

Has Anyone
Got . . .

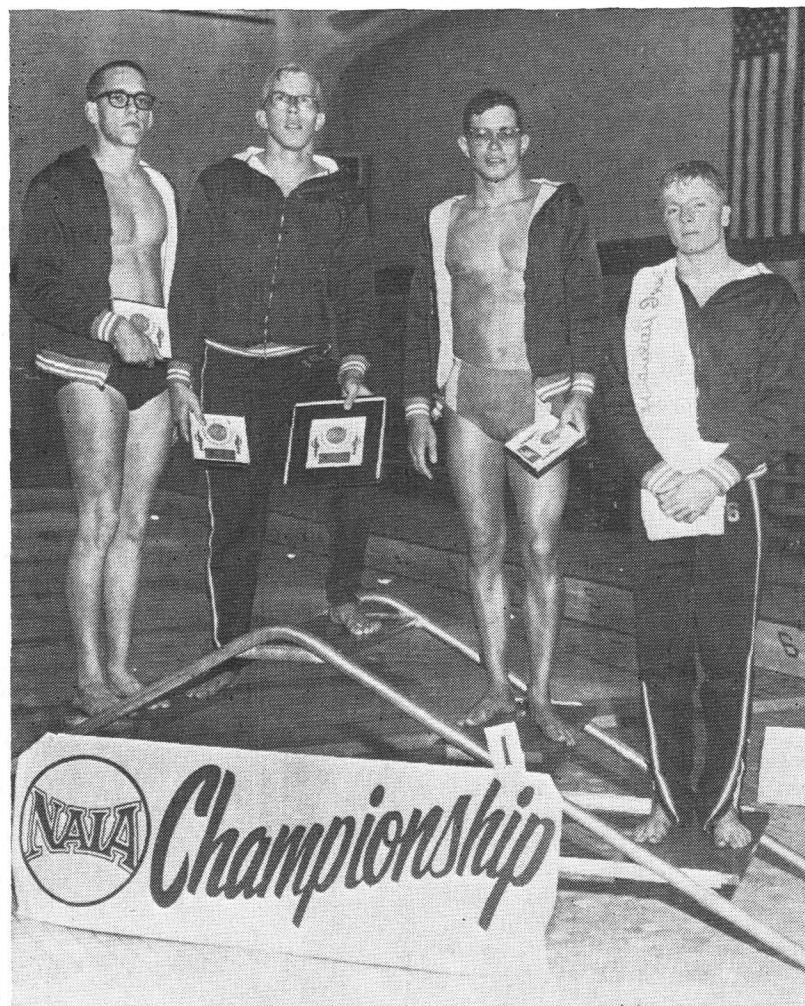
California Tech

Associated Students of the California Institute of Technology

Volume LXX

Pasadena, California, Thursday, April 10, 1969

Number 23



SCIAC Swim Champs: (L to R) Representing Caltech as winners in Swimming Championships are Sheffield, Tyson, Kalisvaart, and Wright.

Ways to Avoid That Two Year "Vacation"

by Dodge

As all the local third term seniors are about to have to go face the world (at least in the person of that universal hate figure General Hershey) there are a few words of wisdom that should be passed on from those who have avoided going before. If your glasses have a correction greater than eight diopters in either lens, or your blood pressure is over 140, you have a legitimate out. Beware, however, of the Los Angeles physical exam people—if you have marginally high blood pressure they will keep taking reading until they get one that is under 140. You can have your physical transferred elsewhere.

If you don't have a legitimate way out immediately, there are a few handy tricks. Braces are expensive and a nuisance, but you can get a I-Y if you have them because they require medical attention that the army does not want to have to provide. If you have a real need for orthodontic work, this is a good time

to have it done.

If you're considering the possibilities of applying for conscientious objector status, DO IT NOW! The people to contact for help and counselling are the American Friends Service Committee on North Fair Oaks. They can be found in the phone directory. The campus YMCA can also give a lot of help and information on draft problems, and put you in contact with other people who can help. CO status does not affect any deferment you might have for physical reasons.

If you're trying non-legitimate dodges for your physical, be careful. People who are caught are frowned on very vigorously. If they are suspicious that you are taking some sort of drug to raise blood pressure or screw up your metabolism generally, they may keep you at the examination center for three days to let it wear off. If that doesn't work for them, they can always call you back for another physical. The

(Continued on page 2)

Notice

DRAFT DODGERS

See page 2.

NEWMAN CLUB:

Caltech's Newman Club will have another mass this Sunday, April 13, in Winnett Lounge at 6:30 p.m. Come pray for victims of the P.M.E.

TOTEM LIVES!

In the Caltech Coffeehouse, Mondays at 9:30 p.m.

EAT WITH GOD AND FACULTY

Part of the Caltech Y's Visiting Theologians Program (April 21-24) is dinners at faculty homes with seminarians. Hosts this year are: Jurg Waser (Tues.), Beach

Langston (Tues.), L. A. ATTORNEY and Y board member Ken Rhodes (Tues.), Richard Hertz (Wed.), and John Benton. Students may sign up in Y office on first-come basis.

CALTECH DEBATERS TO ATTEND FRESHMAN NATIONAL

For the first time in Caltech's History, a debate team will be attending the National Debate Tournament.

Francis Clark & Dick Trtek / their coach Wiley Wright will journey to Northwestern University in Evanston, Ill. to compete in the freshman national debate tournament.

(Continued on page 3)

Like A Bumblebee

PME To Activate Friday

by Ira Moskatek

"Poor Villani, he's a liberal all the time, and has played the Portuguese Oppressors, the South African Oppressors, and Dirkens."

This year, Dan Villani, the above mentioned sufferer gets his chance for glory as Mao Tse Tung when this Year's Political Military Exercise unfolds Friday night.

Set somewhere in Europe, this year's annual PME is headed by Guy Smith, head of Control and Ed Murphy head of Military operations. The scene grows tense at 4:30 Friday afternoon at the distribution of the scenario by the members of Control, the all-powerful governing board which determines the legitimacy of political, as well as military operations.

At seven o'clock Friday policy statements are due in which basic descriptions of the plans of the twenty teams participating in the exercise. An as yet uniden-

tified observer and enthusiastic participant (?) has been heard stating "You have to word it so it says nothing." He's learning fast.

John Hockert and Bob Enenstein represent the United States as Nixon and Spiro T., respectively. Mark Jackson heads the Soviet team. China's team has been temporarily disclosed as realistically representing internal dissent (???) The Reader may extrapolate.

Nuclear War

Play terminates Saturday Evening, or at the commencement of a nuclear war, whichever comes first. Following the success or fiasco Saturday night will be an evaluation session, "It's more on the order of the teams telling what they thought they did and what they thought was done to them," according to Smith.

Smith wrote the scenario along with Denison Rusinow, Ameri-

can Universities Field Staff representative and Eastern Europe expert. Filling out the Control Board with professional expertise are Edwin Munger, Caltech Geography professor; William Griffiths, MIT Eastern Europe expert; James Gould and Diane Cheverton, International Relations experts from Scripps; and Charles Fisher, a Tecker with four year's experience in the PME. Smith has also spent four years participating.

Anyone interested in helping as an interteam messenger should contact John Helm, in Ricketts. The messengers carry the communications between the various teams, and although not at liberty to disclose details have a great position from which to view the action.

Experts have claimed that such an exercise would not function with more than eight teams. Villani summarized the situation: "It's like a bumblebee—it doesn't know it can't fly."

Beckman Hosts Abraham Kaplan on "Loneliness"

Two years ago the Caltech YMCA sponsored Dr. Abraham Kaplan, an internationally known philosopher, currently with the University of Hawaii, as a Leader of America. The California Tech called his visit "an invigorating, rousing success."

Dr. Kaplan has agreed to a return visit next Monday, April 14. He will be sitting-in on an informal, walk-in seminar from 2-4 p.m. Winnett Student Center, and will follow that at 8:30 p.m. with a Beckman talk on "The Meaning of Loneliness." (Dr. Kaplan has remarked that aside from auto accidents, suicides related to the issue of loneliness are the largest cause of student deaths.)

Dr. Kaplan studied philosophy under Bertrand Russell and has taught previously at UCLA, Harvard, Columbia, and Michigan. Among his books are the *New World of Philosophy* and *American Ethics and Public Policy*. Above all, he is enthusiastic about teaching and interaction with students. In 1966, *Time* (May 6) selected him as one of the country's ten best college teachers.

His interests are far-ranging, if not virtually limitless. The Winnett Seminar could be an open discussion on anything from politics, to student activism to sex to sensitivity to philosophy to bridge.

Beckman tickets are limited, so if you are interested, move quickly.

Horny?

There's a PARTY-PARTY tomorrow night at 8:30 in Culbertson.

The ANSWER will be there. So if you really want to do something about your problem, come.

Turn On In Topanga

by Alan Lederman

This is spring term, when a young man's fancy turns from his slide rule, and no doubt you are looking for a punt unique, interesting, educational, fun, and including a possibility of meeting girls. Such a place is "Woody Guthrie's Spot," in Topanga Canyon. Just a quiet outdoor stage near a hill, this is the gathering spot of many hippies, weekend hippies, off-beat intellectuals, young poets and folksingers. When I was there a poetry reading was given by Jack Micheline, a less-than-nice Jewish boy from the Lower East Side who after thirty years now lives in sunny California. His poetry, although somewhat pretentious, was on a blunt but collegiate level. He was at his finest when he used his terse vocabulary, with no shortage of four letter words, to capture the vibrance and sprawl of Southern California. He had been on the road a long time, and his experience gave him some sharp insights into city life. Interspersed between readings a folk group performed, and though they were not notably musically, they were charming nevertheless. There is no admission charge, but donations are requested of bread and potatoes to feed hungry poets, or bricks to rebuild the homes

struck by the winter floods. "Woody Guthrie's Spot" is located on picturesque Topanga Boulevard, about five miles south of the Ventura Freeway. On April 12, there will be a "Quake-In" with lots of poets and folk-singers and many listeners. This is YOUR chance to turn on, and tune in in Topanga.

Draftsman Dodge

(Continued from page 1)

Selective Service has also been known to change their physical requirements—taking thyroid capsules, which used to be an automatic I-Y, is no longer a guaranteed exemption.

All this information is not guaranteed true for any particular draft board, they have the authority to bend regulations a certain amount. This is true especially for such things as II-A deferments—some boards are fairly free with them, others essentially refuse to admit the existence of essential occupations. (One draft board back East reclassified a school teacher every summer until they finally got him at the beginning of September one year.)

And if you prefer cold weather to the tropics, your friendly local Canadian embassy has information on immigration.

DISKover

Beethoven; Symphony No. 9; Fantasia in C for Piano, chorus, and orchestra; Serkin, Bernstein, New York Philharmonic; Columbia M2S-794, \$11.96 Shostakovich; Symphony No. 6; Prokofiev; Scythian Suite; Leonard Bernstein New York Philharmonic; Columbia MS7221, \$5.98.

Leonard Bernstein is engaged in recording a complete set of Beethoven's symphonies on Columbia. With the release of the Ninth symphony he has only the Fourth and Eighth left. Unfortunately this recording was not very successful and can be rated, at most, as "acceptable." The single most objectionable aspect is an extreme lack of cohesion, of ensemble, in playing. Bernstein shows none of the grace or subtlety characteristic of some of the other recordings of this work. There may be some people who prefer this rough approach, but not, we believe, in such exaggerated form.

The tempos of the last two movements struck us as entirely too slow. In the last movement, special attention must be drawn to poor showing of the vocalist soloists and the Juilliard Chorus, for their lack of style, ensemble, intonation, lack of a proper German accent, and to the cellos and basses for their horrible ensemble playing.

At present, there are twenty-four versions of this symphony on discs, and Bernstein's version is not the one to buy. The acoustics of the recording are poor, and, as mentioned above, the recording itself is unspectacular.

The Fantasia in C minor for piano, chorus, and orchestra is an interesting, if somewhat uneven work, which in some ways anticipates the greater Ninth symphony. The performance here is considerably better than of the latter work, in part because of the artistry of Rudolf Serkin. There are six distinct current recordings of this piece, and this is quite possibly the one to get. However, to avoid the rendition of the Ninth, we suggest you get Columbia MS 6616, where it is linked with Beethoven's Piano Concerto No. 3.

The Sixth Symphony is excellent Shostakovich. It opens with a profound largo, followed by two witty and somewhat grotesque movements, a scherzo (allegro) and a presto. Bernstein here is wholly successful, turning in beautiful performances of all three movements.

The Scythian Suite is not really among Prokofiev's best works, but Bernstein gives it an excellent reading, making it sound about as good as is possible.

In sum, buy this record if Shostakovich appeals to you at all.

—Dave Lewin & Greg Rewoldt

At Guilliam's

(Continued from page 1)

about borrowing could be reduced).

Food on your mind? Go talk to Don. He's been to college. He knows how to gripe (and listen) too.

IS THIS YOU

I am opposed to the Viet Nam War (and any such war that is not based upon defense of our country). Please send me application to the Ministry of your church, as well as information as to its beliefs and membership throughout the world.

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Jeff Ochsner

The Right View

by Jeffrey Ochsner

Eds. Note: The Right View is a guest editorial column by Jeff Ochsner which will appear in the California Tech. Views expressed are solely those of the author. The author represents no campus or outside organization or group of people. The Tech takes no responsibility for subjects discussed as they may be of controversial nature. Comment is invited. It should be directed to The Right View care of the Tech office.

It is but a thin line that divides civilization from barbarity and a line easily transgressed. Only a slender link protects and maintains civilization through time—the education of each new generation, and particularly that of an essential vanguard upon whom most of the burden for preserving and developing civilization rests. With the decay of broadly rooted homes and the increasing secularization of churches, more and more the universities and colleges must take the responsibility for training the future leadership. Yet even as the responsibility becomes even greater, we see this last link breaking before our eyes.

The evidence seems plain: campuses across the country fall prey to rampaging SDSers and black militants filled with arrogance, obscenity and a Neanderthal brutality. Yet, these are but symptoms; the problem lies elsewhere. Such demonstrations are but the end result of a disturbance which goes deeper and is much harder to detect. This disturbance lies not in the students, but rather in the faculties and administrations.

The crisis of authority present throughout free society is the underlying cause in a crisis of teaching. Indeed the very will to teach may be destroyed. The existence of authority (as opposed to authoritarianism based on usurpation by force) in free society must be founded on firmly held traditions and moral rights. Leadership must be based on fundamental truths and can only function to preserve such truths.

Is it any wonder then that the will to teach should have been destroyed? When faculties have come to repudiate first the truths of Western Civilization and then the very concept of truth itself, and rushed instead to embrace

an all-encompassing relativism, what else could we expect? It is impossible (no matter how hard one may try) to teach, to educate, unless one has some sense of essential truth to convey. (This does not mean rigid dogmatism.)

The educational process, i.e. the transmission and understanding of truth, must be separate from the world in order to allow concentration on fundamentals. Similarly, it is based on subordination and superordination, not the interaction of equals. If the university becomes fully integrated to the community surrounding it, the required detachment for the transmission of truth will be destroyed by concrete problems of action. (Essential principle tends of necessity to be abstraction from the concrete.) Similarly, if the proper relationship of super-and subordination is lacking then the very concept of teaching becomes impossible.

It is doubtful that present trends could be further from these requisites than they are. The radicalism present in student bodies is but the end result of much deeper problems. What is destroying universities today is not the radicals, but the death of a love of truth among our faculties. With their rejection of the authority of truth and teacher, the faculties have rejected their sole defense against an overwhelming nihilism.

The key, common to both faculties and students, is the concept of relevance. This is not a rele-

vance to wisdom or truth, but a relevance to current affairs, to the outside world, i.e. the subordination of the university to the concerns of the world around it.

This relevance comes in many forms, along different paths. It has taken courses in philosophy and psychology and turned them into courses in adjustment to modern society. No longer are we taught enduring standards of personal conduct, instead we are inculcated with conformity to the passing fad, to the mass mind. Relevance has resulted in the universities promulgating the latest quasi-intellectual novelties, which again are irrelevant to enduring truth. Some colleges (and even high schools) have taken to teaching Swahili as a token of interest in African peoples. It is doubtful that even one tenth of one percent of these graduates will ever use it; and no literature exists in Swahili. Similarly, students have taken up social work and programs of revolutionary action in place of learning to read deeply and write cogently. Education of any type has become secondary to attempts to use universities and colleges to solve social problems. Such problem-solving attempts will never work, but they may destroy the universities. Relevance has yielded in some cases a misplaced vocationalism. Modern technology changes so quickly that the university can never keep abreast of industrial methods. The university should discipline the intellect and provide it with a solid base to understand the technological problems it may face in

(Continued on page 3)

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California Tech

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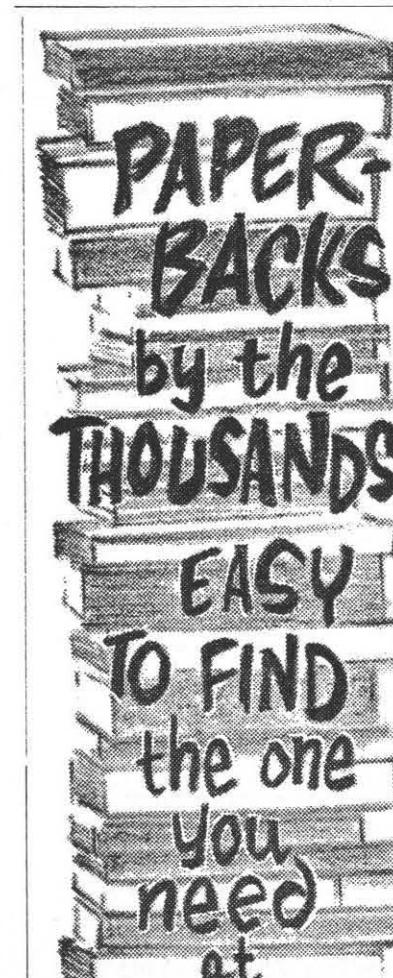
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VROMAN'S
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Jethro Tull Creamy Blues

by David Dixon

"This Was" Jethro Tull (Reprise) \$3.50.

Jethro Tull, a new English group which was formed about a year ago, is being acclaimed as the new Cream. Composed of musicians with jazz backgrounds, the group produces a unique blues sound with a jazz flute occupying the foreground.

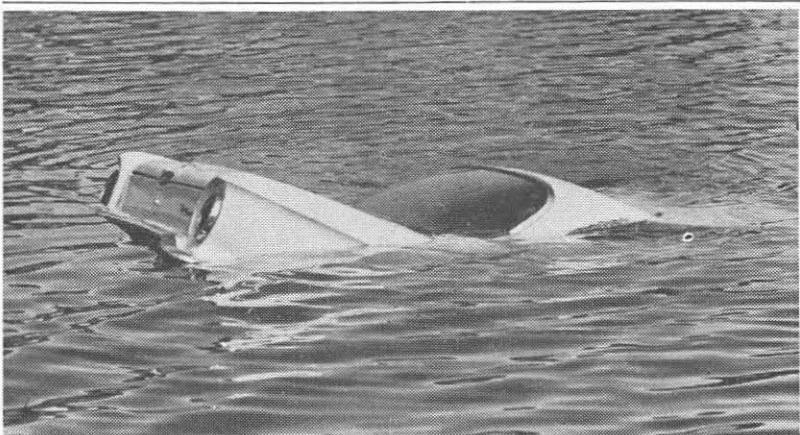
The album "This Was" is well-done overall, but the vocals lack recording depth and are often drowned out by the instrumentals. Each member of the group, however, is an excellent musician and when their voices can be heard they are appealing and interesting in their variety.

Side One is the group's vocal side. "My Sunday Feeling" introduces Jethro Tull with a good rock blues. This song previews the album with its weak vocal and strong lead flute. This song's vocal resembles that of Alvin Lee

of Ten Years After. The lead singer's vocal style switches to a Butterfield style on "It's Breaking Me Up." The rest of the first side is done in jazz blues. Its culmination is in "Serenade to a Cuckoo"—a long flute-led instrumental.

"Dharma for One" is an instrumental with a long drum solo that is well-done. The guitar breaks in and out with short Hendrix-like riffs and accentuates the drums. "Cat's Squirrel" is my favorite and is not at all like the Cream's version. It is a good interpretation and the guitar break in the center is well built up and is very good. Mick Abrahams, the lead guitarist, has developed his own guitar style that is very effective and enjoyable to listen to.

"This Was" is one of the better albums that I have heard and is one that improves with each listening.



Last words of a geo grad: "This talk about L. A. sliding into the seas is nonsense."

MATH TUTORING HELP WANTED

Middle-aged male doctoral candidate needs patient tutor qualified in any or all of the following fields: Differential-Integral Calculus; Matrix Algebra; Linear Programming; Game Theory; Classical Statistics; Bayesian Decision Theory; and Probability Theory. Write briefly summarizing qualifications, hourly rate, evening availability. Address "Tutor", 2190 Courtland Ave., San Marino, 91108.

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Jazz And Folk Fare Offered In "Sweet Child"

by David Dixon

The Pentangle "Sweet Child" Reprise \$7.00 (double record)

The Pentangle's latest offering "Sweet Child," is a record for all jazz and folk buffs. This double record is more of a folk album than their last album. More in evidence this time are the Pentangle's driving forces. Bert Jansch is the first one and his guitar style dominates most of the cuts. The second force is that of the English ballad from which most of the album is based. There is essentially no blues on this album.

Jansch's acoustic lead along with that of John Renborn is usually interesting. However, it can tend to be repetitious and that is a problem with the album—it tends toward repetition. Danny Thomas' string bass is more in evidence on this album and his one solo is excellent. Terry Cox also helps provide interesting rhythms with his drum work.

Perhaps the greatest fault of "Sweet Child" is that Jacqui MacShee does not sing enough. She has a great voice and should have been used more.

The album is recorded half live and the other half in the studio. For its drive and forcefulness, I prefer the live record. Also Miss MacShee sings more on this record and this helps it.

If you enjoyed "The Pentangle" you will surely enjoy this album. It is much better than their first yet there is still room for improvement.

More Notices

(Continued from page 1)

EAT YOUR HEART OUT

This Saturday at 8 p.m. in Culbertson see the West Coast premiere of an award-winning Danish film "Hunger". Refreshments will be served.

WATCH THOSE COGS!

Tour Western Gear Corporation next Thursday, April 17, with the Caltech A.S.M.E. Sign up by Tuesday outside 102 Thomas.

BETWEEN

of peeping Chris.

BANJO

The orchestra for the ASCIT Musical, *The Three Penny Opera*, wishes to borrow a good banjo. Anyone willing to loan one should contact Greg Rewoldt, 239 Page, 449-9833.

GIVE TO ARC'S HAPPENING

The ASCIT Research Center is sponsoring an Education "Happening" for hundreds of educators and innovators on April 19-20. Ideas and materials are solicited for the

500-MAN-COLLEGE, first event in the conference. It'll be made of such things as: cardboard, desks, pencils, glue, milk cartons, paint, people, chewing gum, coloring books, car parts, Beckman auditorium, and magazine clippings. If you want to contribute, please give any weird materials and junk, or wayout ideas, to Dan Nemzer, 25 Blacker, by April 16.

Trackers KO'ed By Absences In CHM Meet

Due to many absences and the loss of two seniors through early graduation, the Beaver trackmen were downed by Claremont-Harvey Mudd (CHM) 86-59.

The largest disappointment was the absence of all the Shotputters. Abatzoglou won the discus with a throw of 125'8", while Beatty was second. It was the same in the javelin, as Jackson threw 161'3" to win while Thoelle was second.

The Beavers were strong in the distance races, as Smith won the 2-mile with a time of 10:32, while Hermeyer followed in behind him. Smith also was third in the mile, which Tardiff won in 4:32. Tardiff also took second in the 880.

As usual, Tarjan won the 440 in 50.8 and anchored the mile relay team to victory. Watkins took a third in the 440, while Tarjan was nosed out for first in the 220.

Butterworth and List were second and third in the 100. Newcomer (Bob) Hall took a third in the 120 highs.

The Beaver long jumpers and triple jumpers are constantly improving. Pool lost the long jump by an inch, while Storno jumped to a third in the long jump and a second in the triple jump.

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CALIFORNIA TECH

CAL

'Gold Fever'

Pravda On Reagan

Translated by William Devereaux from an article entitled "Gold Fever" in March 25, 1969 issue of the Soviet party newspaper "Pravda."

by Yurii Zhukov

An interview was granted to me by the governor of California, Ronald Reagan, a man famous to some extent for his, to say the least, extremely right wing views.

Reagan himself is a former star of the Hollywood movies and television, and in the political life of the USA a great deal depends on the fact that a political figure during his career is held under the searching eye of the television camera. In the course of the pre-election campaign the rival of Reagan, his predecessor in the post of governor, Democrat Brown, attempted to cut him by a caustic question in a television battle. "How are you, an actor, not possessing experience in government service, able to lead the largest state?" But Reagan was not embarrassed. "I played the roles of kings, so that in the role of governor I'll manage somehow," he said with a dazzling smile. In the end the voices of the voters moved over from Brown to him.

So here I am in the consulting room of the governor. A tall, athletic appearance, in an elegant light suit, always with the dazzling Hollywood smile on his face, he is sitting at an immense desk, he leans back in his armchair. Under his feet is a glittering sheet of plexiglass, which covers the carpet. Ronald Reagan receives the representative from "Pravda" extremely courteously — one feels that it gives him pleasure to point out to a Soviet Communist how great and rich his state is, imagining himself, as they like to say here, "a piece of the 21st century."

"I'm very proud of California," says the governor. "This is a classic example of free enterprise. We are in fifth place in the free world according to gross national product."

"In fifth place?"

"Yes. In first, of course, stands the United States," he is still smiling dazzlingly, "then the Federal Republic of Germany, England, Japan, and California. With our twenty million inhabitants we produce as many goods and services as a hundred million Japanese produce. We make forty percent of all the vegetables and fruits eaten by Americans. We make the larger portion of the airplanes and missiles which join the armaments of the United States. We . . ."

I stopped listening to the governor for a minute — I was much startled by his raising of the

question: for him, California is virtually an independent state. Oh, of course, he is a one hundred percent American, and standing beside him on the desk is the stars and stripes flag eloquently reminding one of this. But California in his view is this quintessence of Americanism, and ten percent of the citizens of the USA live here; it is these utterly peculiar Americans pointing the way not only for America, but also for the whole world.

As far back as 1883 one American writer wrote in a magazine. "In almost all respects California reflects the American spirit — only there is more of everything in her. A geranium there grows unbelievably tall and firm, like a small tree; a beet, like a giant watermelon. So unnaturally grand that there are fanatics and bigots, fakirs and prophets, mystics and visionaries."

And here I am holding in my hands an excellent printed "Economic Report of the Governor, 1968" — a booklet courteously presented to me by an assistant of Reagan, and pondering over the cost of it, I am discovering the wealth and that really high standard of technical development of California, of which my interlocutor takes pride.

"California has shared heavily in the activity resulting from the Vietnam war," it says on page vii of this document. "The importance of our defense and space industries has made this state a major source of the armaments for modern warfare. Aerospace manufacturing employment jumped by another 48,000 last year and is still rising. More than one-third of our industrial production is in this field . . ."

Yes, the military-industrial complex in California has really "shared heavily in the activity resulting from the Vietnam war," as the governor expresses diplomatically. We may say, perhaps more coarsely but more precisely: the monopolies of the USA and Californians themselves take part in an active way in the American aggression in Vietnam and assume with the Pentagon the responsibility etc., etc. . . .

Space does not permit further
(Continued on page 5)

Palomar Adds 60 Inch Scope

Heavy metal parts for an advanced new 60-inch telescope are being shipped to Palomar Observatory from Caltech's central shops.

"We've completed our tests in Caltech's shops, and any minor adjustments or modifications can be taken care of at Palomar after the telescope mounting has been installed," said Bruce Rule, chief engineer for the Mt. Wilson and Palomar Observatories.

At Palomar the concrete outside walls for the new observatory building have been poured and the steel dome is being erected.

Rain and Snow

"Installation of the telescope should begin after they've put the dome on," Rule added. "The whole building should be completed around July 1. Our schedule was delayed three or four weeks by rain and snow."

The mirror—a 60-inch-diameter, one-ton disc of fused silica—is being ground to a precise curvature in the optical shops of the Mt. Wilson and Palomar Observatories in Pasadena. The observatories are operated jointly by the Carnegie Institution of Washington and Caltech.

The mirror was cast by the Corning Glass Works, Bradford, Pa., and should be ready by late next fall.

Shining Put-on

The parabolic disc will be aluminized at Palomar. The aluminizing process provides the mirror's highly reflective surface and involves placing the fused silica in a vacuum chamber where aluminum is vaporized. Minute particles of the shiny metal are deposited in a thin layer on the mirror's polished surface, providing the high reflectivity. Fused silica was used as the basic mirror material because it expands and contracts very little with changes in temperature.

The whole instrument—weighing almost 19 tons—will be housed in the three-story observatory building near the bigger dome of the famous 200-inch Hale telescope. The Palomar Observatory site, overlooking Menard Valley in San Diego County, is at approximately 5,500 feet altitude.

Set Me Free

The new telescope is the first major addition to the observatories since the Hale instrument

became operational in 1948. It is expected to be particularly effective for photometric observations that don't require the great light-gathering ability of the 200-inch telescope. The new instrument is also designed for use with advanced new electronic and photographic equipment, and it should free the larger Hale telescope to concentrate on observations of the extremely faint objects for which it was primarily designed.

At Palomar, the new instrument will effectively bridge the gap between the high magnification and small field of view of the 200-inch telescope and the comparatively low magnification and large field of view of the useful 48-inch schmidt telescope camera. The relatively large field of view of the new telescope—1½ degrees, taking in an area slightly more than twice the diameter of the moon—will make it a valuable companion to the schmidt for survey work.

It Gets Larger

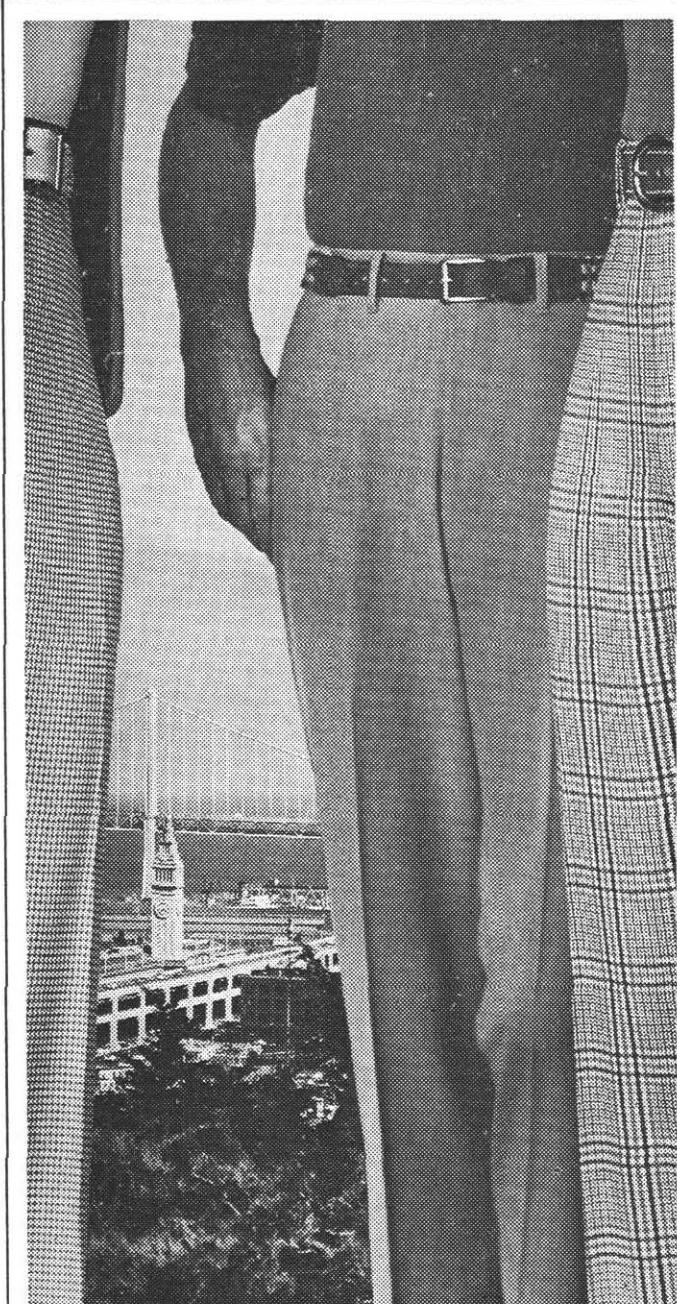
Although the new instrument's telescope tube is only 13 feet long, the use of mirrors extends its focal length to equal that of much larger telescopes. It has a Cassegrain focus—in which the

light is reflected by a mirror near the top of the tube down to a plane just below the primary mirror—for direct photography and photometry; and it has a longer (coude) focus for spectrographic studies.

The new observatory building includes a combination office, library and photographic plate assessment room, and darkrooms for developing plates. Temperature is controlled by an air conditioning system and doubly insulated walls.

Bread for 60

The total cost of the new telescope, facilities and support equipment is about \$1 million. A grant of \$590,000 to the Carnegie Institute from the National Science Foundation covered costs of materials and construction of the telescope itself, while the Oscar G. Mayer family of Madison, Wis., pledged funds to Caltech for the observatory building. A grant of \$125,000 from the National Aeronautics and Space Administration supported preliminary design studies and paid for the 60-inch mirror blank. Planning for the new instrument began in 1962.



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CACTUS CASUALS.

Education

(Continued from page 1)

attend. Some already scheduled are film techniques, dance and expression, the discovery method of learning science, art, math, creativity, and English as a second language.

A keynote address will be delivered at 5:00 in Beckman by Dwight Allen, Dean of the University of Massachusetts School of Education. Dinner will follow on the Olive Walk. Participants are also invited to the performance of The Baker Street Irregulars at 9:00 in Beckman.

On Sunday, task teams will meet to decide on plans for the Summer Institute. Those interested in organizing programs will be continued, leading into the Summer Institute.

The education group is already conducting a pilot program, with

Dear Sports Info Dir.

"Sports" Calls for Beauties

Once again, we're calling for your help in rounding up a series of candidates for our annual Campus Queen contest. As you know, SPORTS publishes over the fall and winter months a roster of pretty coeds gleaned from a national search, and asks its readers to pick a winner. The contests have been well received among our readers and the colleges, over the past 18 years. We hope to continue this success in

students teaching biology to 3rd- and 5th-grade pupils and abstract math and logic to 7th- and 8th-grade pupils. More information about the Happening and the Education Group may be obtained at extension 2470.

the 1969-70 season.

If you have a pretty coed on the campus who will not graduate before June, 1970, please let us know. All we ask is that she have a pretty face and handsome figure. If you have a candidate, would you kindly send us some good, glossy photos of her. We don't want studio-type sophisticated cheesecake or portrait jobs. What we do want are informal photos, with some kind of a campus background, giving us a good view of the gal's face and figure. We'd like her in casual, campus dress. If she is a cheerleader or drum majorette, photos of her in "uniform" would be good. If you could include the vital physical statistics and a brief outline of background data, we would be home free.

The first entry in our contest will run in the September issue (on sale in August). We are accepting entries now and will continue to do so for the next four months.

Many thanks for all your past help and I hope you can supply us with a pretty candidate.

Best wishes,

Bob Rubin, Assistant Managing Editor Sports Magazine

Ed. Note: Coach Emery received this last month. Applicants should not forget vital statistics and confirmation from Institute Physician.

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Trackers Stomp SCC Suffer Loss To Redlands

In two meets last week, the Beaver trackmen ran over Southern California College (SCC) 102-43, while losing a close meet to Redlands, 83-60.

Tim Tardiff led the Beavers with two victories, the first being a fantastic mile in 4:25.1, five seconds faster than his previous best. He then doubled by winning the 880 in 2:03.4 as he overtook Tech's Antaki. Petersen finished close behind in third. Smith captured the two mile in 10:32.2 and was followed by Higgins and Heimeyer. "Smitty" also took a third in the mile.

Even against SCC, Caltech's blatant weakness came through as Hall took a third in the 120 highs while Hurn was third in the 440 intermediates.

Coming through were the sprinters Butterworth and List who took 1-2 in the 220 and List took first in the 100 while Butterworth was third. With Tarjan injured, Watkins won the 440 with a good 51.4 and was followed by Andrew.

The Beavers did well in the weight events but won with very poor marks. Tyler and Holmes placed one-two in the pole vault while Ruth and Blaschko were the same in the shot-put. The Beavers swept the javelin with the team of Jackson, Cox and Thoele who finished in that order. The discus went to Abatzoglou with Blaschko and Beatty following. Fox took first in the high jump with a Beaver season high of 5'8" while Hall was third. Storno was second in the triple jump. The Beavers also started with a victory in the 440 relay and finished with a victory in the mile relay.

Against Redlands, the Beavers fared somewhat worse. They started the meet with a victory in the 440 relay. Tardiff capturing the mile, coupled with Tarjan's victory in the quarter in the time of 50.4, were the only Beaver victories in track. Mikkelsen took a second in the 120 highs while Hurn was third in the 440 intermediates. Tarjan was second in the 220 while Smith and Higgins were second and third in the two mile to round out scoring in the track events.

Stormo and Pool were one-two in the triple jump beating Redland's Proctor and their roles were reversed in the long jump. Abatzoglou won the discus while Ruth and Beatty putted their way to second and third. Jackson took second in the javelin followed closely by Theole. Tyler and Holmes took second and third in the pole vault while Pitachowski captured third in the high jump to finish the Tech scoring.

Pravda's Reagan

(Continued from page 4)

elaboration of the rather extensive discussion which continues in essentially the same vein. If the propaganda necessary for an article of general internal circulation be ignored, one sees in the author a Russian with prudence, tolerance, shrewdness, intensity of purpose, reflected by his breadth of interest and knowledge, and the humility needed to successfully approach new knowledge.

The "Economic Report of the Governor, 1968" is available in Millikan Library.

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Theologians

(Continued from page 2)

Church in Hacienda Heights.

Ellis Keck is working on a Master of Divinity degree at the American Baptist Seminary of the West. He is pastor to youth and visitation at Second Baptist Church of L.A., an almost exclusively Black church.

Rod Seeger is a senior at Pacific Lutheran Theological Seminary. He has worked as assistant minister in a congregation in Castro Valley. His specialty is Pastoral Counseling, and following graduation he will be or-

dained into the professional ministry.

John Spencer is in his second year at Pacific School of Religion. He is an ordained deacon and currently assistant youth minister at First United Methodist Church in Palo Alto. He graduated from U. of C. at Berkeley in electrical engineering and was once a C.O.

For further information about the program (a brochure, etc.), drop by the Y office or contact John Healy in Page House.

Since people must avoid stereotypes and "block" thinking, there is no better place to begin than in theology. Ideas are exploding in this controversial field: What's honest sex? What about situation ethics? Whose heart? Should a minister be a social-political activist? Why God? And how about the stereotyped scientist?

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Springfield's Young Shows Playing, Wiring Talent

by David Dixon

"Neil Young" by Neil Young (Reprise) \$3.50.

The Buffalo Springfield has gone, but Neil Young its lead guitarist and a major force in the group has survived and has gone out on his own. His first album "Neil Young" demonstrates his two main talents—guitar work and song writing. The guitar work is always well-done and most of the arrangements fit well with the style of each song. The songs range from the country-western Springfield style of "If I Could Have Her Tonight" to the Dylanesque "The Last Trip To Tulsa."

One must appreciate Young's voice to enjoy all of the album. In the slower moving songs his voice dominates with its sad, melancholy quality. He almost seems to be dying (or to be more correct, it sounds like a cat is dying).

My favorite songs are "The Loner" and "I've Been Waiting For You . . ." The former is a good rock song with some fine guitar while the second is a song done in a country-western vein. "The Last Trip to Tulsa" is the most symbolic and well-written of his songs. It is a long dream-like epic with many comments on everyone's life. "I used to be a folk singer, keeping managers alive . . ."

The record has some weak spots especially on side two where the introductory instrumental does not fit the album, while "Here We Are in the Years" is poorly arranged, and I did not like his voice. Also, "Trip To Tulsa" is too much like Dylan's "115th Dream," and this detracts from it.

"Neil Young" is an album for all Springfield fans and one for those who like well-written songs with quiet instrumentals.

No Credit Risk

(Continued from page 1)

Russians were through with Romania.

Caltech's PME continued a trend evident in all simulations since mid-1966. Players representing the U.S., whether amateurs as here, or government officials from the State and Defense Departments, or faculty in colleges, have played a passive role, exhibiting what Dr. Edwin Munger has called a "Vietnam Syndrome," an unwillingness to involve the nation abroad.

Dr. Munger, serving in fifth year as faculty advisor to the exercise, and Guy Smith, head of the Control Board and organizer of the game, both stated that they considered this year's game a success although in Smith's words, "We blew a few things." Participants, especially team leaders, are asked to give written criticisms of the game to the YMCA, to be passed on to next year's "God". Aspirants to that position should talk to the Y sometime this year or first term next year.

Who can survive too long
a journey such as this?

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