

Day Campers enjoy their daily visits to the pool. —Photo by Margo Foote

Day Camp Starts 12th Year

The Apaches, Blackfeet, Cherokees and all the rest of the tribes are on the move again on West Campus. Also on hand are the Ants, Beavers, Chipmunks, Ducks, Fawns and Gophers. What this means is that it's Day Camp time again and 174 children of the MIT community are putting all their stored-up energy to good use.

The Camp opened June 28 for its 12th season and, as usual, will run eight weeks, closing on August 20.

The thought of 174 children *en masse* is staggering, but happily, order prevails. The trick is to program enough activities that include a mixture of instruction and entertainment. Planning for the summer program begins the last day of camp the preceding year.

In selecting a staff, previous day camp experience is obviously the best reference. Prospective counselors should be reasonably athletically inclined and proficient in teaching swimming and sailing. The staff includes aspiring teachers, doctors, social workers and others who will profit from day camp experience. With a staff of 30 or more hired by March, the next job, which is the most delicate, is the enrollment.

Because of the camp's popularity throughout the years, filling its quota has never been a problem. In fact, despite the rising costs of operation, the camp has had seasons when the waiting lists could have more than doubled the enrollment. Applications for the Camp are usually distributed to camp alumni and parents throughout the Institute community during the first week in March.

Then, with the Camp filled and the staff hired, the last precamp chore is reevaluating and eventual-

ly partly changing the program of activities scheduled for the campers. If the camp had a motto or philosophy, it probably would be "Specialized instruction in a few specific areas, but general fun in all."

Swimming is the camp forte. In an average day's schedule of five activity periods, swimming instruction is programmed both morning and afternoon. Following the Red Cross courses of instruction, the Day Camp pool staff has achieved remarkable results with both beginning and more advanced swimmers. Other regular camp activities include arts and crafts, rifle, archery, sailing and several competitive ball games.

Directing the Camp for his fourth season is Peter Close, who, during the academic year directs MIT's Sports Information Department. Associate Director is Silvio Vitale, Director of Women's Athletics, who has seen the Day Camp grow from barely 100 campers 12 years ago to its present record enrollment. Bill Kelly, who has had nine years of MIT Day Camp experience, is this year's Program and Counselor Coordinator.

DAY CARE OPENING

The KLH Day Care Center has an opening for a child of an MIT employee. The child should be between the ages of 2½ and six. The cost of taking care of the child, teaching him to paint and taking him to the zoo occasionally is \$42.50 a week, but MIT will provide a subsidy determined by the family's income and size. The center is open from 6:30am to 6:30pm.

For further information, call Sandy Holland, x4276.

Computer Model Predicts New York Heroin Situation

By Steve Grant

Heroin and heroin addiction are among the most complex problems facing cities today. The solutions, if any exist, are just as complex, according to the latest work done by Professor Edward Roberts, '57, of Management and two colleagues.

"Solving the problems of heroin addiction may take a 15 to 25-year effort," he says. "No single high-priority effort, like methadone, police crackdown or education, will solve it alone. And we'll have to do a lot of work changing public attitudes before we can eliminate addiction."

Professor Roberts, Gary Hirsch, '69 (now working for Roberts' consulting firm) and Dr. Gilbert Levin of the Albert Einstein College of Medicine have for 18 months been developing and running computer simulations of the drug situation in a community in the East Bronx. They have spent most of that time drawing up and refining a model for the computer to go on—assumptions about causes of addiction growth and of what will happen if a community adopts certain measures with regard to its addicts. Then, on instruction, the computer shoots back a detailed analysis of how the community's drug situation will unfold over the years.

"But we're wary of the answers we've been getting," Professor Roberts cautions. "The answers are only as right as the model's input relationships. We've been continuously refining our assumptions as we gain new insights into the drug problem."

The three-man team has called on several experts in the areas of drug research, education and rehabilitation to make sure their assumptions are authoritative. Professor Jerry Jaffe at the University of Illinois, just named to head President Nixon's super-agency on drugs, has contributed his expert knowledge. So have Bob Lee, co-author of the definitive book on heroin, *The Road to H*, and other national figures on the drug scene.

This painstaking work, based at the Sound View-Throgs Neck mental health center in the Bronx, has led to a few tentative conclusions. "Methadone has been the most publicized form of solution," Professor Roberts notes. "Would I advocate it? My gut feeling says yes. Strongly? No."

There are several possible drawbacks to methadone, Professor Roberts points out. "More addictive drugs are released into the community, adding to the influx of new addicts. Perhaps even more will be added than rehabilitated, but no one really knows. In addition, any time you lower the threat level of the problem by saying, 'We'll take care of you if you get addicted,' you run the risk of creating more addiction instead of less. And of course it's not clear that replacing a group of heroin addicts with a group of methadone addicts is what you want either."



Professor Edward Roberts.

—Photo by Margo Foote

The importance of the murky area of community attitudes is not lost on the group. Professor Roberts cites a simple example of how a misunderstanding could scuttle a possible solution to the heroin problem. If police cracked down on the illegal supply of the drug, trying to eliminate it quickly and completely, they might well succeed at first. But as the supply was shut off, the price of heroin would skyrocket. Addicts would have to commit much more crime to support their habits, and the resulting public outrage at this increased crime would almost certainly compel officials to stop the crackdown.

"The crime that's associated with heroin addiction is a useful handle for shaping public opinion," Professor Roberts concedes. "Other social problems get tackled mostly by ineffective dogooders. Heroin isn't a crime problem—it's a health problem, a psychology problem and a poverty problem. But crime wholly shifts the way the community looks at the problem."

A number of public officials have already sought out the group's opinions, but Dr. Roberts and his associates still shun the roles of policy-makers. Instead they urge that other groups run their own simulations based on data drawn from their own cities. Professor Roberts says he expects soon to be ready to make conclusive analyses of 15 or so major policy proposals and to start advocating a few. "When we've got enough confidence in our model we'll start doing that."

Frankel to Head Commodity Lab

Dr. Paul E. Gray has announced the appointment of Professor Ernst G. Frankel as head of the interdepartmental Commodity Transportation and Economic Development Laboratory, effective July 1. Professor Frankel succeeds Professor Alfred H. Keil who was recently appointed Dean of the School of Engineering to succeed Dr. Gray who became Chancellor of the Institute on July 1.

A native of Beuthen, Germany, Professor Frankel received the B.Sc. degree with honors from the

University of London in 1948 and the S.M. and Engineer's degrees from MIT in 1960. From 1942 to 1946 he served as an operating engineer in the British Navy. In 1948 he joined the Zim Israel Naval Company as chief engineer and in 1954 was appointed its superintendent of engineering.

Professor Frankel joined the faculty of MIT in 1960 as Assistant Professor of Marine Engineering and was promoted to Associate Professor in 1965 and to Professor in 1968. His areas of specialization include operations analysis and systems control. He is a member of Sigma Xi and received the Gold Medal of the British Institute of Marine Engineering in 1955.

Professor Frankel was one of the organizers of the Commodity Transportation and Economic Development Laboratory when it was established early in 1970. The Laboratory conducts systems analyses and research on the movement of raw materials and processed goods.

Groups of faculty, staff and advanced students work together in the Laboratory on specific real world problems of commodity transportation. Projects include forecasting developments in commodity transportation technology, development of computer-based models to aid in planning and testing transportation systems, building a data center on world shipping systems and research on technological innovations in transport.

Lincoln-MIT Bus Changes Schedule

The shuttle service between the MIT campus and Lincoln Laboratory will operate on its summer schedule from now until September 10.

Leave Lincoln	Leave MIT
8:05am	9:05am
9:05am	10:05am
11:05am	12:05pm
1:05pm	2:05pm
3:05pm	4:05pm

Vehicles leave from the main entrance, Building A, Lincoln, and the Vassar Street entrance, MIT. The ride takes about 45 minutes.

Students Praised as Good Neighbors

MIT students were cited as good neighbors recently by John Lynch, manager of the Allston-Brighton Little City Hall.

Reporting in the *Allston-Brighton Citizen Item*, Mr. Lynch announced the termination of MIT's use of the Hamilton House Motel as a temporary student residence. "We must admit that in the year in which MIT students occupied the Hamilton House we had not one complaint," he said. "It appears that we have a better relationship with our university neighbors across the Charles than those within our community."

The students who occupied Hamilton House last year will return to renovated accommodations in Burton-Conner House on campus in September.



The new staff in the Office of the President and Chancellor includes, left to right: Barbara Gauvin, Susan Easlick, Shelly Moore, Barbara Wollan and Jarmila Hrbek. --Photo by Margo Foote

Students Scan Maine Coast in Search of Sunken Ship

Sixteen of our undergraduates will spend three weeks on Maine's Penobscot Bay this month—but instead of vacationing, they will be working for academic credit.

Some will chart the currents in the bay while at the same time others will search for a sunken ship, all as part of their work in subject 13.90, Ocean Engineering Laboratory.

The Penobscot Bay project is supervised by Professor Damon E. Cummings of the Department of Ocean Engineering and by Professor David Wyman of the Maine Maritime Academy. The Maine Maritime students will join the MIT students in the project.

"The major objective of the course," Professor Cummings said, "is to get undergraduates used to making equipment and working in the ocean." The students themselves have designed and built part of the equipment they will be using.

"Part of the project will be a study of currents and tides in the Penobscot Bay region, which used to be quite a beautiful area," he said. "But pollution from paper mills, chicken processing plants, the city of Bangor, and an oil port have damaged it."

By tracing the pollutants' course through the bay, it may be possible to find easier ways to control them—or at least to keep them away from beaches or clam beds.

While part of the class is chasing pollution, other students will be searching for a boat which sank last fall. The 30-foot Shields class sailboat belonging to the Maine Maritime Academy sank in a storm, taking the lives of four Maine Maritime students aboard. Neither the boat nor the students' bodies were ever found.

The search for the lost boat has actually begun already. Professor Harold E. Edgerton spent the weekend of May 21 with some Ocean Engineering students searching for the craft with side-looking sonar. They found nine "targets," any one of which could be the wreck.

Side-looking sonar, Professor Cummings explains, is better for searching for wrecks because it scans the bottom at an oblique angle instead of looking straight down. The effect is the same as if one were to look out the window of a moving car through a mailing tube. If the tube were aimed at the horizon, the observer could scan much more territory than if it were pointed directly down at the swiftly-passing ground.

The weekend of June 5, Professor Ira Dyer, a visiting professor of ocean engineering, made a more thorough sonar survey of the area where Professor Edgerton found the highest concentration of targets. He located 18 targets in that smaller area.

This July the students will make still more sonar surveys and investigate all the likely targets that turn up. They will use SCUBA gear, grapples, and a diving sled that lets a diver ride through the water like a glider under tow.

In years gone by, there was a great deal of shipping traffic in the Penobscot Bay, and a corresponding number of maritime accidents. "So one of our problems," Professor Cummings says, "is that that bottom has wall-to-wall wrecks."

In addition to a propeller-type current velocity meter which they built themselves, the students will use what Professor Cummings calls the "styrofoam cup technique" to trace the flow of currents in the bay.

A model of ingenuity, the styrofoam cup technique requires about 1000 styrofoam coffee cups and the same number of paper clips and metal washers. The experimental apparatus is made by attaching a paper clip to the bottom of a cup and hanging a metal washer from it in such a way that it will come off when it touches bottom.

The whole assembly is placed in the water and it sinks at a constant speed. When it hits bottom, the washer falls off the paper clip and the cup floats back to the surface, again at a constant speed.

By checking where the cups re-surface, the students will be able to learn the direction and speed of the current.

Pediatric Clinic Now Open to All

The MIT Pediatric Clinic, opened just six months ago, is now offering its services to the entire community, according to Dr. Samuel Clark, associate director of the Medical Department. This will continue to be on a fee for service basis with a charge of \$6 a visit that includes immunizations.

Originally the Clinic's facilities were available only to the children of MIT's student population. Now anyone in the community—student, staff, employee, faculty—can take their young children to the Clinic for well child care, immunizations and sick child care.

During the first six months of operation, the Clinic's facilities were used by 100 student families. Their children, ranging in age from birth to 10 years, were treated for a variety of illnesses and minor complaints.

Dr. Clark describes the Clinic as an escalating operation. "By expanding our services to include the entire community, the demands on our present staff will increase. This increase, in turn, will require us to complement the staff with additional pediatric residents and nurse practitioners. And finally, with a larger staff, the Clinic will be able to offer more services to more people."

The Clinic was organized by Dr. Clark and Dr. Philip Porter, chief of pediatrics at Cambridge Hospital. It is presently staffed by Dr. Porter, who serves as a backup consultant, and Miss Helen Scannell, a pediatric nurse practitioner trained to perform many of the pediatrician's routine duties. Serious cases which cannot be

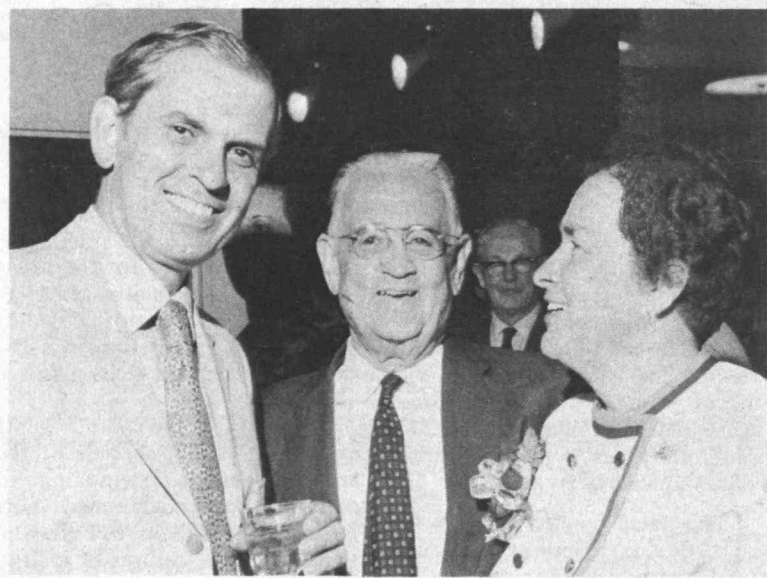
(Continued on page 3)



Kay Chisholm, right, shares a happy reminiscence with her boss, Chief Norman Sidney of the Campus Patrol.

--Photo by Bob Lyon

Retirement parties are frequent occurrences around the end of June each year when many members of the community close out their careers here. These pictures show a few of the individual celebrations which have been held during the past few weeks.



Dean William Pounds, left, and Dr. Charles S. Draper were among those saluting Dr. Harriet L. Hardy of the Medical Department on her retirement.

--Photo by Bob Lyon



Ed Bryan of Lincoln Lab shows his gift from his co-workers.

--Lincoln Lab Photo



Hank Leonard, left, president of the Credit Union, presents a silverstein to Frank Conant, retiring director of Graphic Arts, right, who was the first president of the Credit Union. Looking on is Jim Coleman, also of Graphic Arts.

--Photo by Bob Lyon

TECH TALK

Volume 16, Number 1

July 7, 1971

Editor
Joanne Miller

Staff Writers
Robert M. Byers
Peter M. Close
Steve Grant
Linda Omohundro
Ty Rabe

Business Manager
Paul E. Johnson

Tech Talk is published 50 times a year by the Institute Information Services, 77 Massachusetts Avenue, Cambridge, Mass. 02139. It is distributed free to all members of the MIT community. Additional copies are available in the Information Office, Room 7-111, or in the News Office, Room 5-105, Ext. 2701.

Send Notices for July 15 through July 23 to Calendar Editor, Room 5-105, Ext. 1766 by noon Friday, July 9.

Seminars and Lectures

Introductory lecture on Transcendental Meditation as taught by Maharishi Mahesh Yogi. Sponsored by the Students International Meditation Society. Thursday, July 15, 8pm. Student Center, Room 473. *

MIT Club Notes

Baker House SPAZ Jogging Club **
Jogging around BU and Harvard Bridges. Daily 10:45pm. Baker House, Second Floor West.

MIT Pistol and Rifle Club **
Course in basic pistol marksmanship. Beginning Thursday, July 15 and continuing for five consecutive Thursdays, 6:30-8:30pm. DuPont Gym Pistol Range. Limited to the first 20 adult members of the MIT Community who apply. Fee \$10. For information call Herald Sulahian x3989.

Science Fiction Society *
Every Friday, 5pm. Student Center, Room 421.

Classical Guitar Society **
Summer classical guitar classes every Monday and Thursday, 5pm. Room 1-132.

Outing Club *
Every Monday and Thursday, 5pm. Student Center, Room 473.

Nautical Association **
Basic Sailing Shore School. Repeated every Wednesday throughout the summer, 5:15pm. MIT Sailing Pavilion.

MIT/DL Duplicate Bridge Club **
Every Tuesday, 6pm. Student Center, Room 473.

Movies

War of Nerve *
MIT Chinese Student Club. Chinese film with English subtitles. Friday, July 9, 7:30 and 9:30pm; Saturday, July 10, 2 and 4pm. Room 26-100. Adults \$1.75, children \$1. For information call Ray Eng, x2961.

King Rat **
Lecture Series Committee. Saturday, July 10, 7 and 9:30pm. Room 10-250. 50 cents.

Shanghai Chest and Red Dragon **
Lecture Series Committee. Wednesday, July 14, 7 and 9:30pm. Room 10-250. 50 cents.

Dance

Modern Dance Class **
Intermediate/Advanced. Every Thursday, 5:30pm. McCormick Gym.

Israeli Folk Dancing *
MIT Folk Dance Club. Every Thursday; party last week of each month. 7:30-11pm. Student Center, Room 407. Basics taught from 7:30-8pm.

Friday Afternoon Dance Break *
MIT Folk Dance Club. International Folk Dancing on the oval lawn in front of Kresge Auditorium. Every Friday, 12-1pm.

International Folk Dancing *
MIT Folk Dance Club. Every Sunday, 7:30pm. Student Center, Sala de Puerto Rico.

Dance Development Class **
Every Monday, Wednesday and Friday, 5:15pm. McCormick Gym.

Balkan Dancing *
MIT Folk Dance Club. Basic, Intermediate, Advanced. Every Tuesday; party first week of each month. 7:30pm. Student Center, Room 407. For more information call Jane Weiman, 876-5609.

Square Dance Club *
Every Tuesday, 8pm. Student Center, Room 491. For information call x6213.

Exhibitions

Seymour Lipton: Recent Sculpture *
20 sculptures from the past five years, of nickel, silver or bronze on Monel metal. Sponsored by the MIT Committee on the Visual Arts, courtesy of Marlborough Gallery, NY. Drawings by Seymour Lipton are on exhibit in the Hayden Lobby. 1-5pm daily through the summer. Hayden Gallery and Courtyard, through September 19.

Steamboat Design *
Details of Robert Fulton's steamboat "North River" and other early American steamboats. Hart Nautical Museum, Building 5, First Floor, through the summer.

Deep-Ocean Mining *
Material from Sea Grant Project Office. Hart Nautical Museum, Building 5, First Floor, through the summer.

Main Corridor Exhibitions *
Presented by students and departments. Buildings 7, 3, 4, 8.

Athletics

Summer Rugby *
Every Tuesday and Thursday, 5pm. Briggs Field.

Religious Services and Activities

Christian Bible Discussion Group *
For details contact Professor Schimmel, x6739. Every Thursday, 12:15pm. Room 20B-031.

Islamic Society Prayers
Every Friday, 12noon. Student Center, Room 473.

Roman Catholic Mass
Every Sunday, 11am. MIT Chapel.

The Chapel is open for private meditation from 7am to 11pm every day.

Don't Forget

Join your friends at the Muddy Charles Pub, 110 Walker Memorial, 11:30am to 7:30pm daily. *

*Open to the Public
**Open to the MIT Community Only
***Open to Members Only
****Freshmen interested in departmental program encouraged to attend.

Pediatrics...

(Continued from page 2)

handled at the Clinic are referred to pediatric residents affiliated with Massachusetts General Hospital and Cambridge Hospital.

Many parents, according to Dr. Clark, have reported enthusiastically about the individual care given to their children by the nurse practitioner. He feels that a nurse practitioner, unlike a hurried pediatric doctor, can offer the sympathetic, leisurely care which is so important when dealing with children.

The Pediatric Clinic is located on the first floor of the MIT Infirmary on Memorial Drive. Beginning Monday, July 19, it will be open on Mondays from 8:30 to 11am, Tuesdays from 3 to 5pm, Wednesdays and Thursdays from 8:30 to 10am, and Fridays from 3 to 5pm. Appointments should be made by calling Ext. 1505. In case of emergency after regular Clinic hours, call Cambridge Hospital at 354-2020 and ask for the pediatric house officer.

Summer Chamber Concerts Begin

The Department of Humanities will present *A Summer Chamber Music Festival*, a series of concerts, the next four Tuesday evenings at 8pm in the Kresge Little Theatre.

Professor John Buttrick is in charge of the concert series. He hopes to have refreshments available each time and establish an informal atmosphere for listening. Admission is free.

Next week's program will feature Bach's *Sonata in G* for viola da gamba and clavier, Martinu's *Sonata for Viola and Piano*, Chausson's *Piece for Viola and Piano* and Mendelssohn's *Sonata in C minor* for viola and piano.

The program will be performed by Professor Buttrick, piano, and Philipp Naegele, Professor of Music at Smith College, viola.

Students Get Grants

Eight MIT students who are members of minority groups are among nearly 300 who have recently been awarded grants for graduate study by the Ford Foundation.

Five will be continuing advanced study under previously awarded grants. They are: Michael Hartwell, physics; Nilda Martinez, chemistry; Linda Sharpe, political science; John Williams, chemistry; and Richard B. Winstead, economics.

New grants were given to three students: Shirley Jackson, physics; Ronald McNair, physics; and Valerie B. Williams, economics.

In addition, Michael V. Sawyer, '71, who was recently elected to the Corporation, received a grant for graduate study in physics at Princeton University.

The fellowships average \$5,000 per year and cover full tuition and fees, books and supplies and a monthly living allowance.

Georgia Nagle Helps Refugees



Georgia Nagle.

—Photo by Margo Foote

A quiet ad asking for a piano that a ten-year-old boy could use appeared in the classified section of last week's *Tech Talk*. It soon elicited a response from a caller.

Georgia Nagle, who placed the ad, has made many such appeals to the community for help over the last few years. She devotes a good deal of her time to doing volunteer work for needy people and good causes. "I like to see lights in people's eyes where there were no lights before," she explains.

"Ten years ago a priest in St. Stephen's Episcopal Church in the South End asked for volunteers to help Spanish-speaking people learn English," she recalls. "I volunteered, cautioning that I could do it only one night a week." She was soon tutoring two nights a week, and has continued to do so

year round ever since. She also has found housing, clothing and jobs for people who need them, interceded in educational problems, and provided outings and hospitality.

"There have been some minor miracles through it all," notes Miss Nagle, the secretary in charge of the document room at the Information Processing Center. "Some time ago a girl and her young son needed a place to live but couldn't afford to pay much. A woman called in response to an ad I'd placed in one of the Boston papers and offered them a beautiful apartment in her house for what the girl could pay. She said she was doing it because she herself had been selfish all her life and this was something generous she could do."

Many people at MIT have generously responded to Miss Nagle's requests, volunteering as tutors, donating clothing, books, games, etc., and sometimes even delivering things to the place of need.

Her concern for Cuban refugees and other people to whom she has lent a helping hand has even taken up her vacation time. "It has been wild and wonderful," she says. "I have made countless friendships and my life has been expanded beyond my imagining."

Miss Nagle continues, "People new to our country need our help and hospitality, but in the inner city, many native-born also, especially children, are in need and danger, and by being aware, one finds many opportunities for service."

