but was beaten by Cal Poly's Chapman. Pole Vaulter Walt Innes, who has cleared 13' 6" in practice, made only 13' 0" in the meet, but was more than six inches above the bar when he went over.

Sprinter Fred Lamb captured second place in the 440 and third in the 220. Lamb has been improving steadily. Rock Levinson threw the discus 124' 7", his best for the year, but he was only able to garner a third place for his effort. Lane Mason won the two-mile in 9:49.5 and ran strong.

Caltech's quarter-mile relay team won its event, with Pete Wyatt, Allen Lee, Dick Harley, and Jim Stanley turning a 44.4. Next week Caltech travels to Claremont-Mudd. Our only hope is that the Staggs have been doing much boozing and wenching and little practising during their Easter vacation.

Darbs Beat Flems in Discobolus

Dabney outlasted Fleming in Discobolus basketball last Sunday afternoon by the score of 37-31. The game was hard fought throughout, but in the end the Darbs prevailed. There were frequent temper flareups, something to be expected when the Phlegms and Darbs get together. This made things tough for referees Ed Hsi and Frank Potter, but they turned in a very commendable job.

Fleming jumped out to an early lead on the strength of Dick "Les" Wright's shooting, but Dabney made a quick comeback and by half-time had built up a reasonable lead. The Darbs maintained an eight-point lead throughout the third quarter, but Fleming kept chipping away at the margin during the last period and cut the lead to four at times.

Cliff Tedder, "Mule" Miller, and "Fuzzy" Harslem were instrumental in the Fleming surge.

Dabney managed to stay ahead behind the shooting of "Elephant" Yudelson, "He-man" Zeller, and John Eyler, and finally won by six points. Other players who turned in fine performances were Len Erickson, Don Blair, and Terry Beard for Dabney, and Martin Dowd and Doug Holford for the Flems.

Highlights of the game were a pushing contest between karate expert Holford and Yudelson, Eric "Nork" Garen's last-second hook shot, and the great love shown by Harslem toward the referees.

Incidentally, Fleming's loss clinches the Discobolus title for Lloyd.

ITALIANO AT LARGE

Faced by a ranting, screaming Italian who in the past has been renowned for his unusual mode of non-dress and has lately acquired a sweatshirt which is worse, what would you do? I did the only thing I could; I begged for mercy. As I cowered in the corner, only inches from my raving assailant, my body quaked with fear; my panic-stricken mind searched futilely for a means of escape. What did I ever do to deserve this? Nothing—that was the problem.

He was yelling something about the newspaper, team spirit, duty, ad nauseum. He was

Trophy Standings

| DISCOBOLUS | | | INTERHOUSE | |
|------------|-----|------|------------|--------|
| House | W-L | Pts. | House | Points |
| Lloyd | 7-2 | 23 | Page | 97½ |
| Fleming | 3-3 | 12 | Fleming | 78 |
| Blacker | 3-2 | 11 | Ruddock | 75 |
| Ricketts | 1-3 | 6 | Ricketts | 58½ |
| Dabney | 1-2 | 5 | Lloyd | 48 |
| Ruddock | 1-2 | 4 | Dabney | 36 |
| Page | 0-2 | 1 | Blacker | 24 |

Rhodes Looks for Warm Bods

Who said scientists are untalented? All you Techmen now have the chance to show the world that you can do more than grind out Euler's Constant to 69 places. We are going to put on the coolest demonstration of raw native talent since H5 developed the "bite".

We need more

The ASCIT Talent Show will cut loose Saturday night, May 28th in the House That Beckman Built. From the looks of things

screaming over and over that I was irresponsible, that I was incorrigible—just because I hadn't written those articles for the paper I had promised him faithfully. For some unknown reason he had taken me at my word—such a foolish person—my parents learned not to do that years ago.

I'm sure you know by now the character of whom I speak: "Magnetite" Meo, the less attractive half of the force behind the

we're going to have a real blast. We've got talent; all we need is more. If you sing, dance, think you're funny, or play a musical instrument other than the radio, come over to Blacker and see me.

I want your bod. You can pick the way you want to display your talent: solos, twosomes, threesomes, n-somes. You name it and if it's talented, it goes.

Joe Rhodes ASCIT Activities Chairman

Tech. He told me to write a funny article for the paper this week; obviously the paper must be in a bad way for space fillers if this qualifies.

At first he wanted me to do an interview of Dr. Dade and Dr. Bohnenblust, but then he did my poor little ego irreparable damage by saying that it was too important for me to do and telling me to write "something funny". How can anyone write something funny with all the tragedy there is going on in the world today? The tennis team is losing; the baseball team is losing; the track team is losing; the squamish team is losing; and I

Xerox Copies From Y-office

ASCIT has ordered a Xerox machine for use by Teckers, and according to BOD Vice President Martin Smith, it will be here sometime next week. The copier is being rented by ASCIT, and will be in the charge of the Y. It will reside in the Y workroom. For this term the machine will be run on an experimental basis at seven cents a copy; if this proves successful, the price may be lowered to a nickel.

Operation of the machine will depend on the honor system; there will be the usual sign-up sheets for organizations, and in addition, a coin box for individuals. It is essential that those using the machine must pay for copies they make; otherwise ASCIT will not be able to afford it. So pay, you misers!

"The machine will be off limits to tinkers," said Smith. He remarked that a replaced roller costs \$200, and the machine itself is worth \$30,000. "And besides," quoth he, "if Xerox has to keep replacing parts, they might remove the machine."

haven't taken my physics quiz yet. They took away that lovely old truck with the generator in it that used to sit out behind Guggenheim; Meo has taken over the paper; UFO's have taken over Fleming; Piccioni has taken over Lloyd; and Meo wants me to write a funny article. Ask him what Dr. Dade said when asked what he thought about the math program in the future . . . Now that's funny.

THE CHRISTIAN SCIENCE MONITOR
Printed in BOSTON, LOS ANGELES, LONDON

College Students
Faculty Members
College Libraries

SUBSCRIBE NOW AT HALF PRICE

Clip this advertisement and return it with your check or money order to:
The Christian Science Monitor
One Newbury St., Boston, Mass. 02115

1 YEAR \$12 6 mos. \$6
 COLLEGE STUDENT
 FACULTY MEMBER

THINKING of ?

THINK of TREND Realty

- ✓ buying
- ✓ selling
- ✓ renting
- ✓ income
- ✓ acreage*

* Ask about our choice
Hawaiian acreage at budget prices.

VICTOR M. LOZOYA, REALTOR
26 NORTH LAKE, PASADENA

449-8892
684-2151

CARMELO'S ITALIAN RESTAURANT

THIS AD WORTH 25¢ ON ANY LARGE SIZE PIZZA OR DINNER.
NOT VALID ON WEDNESDAYS. (EXPIRES APRIL 30)
WEDNESDAY SPECIAL: 2 COMPLETE DINNERS FOR THE PRICE OF 1.

Open 11:30 a.m. to 12:00 p.m.
1111 E. Colorado Blvd.

Closed Tuesdays
449-9201



by Bone

Last week's show at the Ash Grove was a refreshing change from the usual slick, Kingston Trio-type groups one usually sees around here at places like the Ice House.

The Bare Remnants Jug Band led off the evening, looking as if they had just come in from a hard day on the north forty. Jug band music is back-porch music; the performers play on anything they can find lying around the house, and the only thing the Bare Remnants were missing was somebody beating on a frying pan.

Floating kazoo

The rhythm section consisted of a washboard on which were tacked a cymbal, a cowbell, two bicycle horns and a bicycle bell. The whole megillah was tapped, scraped, pounded, squeezed and rung by a bearded professorial type with a thimble on each finger — all ten of them. He also occasionally played the harmonica while some of the others alternated on the washboard. For a bass section there were a gutbucket and, of course, a jug, both played by the same Remnant. A guitar and a banjo supplied the actual music; there were also a slide whistle and three or four kazoos floating around.

Number 69

The Bare Remnants' repertoire varied from "a tender love song, Child Ballad no. 369," which turned out to be "Meet Me by the Icehouse, Lizzie" to the Beatles' "I've Just Seen a Face"; they also sang a version of "White Christmas" which was so soft and sickly-sweet that the guy on the washtub bass nearly barfed. The best musician of the group was the banjo player; he was good, but the general run of musical talent was not exactly overwhelming. They didn't make any pretensions, though; they were just there to have a good time (aside from making money).

Doc Watson, one of the most brilliant and talented performers on the folk music scene, carried the second part of the show. Doc plays the harmonica and just about any stringed instrument there is; at the Ash Grove he played banjo, mandolin, and guitar. He was backed up by Fred Price on the fiddle and Clint Howard on second guitar, both of whom have appeared at Newport, separately and with Doc.

Best picker in business

All three are from the Blue Ridge Mountains of North Carolina and Tennessee, and they play and sing mostly old-time mountain music. Clint Howard has the high, nasal voice generally associated with "hillbilly" singing; it was excellent bluegrass, but unfortunately for those who paid to see Doc Watson, Howard carried nearly half the set. Doc himself has a two-fold attraction. He has an extremely good singing voice

which is deep and unaffected, and he is probably the best guitar picker in the business. His playing, especially on instrumental numbers, is just fantastically good; he must be heard to be believed.

The Ash Grove itself is a sort of Amazing Amalgamated Folk Music Emporium and General Store. In addition to musical entertainment, there is a music store which sells guitars, banjos, and miscellany; they also run a folk music school which offers fifteen different courses.

The music itself is top-notch; the performers are generally the big names and the big talents on the folk music circuit (this week's is Phil Ochs). Prices are a little stiff: \$2 for admission and 55 cents for cokes. But if you have a car and can get there, it's well worth it.

Millikan May Be Mountain Made from Molehill

(Continued from page 1)

rately "for the portality, which wasn't in the original contract." The "portality" is the planned extension of the Sloan-Bridge covered walkway. Granger acknowledged that construction was behind, "but we anticipate that we'll catch up later this year."

Granger explained a few details of the library. The black stuff sprayed onto the buried basement walls was "dampproofing." The fiberboard placed against the sides of the library, as the 18-mile 1-foot square column of earth was being replaced around it, "was to prevent scarring the dampproofing." Let there be no wet librarians!

Steam tunnel connections

Physical connection with the

steam tunnels in the region of Kerckhoff has been completed; 5000-volt conduit, to get working power into the Library, is in place leading from Thomas to the Library. Granger sees electrical and steam connections completed in another two months.

As for getting concrete up to the upper stories, an "outside utility elevator" will be added to the Library in the next month. But the iron-hearted workmen are going to have to climb ladders until the fifth floor has been attained, when a personnel elevator will be installed.

One up, one down

Those slots in the east and

west facing walls of Millikan are "for dovetail anchors to hold the granite on the face of the building."

The central core of the Library will house two elevators (one of which will always go up and the other always down), and the west curved facing will house a stairway. Unfortunately, it will not be possible to stare over the railing of the stairs and see a dizzying 144-foot stretch of free vertical stairwell space, because there is to be a solid wall of plaster between the up and down stairways. "No yo-yo's," added Granger, smiling.

We'll see.

One of the Year's Most Important Films

RITA TUSHINGHAM

THE LEATHER BOYS

2nd feature

GINA LOLLOBRIGIDA and ELKE SOMMER

THE DOLLS**STUDENT
RATES****ESQUIRE THEATER**2670 E. Colorado
SY 3-6149 — MU 4-1774**Europe**London, Paris, Madrid, Tangier,
Rome, Budapest, Berlin, etc.Charter flight, \$430. 58-day tour,
all-expense, \$997. Free brochure:
794-5131.**ATC — Professor Warren**
2275 Santa Rosa, Altadena**With this one exception,
GT&E holds the lead in remote control**

We leave it up to the dexterity of youth to manipulate slot cars. But concede nothing to anyone in the matter of making machines act as they should without human intervention...even if they're separated by hundreds of miles.

The lead is supplied by two of GT&E's family of companies. Automatic Electric manufactures the control systems, and Lenkurt Electric the equipment to transmit the control signals over wire

lines or microwave radio. In combination, the systems are used to automate gas and oil pipelines, electric utility complexes, and the operations of railroads.

The CONITEL™ 2000 supervisory and control system—new from Automatic Electric—can report the status of 180 devices in as little as .290 seconds.

Lenkurt's new Journal Data Transmission transmits "hotbox" information instantly so railroad controllers may stop trains before costly accidents occur.

Automatic remote control is just one of many ways GT&E is serving the national interest. Our total activities are covered in a booklet you can obtain from your placement office, or by writing General Telephone & Electronics, 730 Third Avenue, New York, N. Y. 10017.

**CHANDLER'S
PRESCRIPTION
PHARMACY**

Free Delivery

Robert Chandler

1058 E. Green St. — SY 2-2211

185 S. Euclid Ave. — SY 3-0607

Pasadena, California

**GT&E
GENERAL TELEPHONE & ELECTRONICS**

730 THIRD AVE., N.Y. 10017 • GT&E SUBSIDIARIES: General Telephone Operating Cos. in 33 states • GT&E Laboratories • GT&E International • General Telephone Directory Co. • Automatic Electric • Lenkurt Electric • Sylvania Electric