# The Tech

1861 — MIT Centennial Year — 1961

Vol. 81, No. 15 Cambridge, Mass., Friday, September 15, 1961 5 Cents


# Frosh Arrive, Head For Beach

## New Freshmen Alleged Smarter, More Versatile Than Predecessors

Over 900 entering freshmen flowed into Cambridge this week as MIT welcomed the class of 1965 to Freshman Weekend, Rush Week, and the opening of classes Tuesday.

Statistically, the new crop of frosh are smarter and more versatile than any of their predecessors at the institute. While the mean SAT scores do not differ greatly from those of the preceding class of 1964 (about 650 verbal, 728 math), the number of students granted degree credit at entrance (advanced placement) rose nearly 30 per cent from that of the previous class. Some 196 students will be able to advance-stand one or more subjects which their contemporaries will have to take.

The freshmen, who are entering during the institute's centennial year, come from more than 700 secondary schools in 47 states and 25 foreign countries. According to the new director of admissions, Roland B. Greeley, 85 per cent of the freshmen were in the top tenth of their secondary school classes Only 36 new students have parents or grandparents who attended MIT. Additionally, 25 new coeds will grace the campus this year.

## '65 To Meet Activities

Tomorrow morning at 10:30, buses leave Kresge Auditorium for the annual freshman picnic, to be held at Wingaersheek Beach. The event is part of Freshman Weekend, which began yesterday and continues through 5:00 P.M. tomorrow. Tonight from 7:45 to 11:00, upperclassmen will demonstrate various extracurricular activities at the "Activities Midway" in Rockwell Cage, in an attempt to interest freshmen in their respective groups.

Sunday's program commences with religious services in the MIT chapel for students of all denominations. From 3:30 to 5:30 on Sunday, the traditional reception for freshmen and their parents will be held at the home of President and Mrs. Stratton on Memorial Drive. Monday morning some 6300 undergraduates and graduate students will register for the 1961-62 academic year.

Dr. Stratton opened Freshman Weekend yesterday with an introductory greeting to the class of '65. Meetings with faculty advisers followed. Guided tours to various points of interest around the Institute were conducted.

The three session program entitled **Introduction to Technology** was launched this morning under the direction of Kenneth R. Wadleigh, Dean of Student Affairs. Professor Hans Mueller spoke on the subject of optics while Professor John Wulff discussed the superconductivity of alloys. The series is designed to acquaint freshmen with various aspects of research at MIT.

During the afternoon session, Dr. Edwin H. Land, president of the Polaroid Land Corporation, elaborated on some recent experiments in vision. The second speaker was Dr. Harold E. Edgerton discussing stroboscopic light and its use in technical fields.

The third and final session will be held tomorrow morning. The speakers will be Professor Howard W. Johnson and Professor Ascher H. Shapiro. Professor Johnson will talk on opportunities in international management; Professor Shapiro's subject will be fluid mechanics.

# Fraternities Pledge 281: Down 33 From Last Year

Almost two thirds of the class of 1965 toured MIT's twenty eight fraternities during Rush Week 1961. 556 entering freshmen registered at the Interfraternity Conference clearing house for Rush Week, from Friday, September 8 through Wednesday, September 13. The figure represents a surprising drop of forty one from last year's mark of 597, the highest number of freshmen at Rush Week since 1958.

By midnight Wednesday night, 281 freshmen had pledged fraternities, as compared with a total of 314 last year. The breakdown by houses runs as follows:

| | |
|---|---|
| Alpha Epsilon Pi | 16 |
| Alpha Tau Omega | 12 |
| Beta Theta Pi | 5 |
| Chi Phi | 7 |
| Delta Kappa Epsilon | 9 |
| Delta Psi | 3 |
| Delta Tau Delta | 9 |
| Delta Upsilon | 7 |
| Kappa Sigma | 10 |
| Lambda Chi Alpha | 14 |
| Phi Beta Epsilon | 8 |
| Phi Delta Theta | 12 |
| Phi Gamma Delta | 12 |
| Phi Kappa Sigma | 13 |
| Phi Kappa Theta | 13 |
| Phi Mu Delta | 6 |
| Phi Sigma Kappa | 9 |
| Pi Lambda Phi | 8 |
| Sigma Alpha Epsilon | 16 |
| Sigma Alpha Mu | 15 |
| Sigma Chi | 7 |
| Sigma Nu | 7 |
| Sigma Phi Epsilon | 14 |
| Tau Epsilon Phi | 16 |
| Theta Chi | 10 |
| Theta Delta Chi | 11 |
| Theta Xi | 4 |
| Zeta Beta Tau | 9 |

## Director of Athletics Richard Balch Resigns, Ross Smith Is Named

President Stratton has announced the appointment of Ross H. Smith as Director of Athletics, succeeding Richard L. Balch who had served in that post since 1955. Balch resigned to accept a position with Stanford University.

A 1936 graduate of Springfield College, Mr. Smith has been active in coaching and athletic administration at both the high school and college level, his most recent position being that of assistant athletic director and director of physical education at Cornell University. Mr. Smith has an outstanding reputation as a teacher, coach and administrator.

Ross H. Smith

Mr. Smith joined the athletic staff at Cornell as varsity soccer and freshman basketball coach in 1947. He was named head coach of lacrosse in 1949 and continued to coach this sport when named assistant athletic director and director of physical education three years later.

Lacrosse teams under Coach Smith compiled outstanding records, finishing second in the Ivy League in 1958, 1959 and 1960. His soccer teams won the league championship in 1948 and 1949, and the 1948-49 freshman basketball team which he coached won all 16 of its games for the best rec-

(*Please turn to page 8*)

## Building 7 Distribution

# Month-Late Catalogue Out Today

The MIT General Catalogue was issued today, over one month late.

John J. Mattill, director of publications, anounced that copies of the catalogue would be placed in Building 7 during the weekend.

Normally the catalogue is issued during the first week in August, in time to be sent to students before they are required to submit registration material. For the past two years, however, the catalogue has been late.

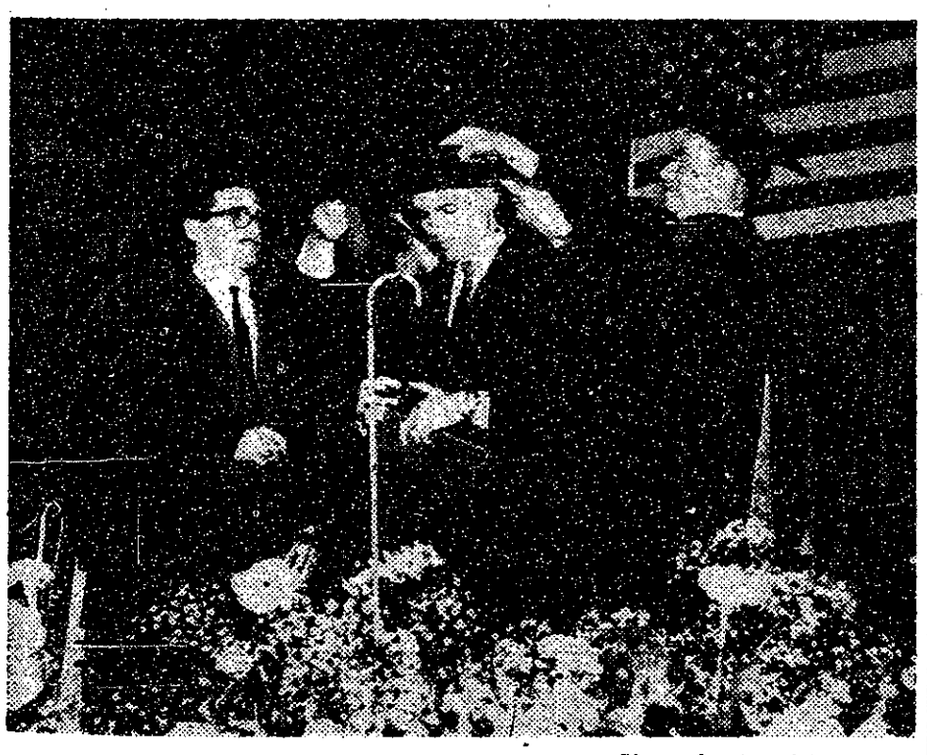
When asked the reason for this, Mattill stated "I have underestimated the importance of setting up a rigorous schedule, and of making it stick". He added that even though he realized this need, the catalogue still might be late again this next year.

This year the catalogue was not ready to go to press until August 30. Delays at the printer held up actual printing until last Monday night. The faculty received their copies yesterday and they were made available to students today.

This year's delay was caused also by the fact that decisions affecting the catalogue were made by the faculty and administration as late as mid-June. Mattill pointed out that the freshman seminars, for example, were not approved by the faculty until mid-June and that many sections of the book were tied up by this late decision.

Thirty-eight thousand copies of the catalogue have been printed at a cost of over $30,000.

# Commencement Highlight: Blind Student Gets Ph.D.



— Photo by Boyd Estus '63

James R. Slagle receiving his doctoral hood at MIT's graduation exercises in June.

James R. Slagle, blind since high school, received his doctorate in mathematics as the MIT graduation assemblage showed its admiration with sustained applause in Rockwell Cage June 9. The 27-year-old graduated from St. John's University, Brooklyn, and received his master's degree from MIT. All his efforts have been distinguished by extremely high scholarship.

Slagle was one of four blind students who received awards from President Eisenhower for outstanding scholastic achievement. During the past two years he worked at Lincoln Laboratory.

Slagle and his wife have two children.

**For More Graduation Photos And Articles . . . . See Page 3**

## *The Tech* Announces New Staff Meeting On Tuesday Evening

Prospective *The Tech* staff members are urged to attend a meeting at 7:30 p.m. Tuesday, Sept. 19, in *The Tech* offices on the second floor of Walker Memorial.

*The Tech* will next publish Wednesday, Sept. 27. Editorial, entertainment and sports makeup will be the previous Sunday afternoon, news makeup Monday evening.

The expansion of *The Tech* which began last spring will continue this year, bringing with it opportunities for persons with journalistic interests. Every staff will continue increasing in size. The editors of *The Tech* are most interested in meeting persons anent joining the staff.

## Acquaintance Dance To Be Next Friday

An All-Tech Acquaintance Dance will take place Friday, Sept. 22 from 8 to 12 p.m. Location is Walker Memorial, MIT, and admission is $1.25. This event will feature music by George Graham and is an annual occurrence sponsored by the Technology Catholic Club.

## *DU House Remodeled*

# SAM, LCA In New Homes

Three of MIT's twenty eight fraternities boast virtually new houses this year. Sigma Alpha Mu and Lambda Chi Alpha both moved to larger quarters, while Delta Upsilon underwent extensive renovation and modernization.

Sigma Alpha Mu moved from 222 Babcock Street in Brookline to 34 The Fenway in Boston. When renewal of their yearly lease on their old house was denied to permit selling the house its new and larger house. The new house sleeps twenty five their new and larger house. The new house sleeps twenty five as opposed to nineteen in the old. Money for the new house came from a standing fund and from a loan from the SAM national.

Lambda Chi Alpha left their old location at 441 Beacon Street for a larger house at 99 Bay State Road. The house is six stories high and comfortably sleeps fifty. The home, which once belonged to the Saltonstall family, boasts a dining room modelled after the Captain's dining room on the Lusitania. The Lambda Chi alumni handled the financing for the new house ad disposal of the old.

Delta Upsilon remained at 526 Beacon street, but underwent a $90,000 remodelling completely financed by alumni donations. High points of the house include completely redone commons rooms, kitchen and bathrooms, new plumbing and wiring, and new furniture.

# MIT Solar House Closes; Successful Experiment Over

Sunshine hitting its roof can at present provide a three-bedroom suburban house in New England with two-thirds of the energy required for heating and domestic hot water supply. However, under present market conditions, the cost of mechanical equipment required for solar heating remains higher than can be justified by fuel savings.

This is one of the conclusions reached after three years of operation of MIT's Solar House IV, in Lexington, Massachusetts. They were reported by Professor Albert G. H. Dietz at the recent United Nations Conference on New (Non-nuclear) Energy Sources in Rome, Italy. Dr. Dietz is professor of civil engineering and a member of the Space Heating Committee of the MIT Solar Energy Conversion Project.

**Built in 1958**

Built in 1958 specifically for experimental work in solar energy, the house has yielded all the scientific information it can provide and will now be converted into a conventional home and sold. The most valuable contribution of the house, Professor Dietz reported, was the engineering knowledge gained in constructing and operating a complex solar heating plant.

**Roof Is Energy Collector**

Architecturally, the most striking feature of the house was the solar energy collector which formed all of the combined roof and wall of the south side of the building. Set at an angle of 60 degrees, the 16-by-40-foot collector consisted of two layers of glass over an identical area of thin aluminum sheet painted black. Water pumped through copper tubes attached to the aluminum sheet was heated by trapped solar energy and then stored in a 1500-gallon tank in the basement. Hot water from the tank was pumped through a heat exchanger to transfer heat from the water to air. The warm air was forced through ducts to heat the house, as in conventional heating systems. Incoming cold water from the public water system was heated for domestic hot water supply by being pumped through coils in the storage tank.

In operation, temperatures within the house were very strictly maintained and the occupants at no time accepted any compromises with the comfort levels or volume of hot water use that Americans have come to expect. The house was occupied by the chief engineer of the project, Claremont D. Engebretson, former research associate in mechanical engineering, and his family.

**Detailed Records Kept**

During the three-year period, Engebretson kept a detailed record of performance of the system and gradually improved the installation until, in the 1960-61 winter, the heating plant operated at peak efficiency and satisfied the predictions of its designers.

The flow of controlled energy in the Solar House system was distributed on a fully automatic basis. Regulating devices instructed the system exactly when energy could be picked up from the sun at the collector-roof and told the auxiliary fuel-burning heater precisely how long to wait before coming to the aid of a depleted store of solar energy.

**Complex Piping Needed**

To accomplish this required a greater complexity of piping, valves, pumps and especially control devices than is ordinarily found in a small building, and maintenance of such a system is also an economic factor in solar heating. The experience gained in coordinating these elements into a complete system capable of the most careful custody of small amounts of energy was the most profitable result of building and operating the house, Professor Dietz reported.

Although the Lexington house is the first complete suburban house built by MIT, it is officially Solar House IV — the fourth in a series constructed since 1938.

Leads II, XIII

# Stever Heads 2 Depts.

Dr. H. Guyford Stever is heading two departments—those of Mechanical Engineering and Naval Architecture and Marine Engineering—under a appointment announced during the summer by President Julius A. Stratton.

Dr. Stever, an authority on many aspects of aeronautics and space technology, has been professor of aeronautics and astronautics since 1956 and was recently elected president of the Institute of the Aerospace Sciences. He served as associate dean of the School of Engineering from 1956 until 1959.

In his announcement, Dr. Stratton said: "The appointment of one man to head two departments is not without precedent at MIT, and it in no way means that we are combining the Department of Mechanical Engineering with that of Naval Architecture and Marine Engineering.'

H. Guyford Stever

In the Department of Mechanical Engineering, Stever succeeds Professor Joseph H. Keenan, whose work in thermodynamics has won him international distinction, and who will now devote full time to teaching and research. In the Department of Naval Architecture and Marine Engineering he succeeds Professor Laurens Troost, who retired in 1960 to return to his native Holland.

Dr. Stever is a fellow of the American Academy of Arts and Sciences and the American Physical Society. He is member of numerous other professional societies.

In 1955 and 1956 Stever served as Chief Scientist of the U. S. Air Force and received the Exceptional Civilian Service Award for his work. He is now chairman of the National Aeronautics and Space Administration Research Advisory Committee of Missile and Space Vehicle Aerodynamics, vice chairman of the Air Force Scientific Advisory Board, and a member of the scientific advisory committee to the Committee on Science and Astronautics of the House of Representatives.

# Stoddard And Kispert Named Vice Presidents Here During Summer

The appointments of Philip A. Stoddard as Vice President, Operations and Personnel, and of Malcolm G. Kispert as Vice President, Academic Administration, were announced this summer by President Julius A. Stratton.

Stoddard, who became Vice Treasurer in 1957, is an MIT graduate and began his administrative career here in 1947. Kispert, who holds S.B. and S.M. degrees from MIT in Aeronautical Engineering, had been Administrative Vice Chancellor since 1957.

Also announced during the summer were the elections, to the MIT Corporation, of three prominent business and industrial leaders. Elected to life membership were Edward J. Hanley '24, president and director of the Allegheny Ludlum Steel Corporation, and Robert A. Lovett, former Secretary of Defense and a New York City bank executive.

Uncas A. Whitaker, president, treasurer and director of Aircraft Marine Products, was elected to a special term membership.

# Annual Guidance Meeting Will Stress Admissions

For the sixth consecutive year, the Institute will have as its guests over one hundred guidance counselors. The conference, known as the Secondary School Guidance Conference, will take place October 2 and 3. Conference will come to Cambridge from as far away as Alaska.

The conference program is intended to provide a valuable exchange and interchange of information, ideas, and procedures with a general emphasis on the admissions process.

The conferees will meet in informal session to hear from representatives of several schools and attend meetings dealing with financial aid, modern languages, advanced placement, and new techniques in science and math teaching. They will have an opportunity to meet many of the faculty as well as students who may be presently attending MIT from their schools.

For the first time, an opportunity has been provided for MIT students interested in teaching as a career to meet with the principals and headmasters attending the conference and to learn at first hand of the opportunities available.

All students interested in this phase of the conference should contact the Admissions Office, 7-103.

# Prof. Schwarz Dead; Was Textile Specialist

Prof. Edward R. Schwarz, head of the division of textile technology in the Department of Mechanical Engineering, died July 27. He had been a member of the MIT staff since 1922.

Prof. Schwarz, one of the world's leading textile engineers, graduated from MIT in 1923. He became a professor in 1937 and was placed in charge of the Samuel Slater Memorial Research Laboratory when it was established in 1945. He was a member of numerous textile societies and had been honored with two important medals.

# Grad Student's Corkscrew May Solve Plasma Problem

A new kind of magnetic bottle incorporating a corkscrew shaped field will be built here this fall to test a newly suggested way of removing a major obstacle to harnessing thermonuclear energy.

Proposed by a graduate student, Air Force Capt. R. C. Wingerson, it will be built by another graduate student, James S. Tulenko, under the supervision of David J. Rose, Professor of Nuclear Engineering. Prof. Rose believes Capt. Wingerson has found a solution to a problem with which nuclear engineers have grappled in vain for the last 10 years.

**Superior Plasma Container**

Thermonuclear reactions occur between the nuclei of isotopes of hydrogen at extremely high temperatures. In the sun and stars, gravity confines this material (plasma); on earth, confinement can be achieved only by magnetic fields. Magnetic containers of various shapes are being studied in this country and abroad. One serious difficulty is that the better the container is, the harder it is to put the plasma inside.

One important class of bottle consists of a long pipe, the walls of which are a magnetic field created by an electrical coil around it. The ends of this pipe are open but "mirror" magnetic fields are set up there to serve as stoppers. Capt. Wingerson has found a way of filling the bottle with plasma, by using corkscrew magnetic fields. This structure, his work indicates, would be much more effective than configurations proposed hitherto—for example, the undulating field investigated two years ago by the Soviet physicist, K. D. Sinel'nikov.

In effect, his device would be similar to a lobster trap. It would be easy for a particle to get into the thing but difficult for it to escape because of the trap's geometrical configuration. The walls of this trap are the complex magnetic fields created by the axial coil and the mirrors—and the entrance is determined by the corkscrew fields.

**Experimentation To Begin**

Theoretical studies made by Capt. Wingerson have reached a point where definite predictions of the behavior of charged particles in the corkscrew structure have been made, and designs for a major experiment are underway. The ionic charged particles that must be confined for a thermonuclear reaction to occur are relatively heavy, and would necessitate a structure between 50 and 100 feet long. The experimental scale model being built by Tulenko will operate with electrons, which are much lighter than the ions. As a result, this scale model will have to be only eight feet long.

Large scale experimental machines of many types have already been built in this country, England and Russia in the hope of achieving thermonuclear reactions. Plasmologists here, however, have maintained that the first step should be to acquire more fundamental knowledge of the nature of plasmas, their instabilities and their behavior in magnetic fields. This basic research has led to the discovery at MIT of the Wingerson corkscrew effect and many other important plasma phenomena. Such studies will be extended with Tulenko's scale model while other graduate students are dealing with other aspects of thermonuclear problems.

Preliminary research inspired by Capt. Wingerson's discovery already is under way in the Atomic Energy Commission's Los Alamos Scientific Laboratory and was to be described at an international conference on plasma physics and controlled nuclear fission research in Salzburg, Austria. MIT was to be represented at that conference by Professors William P. Allis, Sanborn C. Brown and George Bekefi.

# The Tech

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| | |
|---|---|
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## To Freshmen

By the time you read this, you will, as a freshman have been thoroughly talked to, talked at, and talked about. Everybody, from the MIT Admissions Office, to President Stratton, to the fraternities, to your own family and friends will have had something to say to you about MIT. You will have been told that MIT is difficult to adjust to, that it is not difficult to adjust to, that "Tech is Hell," that it is a wonderful place, hat it is the best educational institution in the country, that it is an awful factory. You will have heard about the all-important "cum," about the terrors of the weekly quiz, about merciless instructors, about impossible labs.

Once a year, the Editor of *The Tech* has the dubious privilege of looking down from his not very high perch above the world and adding his own advice to all that has come before. It is doubtful whether much that a freshman hears really sinks in, or whether that advice which he does absorb is of any value to him. MIT being what it is however, people will never cease to attempt to explain it to newcomers.

Perhaps the first thing that should be said is that any impression formed of MIT this week will be different from the one you have next week, or nxt month, or four years from now. Everybody goes through varying periods of elation and depression, particularly in a wholly new environment, quite different from anything most freshmen have ever before experiencd.

A good many freshmen suffer from what has been called "Novemberitis," an epidemic of wholesale gloom that pervades the class the last few weeks before Thanksgiving, when it seems like years since the start of the term. Rest assured, the world will eventually look considerably brighter.

Life for a freshman at MIT tends very much to become a matter of week-to-week existence, where one cannot see anything beyond the next quiz. This weekly routine makes things often seem an unending succession of disasters. A freshman section leader once held a discussion with his section mid-way through the term and discovered to his, and everybody else's surprise, that almost every member of the section felt he was doing very poorly and actually in danger of flunking out. Bear in mind that things are seldom as bad as they seem. This platitude merely indicates that somewhere, someone is much worse off than you are, and that by comparison to the class as a whole, you may be doing quite well.

There is a very real problem regarding the state of mind of the freshman who enters from the top ten percent of his high school class and suddenly finds himself doing C work at MIT. It was once discovered, as you have now undoubtedly been told, that ninety-five percent of the entering freshmen of the class of 1961 expected to be in the upper half of the class. This is clearly an impossible situation, but an entirely commendable group aspiration. It is perfectly obvious however, that on the order of 400 members of the class are going to have some badly crushed ambitions. To those who do end up further down the line than they would have liked, we say remember that you are competing with some of the best students in the country, and any level of achievement is commendable. We are not encouraging complacency, but trying to prevent discouragement with something less than the very best. It should be said furthermore, that some people have to work harder than others to get the same quiz grade. It is very often the "plugger" who comes out on top in the end.

Finally, some parting words. One of the favorite pastimes of upperclassmen, and especially of sophomores, is telling freshmen, and each other, what an awful place MIT really is. Don't be deceived. Admittedly, some of the criticism levelled at MIT by students is justified. But the orientation of freshmen is something that most students aren't very good at, and much that freshmen are told isn't quite balanced. Despite what many of them say, most MIT students believe they are getting one of the best educations available, and their protests to the contrary, wouldn't be anywhere else. MIT has some of the most loyal alumni in the country.

MIT is pretty much what you want to make it. Do things, talk to people, and don't let studying become your entire world. Boston has more than its share of girls. Join an activity. If you do have complaints (and you will), tell people about them (not just your friends), and by all means write letters to *The Tech*. Best of luck in the next four years.

## Snow On Ethics

The writings of C. P. Snow have recently been very much the fashionable topic for discussion both in literary and in scientific circles. The *Strangers and Brothers* sequence of novels and the other, non-fiction titles, such as *The Two Cultures,* have treated the scientific world from a unique vantage point. Snow has undeniable literary powers, and his knowledge of the scientific world certainly has the ring of truth.

Much of the attention that has been focussed on Snow has been due to the book *The Two Cultures* where he dealt with the gap that exists between the traditional world of "liberal arts" and the world of science and technology. More interesting to MIT, which despite strenuous efforts by certain people, remains considerably more a technological world than a universal one, is Snow's knowledge of the public and private personalities of the scientist.

In one of the novels of the *Strangers and Brothers* sequence, *The New Men,* Snow examines not only the private lives of the scientists and engineers, but also, more important, their public and private ethics. *The New Men* is a novel of those who contributed to the making of the atomic bomb during the Second World War. Things may not have happened precisely as Snow depicts them, but that is irrelevant, for it is easy to imagine that this is the way the bomb was built.

What is interesting to contemplate is how the scientist being educated today might react under the circumstances of twenty years ago. How many graduates of MIT and other universities go to work without a second's hesitation for what is termed in some quarters the "munitions lobby?" Nuclear weapons and missiles have become very much a fact of life, but most students default on the question of what is to be done with them.

Snow has several of his scientists seriously contemplate making desperation, self-sacrificing gestures to prevent the use of the atomic bomb. Today, the immediate military offspring of the bomb support the bulk of the scientists and scientific research in this country. What has happened to the initial efforts of the atomic bomb scientists to restrain their governments from ever using the bomb? Too many people today plunge into the weapons race, their only concern being that of finding the particular aspect supplying them with the greatest remuneration.

At one point in his novel Snow writes of a protest meeting called at the British atomic research laboratories:

"It struck me that all the top scientists at Barford were present, but none of the engineers. As an outsider, it had taken me years to understand this rift in technical society. To begin with, I had expected scientists and engineers to share the same response to life. In fact, the difference often seemed sharper than the difference between the engineers and such men as Hector Rose (bureaucrat).

"The engineers . . . the people who made the hardware, who used existing knowledge to make something go, were in nine cases out of ten, conservatives in politics, acceptant of any regime in which they found themselves, interested in making their machine work, indifferent to long-term social guesses.

"Whereas the physicists, whose whole intellectual life was spent in seeking new truths, found it uncongenial to stop seeking when they had a look at society. They were rebellious, questioning, protestant, curious for the future and unable to resist shaping it. The engineers buckled to their jobs and gave no trouble, in America, in Russia, in Germany; it was not from them, but from the scientists, that came heretics, forerunners, martyrs, traitors."

There is much fatalism in the world today; fatalism regarding the possible effects of the use of weapons created by science. It would be a major catastrophe if the people who are continuing the creation of these weapons lose sight of the consequences of their work. They may, in truth, come to the conclusion that they are right in helping to create instruments of mass destruction, but unlike Snow's engineers they must never conclude that it is not their right, and duty, to question the moral and ethical implications of their work. It is as much, or more, their right and duty, as it is the duty of the people who run our government, military forces, and armaments industry.

America has a tradition of engineering; MIT began as an engineering school. Perhaps, despite all the abstraction that has been built into education, the mentality, the intellectual content remains that of the engineers whom Snow describes. We wonder if something is not lacking in present day education, immersed as it is in the brute practicality of the Cold War, that should instill in newly trained engineers and scientists a greater sense of social responsibility.

## Kibitzer

By Elwyn R. Berlekamp '62

This hand, originally played last June at the Easter Regionals in New York, represents one of the most interesting studies in the warfare of psychological bidding I've ever encountered.

I sat South and opened with 1♣. Opponent overcalled 1♥, partner 1♠, and I announced my surplus values with a cue bid of 2♥.

Then opponent made the bid that cost him dearly: 3♣. The motive behind this bid was to warn off a heart lead from his partner against an eventual spade contract for which he felt we were heading.

The strategy was fine, but the tactics poor. Had he only sat back and waited until we bid 6♠ (as any good duplicate partnership holding the North-South cards would surely do), he could then have doubled, thereby requesting from his partner the lead of dummy's first side suit: clubs.

Many were the tables at which this happened, and 6♠ doubled down one and 6♠ doubled down two were very common scores. We would surely have been among them had it not been for the misguided enthusiasm of our helpful opponent.

Partner promptly doubled the 3♣ bid and it was pretty obvious from my seat what was going on. I passed this bid around to the opponent and let him run to 3♥, which partner also doubled. I then cue bid 4♦; partner quietly returned to 4♠; and I then bid 5♣.

I might have gone to 6 on my own, but I was afraid that too much of partner's strength would lie in hearts and we would therefore be stuck with two losers in the black suits. Partner had listened to my bidding, however, and confidently put us in slam.

The opening lead was the ♠2, ducked in dummy, won by East's king. I was still congratulating myself on the auction and so made the stupid play of the ♠7 on the first trick. A spade return by East at this point would have surely set the contract, but she politely switched to her singleton heart which I won with the ace.

| | | |
|---|---|---|
| | NORTH<br>♠ A 10 8 6 4<br>♥ Q 9 7 6 5<br>♦ —<br>♣ Q 10 8 | |
| WEST<br>♠ J 3 2<br>♥ K J 8 4 3 2<br>♦ K J 5 2<br>♣ — | | EAST<br>♠ K 5<br>♥ 10<br>♦ 10 9 8 7 6 3<br>♣ J 9 6 3 |
| | SOUTH (D)<br>♠ Q 9 7<br>♥ A<br>♦ A Q 4<br>♣ A K 7 4 2 | |

The bidding, North-South vulnerable:

| South | West | North | East |
|---|---|---|---|
| 1♣ | 1♥ | 1♠ | P |
| 2♥ | 3♣ | Dbl. | P |
| P | 3♥ | Dbl. | P |
| 4♦ | P | 4♠ | P |
| 5♣ | P | 6♣ | All Pass |

A small club to the queen revealed that the suit was sitting the way I had anticipated, and the 10 was returned, being jacked and aced. I now nonchalantly led the 9 of spades toward dummy, and West missed his golden opportunity to set me by throwing in the jack.

He should have realized that I must surely hold the queen or I would not have ducked the opening lead. Since his jack will fall anyway, it could cost him nothing to put it up, and, if I am in bad need of an extra entry, (as is actually the case) the play of the jack prevents me from getting it.

But, fortunately, he played low and the trick was won with dummy's ♠10. The ♣8 was returned and won, as East ducked. A heart was then ruffed and overruffed and it was claiming time as the spade queen was overtaken with the spade ace to run the spade suit and bring the contract home.

A little more foresight on my part would have eliminated the defenders' opportunities to set me. It will be noted that by throwing the queen of spades under the king on the first trick, I can insure two spade entries to dummy and thereby make the contract against any defense.

Entertainment-wise

# Boston Offers Restaurants, Theatres

Entertainment in Boston, and particularly at MIT, should interest all incomig frshmen! Whether it does now or not is beside the point, but an evening's entertainment should be an integral part of every man's week. Very often the Tech man becomes overly involved in his studies and does not realize the need for relaxation. For this reason, this column is dedicated to presenting information concerning entertainment in a list-form, in order to aid the student at MIT to plan his weekends.

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Restaurants are necessary because some of the dorm cafeterias and some of the fraternities on campus do not serve some weekend meals. The following list, taken mainly from **The MIT Social Beaver**, includes places for lunch and dinner (and possibly even breakfast). "Elsie's" located on the corner of Mt. Auburn and Holyoke Streets, near Harvard Square, is advertised as the smallest restaurant serving the largest sandwiches at the lowest prices in the Boston area.

**"China Town" is a good place to go for dinner and is really about two dozen restaurants grouped within a couple of blocks. "Simeone's", 21 Brookline Street in Central Square, is a favorite with Techmen for hearty inexpensive weekend meals.**

Several restaurants on Newbury Street offer excellent meals at modest prices: "Newbury Steak House at 279 Newbury (with a branch at 94 Massachusetts Ave.), "29 and 39 Newbury Street." "Durgin Park" at 30 Market Street has an unusual atmosphere and robust portions of good food, especially the roast beef and strawberry shortcake. If you're looking for something a little more expensive to snow your date, check the **Social Beaver** or the Yellow Pages.

Meanwhile back at the Institute, the complete cycle of sixteen Beethoven string quartets, to be performed by the Juilliard String Quartet in five concerts during the academic year, is announced for the 1961-62 Humanities Series. Concert dates are November 19, December 10, January 14, February 11, and March 18. One of the foremost chamber music ensembles of our time, the Juilliard Quartet appeared last March under the auspices of the Series for a single concert. The Humanities Series was established twelve years ago through the interest and generosity of Elizabeth Sprague Coolidge of Cambridge. The Department of Humanities sponsors the series, which brings to the MIT community a selection of recognized concert artists and musical groups.

**The outstanding theaters in the area are advertised in the local papers, but a few are of special interest to Tech students. The Exeter Street Theater, Brattle in Harvard Square, and the Telepix in Park Square show predominantly foreign films and are cultural centers of interest for language students here at MIT.**

Boston offers great variety in the field of stage plays. A brief listing of the more outstanding plays in the area follows: "The Caretaker" at the Wilbur starting September 18, "Kwamina" at the Colonial starting September 26, "The Pajama Game" at the Bradford Roof Theater starting September 25, "Everybody Loves Opal" at the Wilbur October 2, "Write Me A Murder" at the Wilbur starting October 9, and "Bye Bye Birdie" at the Schubert on October 10.

**A special note to entering freshmen: there is great opportunity for interested persons in the entertainment department of *The Tech*. Currently only one person fills the requirements of an expanding newspaper, and there will be openings for an editor and assistant editor plus writers. Anyone interested contact me!**

**Kraig W. Kramers '64**

Munch Conducts Series

# BSO Schedules Open Rehearsals

Charles Munch has announced that ten of the Boston Symphony Orchestra's rehearsals will be opened to the public this season. Doctor Munch inaugurated the popular series of rehearsals in 1951-52, his second season as the Orchestra's music director, primarily to give the college students of the area a greater opportunity to hear the Orchestra. With most of the Orchestra's regular concerts sold out by season subscription, he felt many students were unable to hear the Orchestra in person during their years of study in Boston. The Open Rehearsals not only provide this opportunity but they also give the public and students an opportunity to observe the Orchestra in final preparation for its regular weekend concerts.

Doctor Munch will conduct a majority of the rehearsals including the first Open Rehearsal on Thursday, October 12. Subsequent Open Rehearsals, all on Thursdays, will be held on November 2, December 7, January 11, February 8, February 15, March 8, March 29, and April 26.

Season tickets for the ten Open Rehearsals by the Boston Symphony Orchestra are $15.00. Seats are unreserved and any seat in Symphony Hall is available to ticket-holders on hand when the doors are opened at 6:45 p. m. for the 7:30 rehearsal. Season tickets are available through some of the colleges in the area and at the Symphony Hall box office. Sale on tickets closes October 5th.

This series is a good way for the entering freshmen at MIT to get to know the Boston Symphony Orchestra.

## Charles Playhouse To Open Fifth Season

The Charles Playhouse, Boston's resident professional theatre, is getting ready to open its fifth season. Producers Frank Sugrue and Michael Murray announced today that a community-wide subscription campaign will get underway early next month.

The 32 week season at the Charles will open October 10th with Eugene O'Neill's "The Great God Brown" followed by Eugene Ionesco's "The Chairs" and Jean Genet's "The Maids," George Bernard Shaw's "You Never Can Tell," Anton Chekhov's "Uncle Vanya," and Lillian Hellman's "The Autumn Garden."

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All speech, written or spoken, is a dead language, until it finds a willing and prepared hearer.—Robert Louis Stevenson.

# Baton Society To Present The Weavers

The Weavers, America's popular folksingers, are coming to MIT Saturday, September 30, to present an evening of folk music from around the world. The concert will be in Kresge Auditorium at 8:30 p.m. under the sponsorship of Baton Society, the honorary musical organization.

Tickets are $2.50, $2, and $1.50 and will go on advance sale Friday, September 15, in the lobby of Building 10. Tickets can also be obtained by calling extension 2910, or by addressing requests to the Box Office, Kresge Auditorium.

The Weavers think of themselves as songweavers and appropriated their name from the refrain of an old Scottish ballad, "If it wasna for the wark o the weavers . . ."

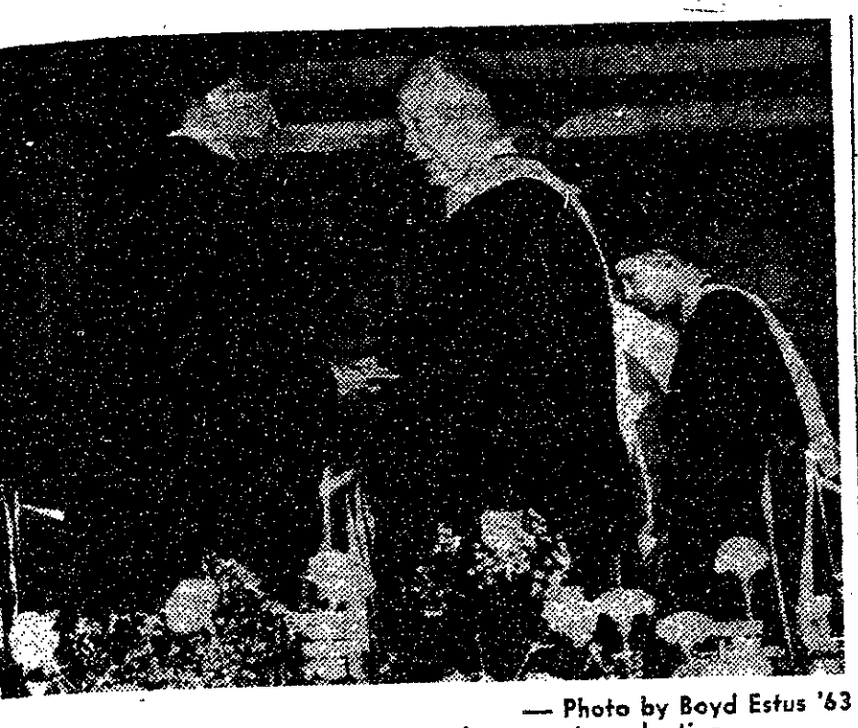
For the coming season, the Baton Society will bring back Ernst Levy, the noted composer-pianist, former professor of music at MIT, for a concert of piano music.

## Flying Club To Have Smoker; Buys Plane

The Tech Flying Club will have a meeting and smoker Tuesday, Sept. 19 at 8 p.m. in the Vannevar Bush Room, 10-105. Films will be shown and refreshments served.

The club has recently acquired a 1960 Cessna 182 Skylane, a four-place aircraft which cruises at 160 miles an hour. It is fully equipped for instrument and crosscountry flying.

# 1166 Get Diplomas; CBS President Stanton Speaks



— Photo by Boyd Estus '63
President Stratton handing out degrees at graduation.

## 83 Students Receive Two Degrees Apiece

Degrees were awarded to 1166 students at MIT's commencement exercises in Rockwell Cage June 9. Among them were 667 undergraduates, members of the centennial year class of 1961.

The diplomas were presented individually by President Julius A. Stratton before about 4000 persons assembled in the Cage and an additional 1200 watching the program via closed-circuit television in Kresge Auditorium. A total of 1249 degrees were awarded, with 83 students receiving two degrees each. The number included 99 doctoral degrees, 62 advanced engineering degrees and 421 master's degrees.

In his commencement address, Dr. Frank Stanton, president of the Columbia Broadcasting System, advocated a 10-year program of educational assistance to underdeveloped nations. In his educational "Marshall Plan" he called for expenditures amounting to nearly one-fifth of the United States' current foreign aid commitment.

In the academic procession the degree candidates were led by the 1961 class officers: President Ira J. Jaffe, Vice-President Peter R. Gray, Secretary Joseph Harrington III and Treasurer Jerome H. Grossman. The procession also numbered approximately 250 faculty members, 17 members of the 50-year Class of 1911, the Corporation group and a division of guests of honor.

Among the members of the honor division were nine retiring faculty members: James A. Beattie, professor of physical chemistry; Edward P. Brooks, professor of industrial management; Arthur C. Hardy, professor of optics and photography; Richard C. Koch, assistant professor of modern languages; Frank M. Lewis, professor of marine engineering; John R. Markham, professor of aeronautical engineering; B. Alden Thresher, director of admissions; Walter G. Whitman, professor of chemical engineering; and Karl L. Wildes, professor of electrical engineering.

Dr. Stratton delivered the charge to the graduates. At the close of the exercises, the Commencement luncheon and reception were held in the Great Court.

— Photo by Boyd Estus '63
Dr. Frank Stanton, CBS President, as he spoke at the 1961 commencement exercises at Rockwell Cage.

— Photo by Boyd Estus '63
Chief Marshal Clarence L. A. Wynd, with the MIT mace, leads the recessional at the close of the commencement exercises.

## Teaching Excellence Medal To R. Y. Kain

For conspicuously effective teaching by a graduate student, Richard Y. Kain received the Goodwin Medal and an accompanying award of $500 at graduation exercises June 9. He has been teaching for four years in the Department of Electrical Engineering.

His outstanding teaching ability was brought to the attention of department heads by letters and commendations from his students.

## ROTC To Offer Commissions

In some cases it may be possible for upperclassmen and graduate students who have completed all or a part of the basic Army ROTC course or who have had prior military service to still obtain a commission through the ROTC program, announces Col. Irving W. Finberg, Professor of Military Science. Interested persons may contact the Military Science Department so that their eligibility and required actions can be determined.

# Crews Excel In Spring Regattas; Frosh First, Varsity Third In U.S.

**By Sandy Wagner '61**

In championship regattas at Worcester, Mass., and Syracuse, New York, late last spring, MIT crews turned in what has been estimated as one of the finest overall performances in the history of rowing at Tech.

**Frosh 150's Champs**

At the Eastern Sprints in Worcester, Engineer crews qualified in all heats, an unprecedented feat for MIT, and one matched that day only by Cornell. Outstanding performances were turned in by the freshman lightweights, who were crowned champions of the East, and in effect the nation, since 150 pound crew does not exist in the West. The varsity heavyweights rowed their best race of the year to come in third behind Navy and Cornell.

**Varsity In Fine Race**

At the Intercollegiate Rowing Association's annual championship in Syracuse in June, Tech produced its best showing in 10 years in the varsity competition, finishing third behind Cornell and California and ahead of Washington, Penn, Navy, Brown, Wisconsin, Syracuse, Princeton, Dartmouth, Rutgers and Columbia in that order.

Getting away from the start slowly, Jack Frailey's oarsmen were next to last as the crews settled from their racing starts. Then something clicked in the shell, and with sophomore stroke Chris Miller holding the beat to 31, Tech gradually crept by shell after shell. With three-quarters of a mile to go the Engineers poured on the steam and surged away from a knot of crews consisting of Washington, Penn and Navy.

Tech crossed the finish line three full lengths ahead of the favored Huskies from the West and even more up on the sprint champion Middies, both of whom went to the starting line with a two inch and 12 pound advantage per man over Tech. Also, both of these crews had logged about twice as many practice miles as did MIT.



Team Gains Title

# Sailors Have Fine Summer

Nelsen, Gray Shine

**By Walter Dence '62**

Sailing at Annapolis, Maryland during the summer Pete Gray '61 and Don Nelson '61 won the North American Intercollegiate Dinghy Championship for MIT from a field of eight finalists in the Gannet Dinghies class. Their final score, 217, left Tech 20 points ahead of the nearest rival, Navy.

The field of eight colleges represented the two finalists in each of the four national intercollegiate districts: Claremont and Washington Universities from the Pacific Coast, Michigan and Wisconsin from the Midwest, Cornell and Navy from the mid-Atlantic and Harvard and MIT representing New England.

**Nelson Wins Trophy**

Nelson won the Allan Trophy, the high point skipper award, and Gray was close behind, placing second in the skipper rankings. This has been the 11th time that MIT has won the Nationals in 25 annual competitions, the closest opponents in overall performance having been Yale and Harvard with 3 victories apiece. This record is a tribute to the efforts of Jack Wood, MIT's sailing master for the past 25 years.

In honor of Wood's contribution to intercollegiate sailing the Intercollegiate Yacht Racing Association of North America has voted to honor him with a new championship trophy, emblematic of the inter-district team racing title. This is the team race regatta that has preceded the Nationals for many years.

Wood was instrumental in arranging a trip to England for Gray and Nelsen in the summer of 1960, where they perfected their sailing of Firefly Dinghies against the British collegians. This helped MIT to its sixth victory in the 19 year history of the New England Championships which were also sailed in Fireflys.

Gray and Nelson earned a narrow four point margin over second place Harvard with a winning total of 229 points. Coast Guard and Harvard have been Tech's nearest rivals in this annual series, each having won it five times.

In the Institute's non-varsity activities, a former Nautical Association Member defeated the Russians in their own country. This June Dr. Britton Chance was invited to compete in his 5.5 meter (Olympic) yacht in a five race series off the coast of Tallin on the Gulf of Finland. He won, beating the nearest boats, East Germany, 6914 to 4835.

In other action by Tech sailors this summer Nelsen won the North American Firefly Championship at Brockville, Canada, by a margin of two points, and Jerome Milgram '61 won the New England Thistle class title on the Charles.

# Smith Gets Athletic Post

(*Continued from Page 1*)

ord — freshman or varsity — in Cornell history.

While majoring in physical education at Springfield College, the new MIT athletic director was an outstanding lacrosse, soccer and basketball player. He was named to the All New England lacrosse team as a senior and was an All-America soccer player in 1935.

He served as president of the United States Intercollegiate Lacrosse Assn. in 1957. In 1952 he was in charge of the successful tour of the combined Cornell-Dartmouth-Yale soccer team in Bermuda. In 1955 and again in 1956, at the invitation of the commanding general of the U. S. Army in Europe, he conducted soccer clinics for service coaches. He has been one of the leading basketball officials in the East for several years.

Mr. Smith is married and has three children: James L., 23, senior at Cornell; Jeanne M., 21, a 1961 graduate of Cornell; and David R., 19, a sophomore at Franklin and Marshall.

## CLASSIFIED ADS

LOST at the Senior Banquet: a manuscript book of one thousand popular songs. Generous reward for return. Call ext. 4444.

RIDE WANTED to Hartford any weekend. Leave Boston Fri. night or Sat. morning. Return Sun. night or Mon. morning. Will share gas and driving. Call Joe Hanlon. BE 2-9433.

COFFEE percolator, electric, in original box, never used. $7.50. East Campus, Walcott 411.

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