

# the journal

WORCESTER POLYTECHNIC INSTITUTE

73  
VOL. 74 FALL




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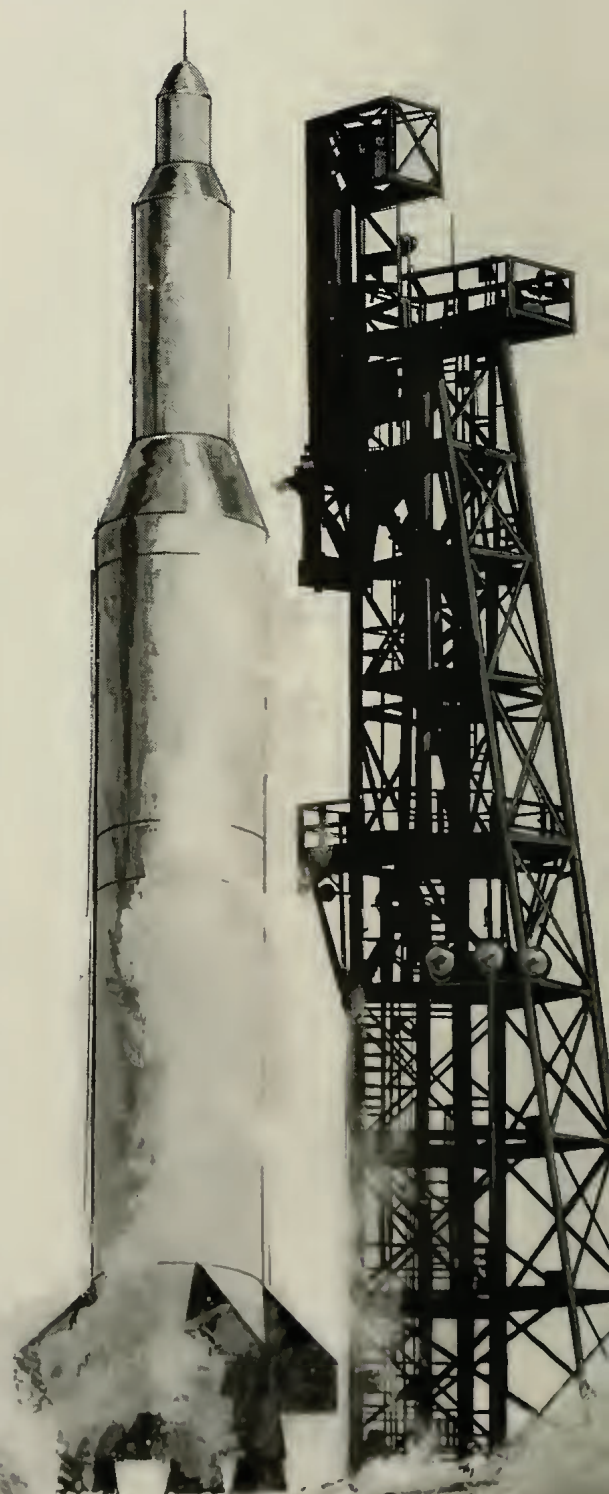


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# the journal

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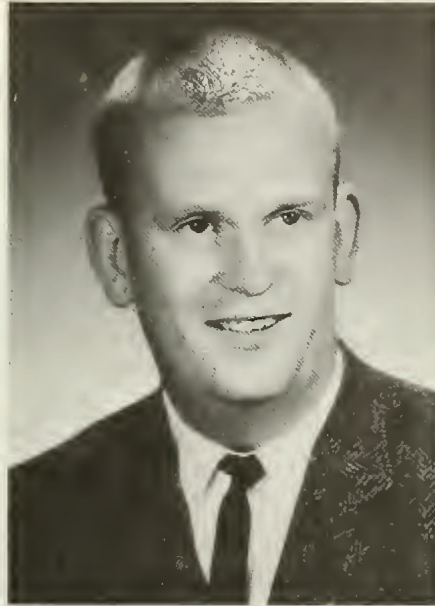
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Stephen James Hebert, '66  
Assistant Alumni Secretary

It is a pleasure to introduce to you Stephen J. Hebert, '66, the newly-elected Assistant Alumni Secretary. Steve will fill the position left vacant by Roy A. Seaberg, '56, who, after

seven years with the Association, has become an Assistant Director of Admissions at Tech.

Steve was born in Boston, Mass., and moved to Springfield, Vt., at an early age. He attended Springfield High School prior to his entrance to Tech in the fall of 1962. He majored in civil engineering, receiving his B.S. degree in 1966. While at Tech, Steve was very active; he was president of Skull, the senior honorary society; chairman of the Assembly Committee; vice president of his fraternity, Sigma Phi Epsilon; President of the Student Chapter of A.S.C.E.; Business Manager of *The Peddler*; and Treasurer of his class.

After graduation, Steve joined the staff of Springfield (Vt.) High School. He taught mechanical drawing and physics, coached football and basketball, and was also acting athletic director this past year.

We hope you will have a chance to meet him personally in the coming year.

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Volume 73

Fall

Warren B. Zepp, '42  
*Editor and Business Manager*

Stephen J. Hebert, '66  
*Assistant Editor and Business Manager*

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# Dr. George W. Hazzard Inaugurated As Eleventh President Of W.P.I.

Dr. George William Hazzard was inaugurated as the eleventh President of Worcester Polytechnic Institute on Friday, October 17. The well-planned and stately ceremony was attended by approximately 250 delegates from sister institutions of higher learning and by a large delegation of trustees, administrators, faculty, alumni, and friends. Dr. Hazzard's inauguration was the first to be held in Harrington Auditorium and was preceded by a luncheon in Morgan Hall for 850 people.

The Reverend Raymond J. Swords, S.J., President of the College of the Holy Cross, gave the Invocation and Benediction, and the Honorable Francis W. Sargent, Governor of Massachusetts, extended the greetings of the Commonwealth. Professor George E. Pake of Washington University in St. Louis, Mo., and a long-time friend of Dr. Hazzard's, introduced the President, after which Dr. William E. Hanson, '32, Chairman of the Board of Trustees, gave the charge to the President and presented him with the school seal. Music was provided by the Worcester Intercollegiate Symphonic Band and a combined chorus from the Worcester area.

Following the ceremonies, a reception was held on the quadrangle.

President Hazzard's Inaugural Address follows:

Ladies and gentlemen, delegates from colleague institutions and societies, members of the Worcester and Worcester Tech community, Governor Sargent, and friends, friends new and old. Thank you for coming. Thank you for honoring Worcester Polytechnic Institute in its 104th year.

The presence here of so many friends of mine and of the college makes this a heart-warming moment for me, a moment I shall long remember.

The responsibilities I accept from students, faculty, alumni, and trustees make this a challenging moment. It is a moment for facing and interpreting the task I have been asked to undertake.

The very personal nature of this small institution makes this a moment for direct personal expression of my present

views on engineering education. It is the moment for saying that I believe engineering education is better called technologically-based education and explaining why.

It is a moment for talking about a professional school and for reiterating the values implicit in the use of the word professional.

Finally, it is a moment for humility. A scientist knows that he can only see further because he stands on the shoulders of those who labored before him.

Today man is where he is only because so many previous generations of men thought, and said, and did things that inspired others to improve on what went before. All men have related such efforts to some view of the world — how the world is or how it ought to be.

What I propose to discuss is my view of how the world is or how our society is and how engineering education, technologically-based education, *professional* education, can serve that society. In so doing, I am asserting a philosophy of higher education as applied to Worcester Polytechnic Institute and suggesting some implications of that philosophy for the Worcester Tech community.

Society today is technologically-based. No one can deny the evidence of instant communication after the Apollo 11 moon walk. Or of almost instant transportation after lunching in London and dining in New York. Or of an incredibly interdependent technical distribution system when eating fruit from Texas or Israel while stuck in a Manhattan elevator in a power blackout. In a sense, the medium of modern technology is the message.

Such being the case I believe technologically-based education provides a major hope for the creation of an informed citizenry able to act on and be aware of the problems of this modern society. But a very special kind of technical *education* is required — an education that will produce *technological humanists*.

For what technological humanism means I am indebted to Sir Eric Ashby and his illustrious countryman, Alfred North Whitehead.





As Ashby says:

"The habit of apprehending a technology in its completeness: this is the essence of technological humanism, and this is what we should expect education in higher technology to achieve."

And Whitehead explains this further. He says:

"There is something between the gross specialized values of the mere practical man, and the thin specialized values of the mere scholar. Both types have missed something; and if you add together the two sets of values, you do not obtain the missing elements. When you understand all about the sun and all about the atmosphere and all about the rotation of the earth, you may still miss the radiance of the sunset. There is no substitute for the direct perception of the concrete achievement of a thing in its actuality.... A factory, with its machinery, its community of operatives, its social service to the general population, its dependence upon organizing and designing genius, its potentialities as a source of wealth to the holders of its stock is an organism exhibiting a variety of vivid values. What we want to train is the habit of apprehending such an organism in its completeness."

In other words, the person with a technologically-based education must do more than the scientist. The scientist has to preoccupy himself with abstractions from reality for that is the power of science. The engineer has to respond to the assertion that he is a professional. For any professional

school, be it medicine, or law, or engineering, produces graduates dedicated to service to society. Its graduate must be concerned with the whole reality, including real people.

Since Worcester Polytechnic Institute is one of less than two dozen private technical universities in this most technically-oriented of countries, it behooves us to respond vigorously and creatively to such a challenge.

To educate technological humanists is to respond to several aspects of modern society — to science and its evolutionary building of a more complete explanation of nature on earlier, less general paradigms; to the young and their intuitive, but expressed, wish for greater individual self-realization; to the problems of the real world where the very successes of science and technology in solving old problems have created a whole set of new ones; and to the developing knowledge from the social sciences on how people learn.

Once upon a time, I was a scientist. So let me start with science. As every scientist knows, science is a stimulating and frustrating mix of the radical and the conservative. Each new idea has the potential for completely changing the existing state of affairs (though rarely now does a scientist get tried by the Inquisition as did Galileo for his ideas coming from mechanics and optics). But simultaneously each idea must stand the test of practicality. Can it explain information that was known before while simultaneously predicting and explaining the knowledge implied

by that idea?

Thus a person with scientific training is automatically a radical and a conservative in his own field once he is creative enough to have new ideas. Every radical new idea has to stand the conservative test of fitting the facts or being operationally sound. Scientific training enables one to learn how to live with change yet relate it to the past.

Simultaneously the scientist must develop a set of values. He must be truthful; for others check his facts. He must share his knowledge with others; for they have shared with him. He must give credit to others for the ideas on which he builds; as they must credit him. If this all sounds like the Golden Rule, it isn't very surprising. Science really burgeoned when Puritan man decided that investigating and elucidating Nature's secrets was the best way to glorify God.

The study of science and its methods must be part of the education of a technological humanist.

Now how about the problems of the real world stemming from our on-rushing technological advances? Here I must join Lee DuBridge, Science Advisor of President Nixon, in saying that "Success has led only to rising expectations and to mounting accusations of failure. Or so it seems."

Actually a greater fraction of the world's population is better housed, better fed, and has better health than ever before in history. Yet all of us want everyone to participate in these advantages. And all of us want better solutions to housing, transportation, pollution, war, and above all, the threat of the bomb.

Technology holds the key to possible solutions if it can be combined with the developing knowledge of the social sciences and the mutual respect and understanding between individuals and groups that comes from shared values. And here I repeat, technology can provide the *means*. Each of us must provide the social and ethical understanding. No longer can engineering education be undertaken as an escape from the reality of people. Not many of us can fulfill Walter Lippman's wish, "I'd like to have been born a great mathematician or something like that where I would have dealt with problems that didn't require dealing with the everlasting persnickitiness of human nature."

The study, understanding, and use of the social sciences and the humanities must be part of the education of the technological humanist.

Neither the great ordering principles of physical science nor the growing understanding of groups or individuals by social science provide evidence to modern youth that each person can remain a person and not become a thing, a number, a pawn on an overpopulated world chessboard. The great gatherings at Newport, Bethel, or Lewisville speak to that need to be someone; to be real to someone else; to share emotions like love and kindness. Or in other words, our higher educational system must respond to this need; must show that scientists and engineers are individual and

## . . . AN EDUCATION THAT WILL PRODUCE TECHNOLOGICAL HUMANISTS

human; that they work in a value system of individual contribution for the good of all.

What this means is that each student needs to be helped to find his own way to the conclusion of his college education. Each individual student will be a wool thread held by the wrap of faculty guidance, all together forming the brilliant woven patterns of the university. Being different from all others but part of a total pattern seems a necessity for all of us.

Personalized and individualized teaching and learning must be part of the education of the technological humanist. All of the above needs might never be met by a technical institution like W.P.I. were it not for technology and science itself. Here I refer to the considerable progress now being made in that difficult and complicated area called "the learning process." Much of the activity is directed toward young children for purposes of simplification; toward simple cognitive or tactile situations. Yet progress in understanding is considerable.

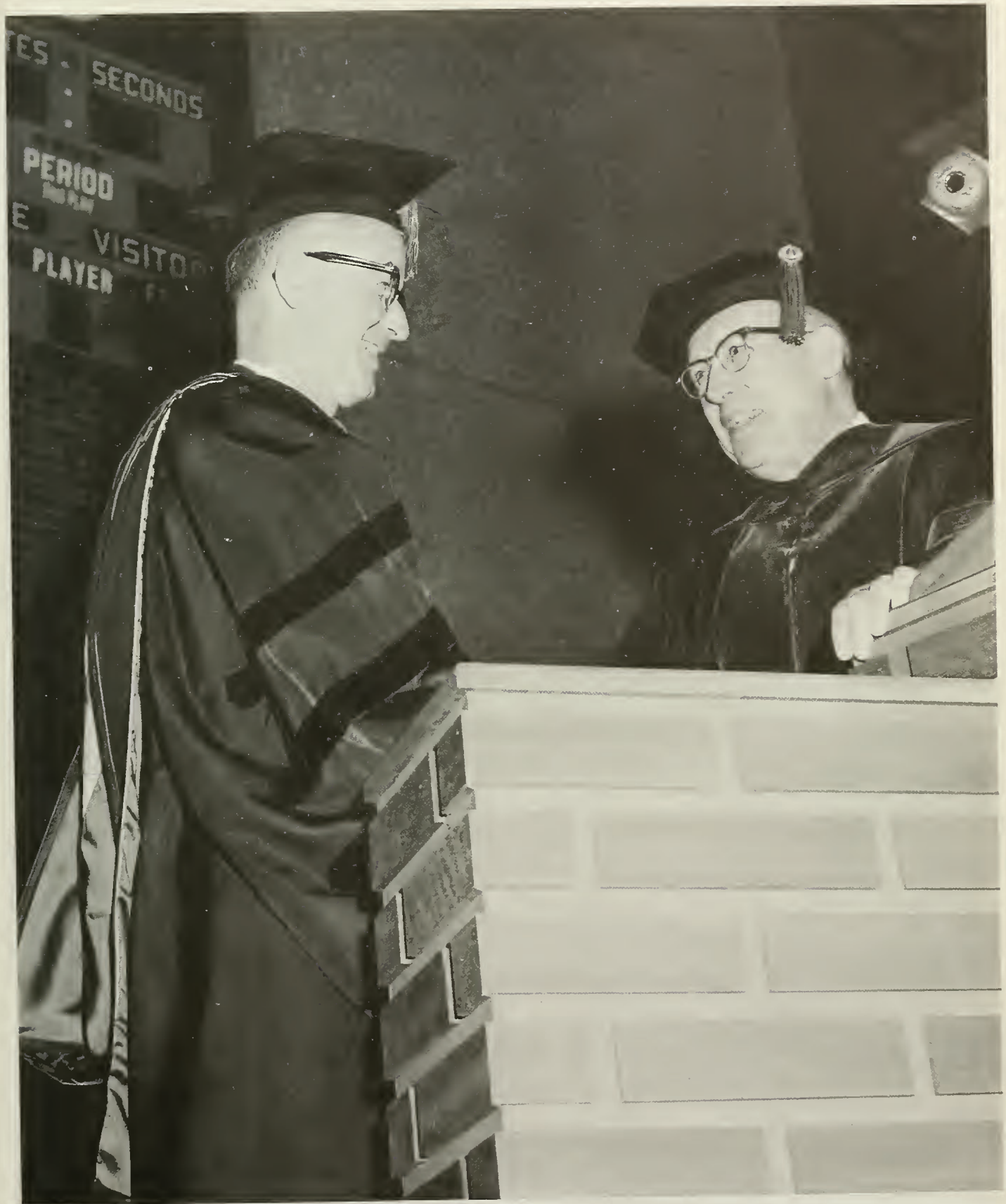
Conscious experimentation with the learning process must be part of the education of the technological humanist. Only thus can he learn and learn how to continue to learn in this world of accelerated change.

These four main trends form the challenge to any technological university. How do we combine broad general principles, real social problems, individual learning, and optimal teaching-learning methods into a coherent, recognizable, unique whole? This challenge is one I believe W.P.I. is ready to accept. One to which it will rise in the first decade of its second century.

Let me now turn to some possible methods for reaching these goals at W.P.I., methods which may combine here into a distinctive kind of technologically-based education. What I say here has already been said in part to the W.P.I. community but not to all that community at the same time and place. Presumptuous this may be after three months on the job, but non-squeaky wheels get little grease.

Many of these educational objectives are best reached by operating a small institution, a college where students and faculty and administration can know each other as people rather than symbols, as individuals rather than as "they". With an undergraduate population of less than 2,000 we are a small college by today's standards. It is imperative that we remain small and that our student body and faculty continue and extend the friendliness and





Dr. William E. Hanson, '32, Chairman of the Board of Trustees, congratulates President Hazzard.



participation already here. I must confess that I don't have a really good definition of smallness. But I can say that a college remains small until it starts breaking apart into units without common loyalties or until faculty members start saying there are so many students that they can't know a large fraction of them so they won't try to know any.

At the same time, one has to deal with the knowledge explosion and the consequent growth of specialization. Smallness may deprive a student of many opportunities that exist in a large institution. We must in many ways be large. Luckily the situation in Worcester permits us to be both small and large simultaneously. After all there are over 13,000 students enrolled in Worcester institutions of higher education today, institutions different in character, education objectives, specialties, and student background. With this size, produced by ten institutions, all essentially within 15 minutes of each other, we have a tremendous opportunity to provide the qualities of the large institution.

With the formal incorporation of Worcester Consortium for Higher Education and the employment of a full time executive director, we are well on our way in this respect. I look forward with pleasure to the results of our mutual enthusiasm for this consortium. It is especially rewarding to continue this effort pioneered by my predecessor, President Storke.

We shall remain small within the matrix of a large institution. But large or small, we can still miss the close student-faculty interaction that is one of our major goals if faculty commitment and internal organizational mechanisms are not there. Here is where we have already made real progress. Our Planning Committee has been working for almost a year on meeting the goals I have outlined. Involving faculty, students, and administration, the committee has produced what I consider to be creative answers. These answers were discussed intensively and constructively by over 400 members of the Worcester Tech community on Planning Day II just two weeks ago.

Let me outline the major points to show one way to be creative in American higher education. First is *individual* student program planning through four years with the same faculty advisor to develop and carry out each student's course of study. Second is the emphasis on individual study through seminar, library, or on the job activities. Large lectures there will be but the lecturer will focus on an integration of facts and ideas into a creative whole.

Third is the use of project activity for over a quarter of the student's academic work. Projects of two kinds are envisaged: those typical of a disciplinary orientation within the college laboratory or classroom and those oriented to the societal activities of engineers in the outside world. Here in groups of 3 to 5, students with a faculty leader can do relevant, constructive, and challenging activities. Students and faculty will have to learn together. Additionally we hope to involve many alumni in these projects — a life-long laboratory school so to speak. You might say that

here we are combining the pragmatism of John Dewey with the idealism of Mark Hopkins. Finally, testing and examination will come from outside, providing each student and his teachers with a critical evaluation of his college achievement, of his preparedness to contribute to the society that will support him.

All these ideas, good in themselves, would be useless without a commitment from faculty and students. The faculty member must provide the model of a concerned, learning, dedicated contributor. The student must accept great responsibility for his own progress in return for his freedom to learn. I say to my faculty and student colleagues: This is a challenge I dare you to accept.

Most difficult of all, I expect, is adopting new learning and teaching techniques and then measuring our success in their use. Even if we succeed in introducing new learning methods or "improve" on the old, how are we to know whether we do better or worse in creating a graduate fitted for his chosen role in society? How do we know if just change in itself is not the most effective learning stimulus?

Measuring the effectiveness of education is an elusive thing at best. Here, then, is a challenge to the expert measurers and to the foundations or to our federal agencies. Who can measure our success or failure and who will support them in the process?

In this present time of social stress, the universities are under pressure from students for relevance, from the government for problem solving, from parents for being too expensive and contentious. You may have wondered why I have not said more about such matters. Implicitly I have, but let me be explicit.

The business of W.P.I. is to be an educational institution. It is *not* a consulting firm, a baby-sitter, or a research institute. It cannot be a political instrument, an arm of industry or government. It must look at each part or problem of society and selectively utilize it for the education of the men and women who choose to come here. Only thus can a private, independent, technologically-oriented university college justify its existence. Only thus will it continue properly to deserve the support of parents, alumni, business, foundations, government, trustees, and friends.

I have shared with you some hopes and dreams for Worcester Tech and its people. How well we shall succeed I cannot tell. But I doubt we shall fail if I can do as Robert Frost said:

"When I was young my teachers were the old.  
I gave up fire for form till I was cold.  
I suffered like a metal being cast.  
I went to school to age to learn the past.  
"Now I am old my teachers are the young.  
What can't be moulded must be cracked and sprung.  
I strain at lessons fit to start a suture.  
I go to school to youth to learn the future."



Left: Left to Right - Mrs. Anne (Hazzard) Trenholme, Dr. George W. Hazzard, Miss Ruth Hazzard, and Mrs. Jean Hazzard.

Below: Left to Right, Paul S. Morgan, Trustee, Charles C. Bonin, '38, Trustee, and President Hazzard.





# HOMECOMING 1969

## LARGEST AND BEST EVER



*Courtesy - Worcester Sunday Telegram*

A windy autumn day set the scene for the 1969 Homecoming celebration. The Sweetwater concert and fireworks which were held Friday night had been a good omen for the next day's activities.

Registration began early, and by the time the soccer game had started at 11:00 A.M. the baseball field had begun to fill with cars. The soccer team lost its contest to Clark 2-0. Over 400 alumni and families registered for the combined tailgate picnic and barbecue. Trunks were raised and tailgates opened with groups gathering to renew old friendships. The tailgate prize for the best spread of food, awarded for the first time this year, was shared by Carl W. Backstrom, '30, and Iving James Donahue, Jr., '44.

The football game with Wesleyan was the highlight of the afternoon. Coach Mel Massucco and his squad gave the crowd of over 4,500 many exciting moments in their losing cause to Wesleyan 21-13. The Engineers generally out-played and out-hit the visiting undefeated Cardinals, but were hampered by miscues. At half-time, Warren B. Zepp, '42, Alumni Secretary-Treasurer, awarded the Homecoming Display Trophy to Sigma Alpha Epsilon fraternity, with Sigma Phi Epsilon receiving honorable mention. The freshmen won the annual Freshman-Soph Rope Pull following the game.

The Reunion of the classes of '59-'63 was held following the football game in the form of a social hour in the Janet Earle Room of Alden Memorial Auditorium, and there was a large turnout for this inaugural event.

Homecoming continued as various groups gathered to return to their fraternity houses or to have dinner at local restaurants. For those who desired, there was a concert Saturday night featuring Richie Havens and a Sunday concert featuring the New York Jazz Sextet.





*Courtesy - Worcester Sunday Telegram*



Left: Richard Lucey, '55,  
and his family enjoy the tailgate picnic.

*Courtesy - Worcester Sunday Telegram*

# The Future of Two Towers



## A MODEL

The faculty Planning Committee has published its third report containing a model for the future of Worcester Tech. The committee consists of Professors John P. van Alstyne, John M. Boyd, William R. Grogan, '46, Charles R. Heventhal, Romeo L. Moruzzi, and C. William Shipman. Stating "It should be the goal of the Worcester Polytechnic Institute to teach its science- and engineering-oriented students to learn for themselves and to develop in them an understanding of the interplay between technological advance and human need," the report proposed a radically new unstructured curriculum which would emphasize projects and independent study and the relationship of technology to society. Under the new model, the present academic departments would be abolished and replaced by "Study Groups," which would be based on common areas of study.

The Committee proposed the following goal for Worcester Tech:

"It is the goal of Worcester Polytechnic Institute to bring into the second century of its existence a new, dynamic version of its great Two Tower tradition. In its first century, W.P.I. pioneered the integration of science and shop; in its second century, W.P.I. will pioneer in scientific service to society.

"The W.P.I. graduate of the future must have an understanding of a sector of science and technology and a mature understanding of himself and the needs of the people around him. While an undergraduate he must demonstrate that he can learn and can translate his learning into worthwhile action. He must learn to teach himself those things that are needed to make his actions socially significant. A W.P.I. education should develop a strong degree of self-confidence, an eagerness to contribute to the community beyond oneself, and an intellectual restlessness, a spur to continued learning."



To accomplish this goal, the report outlined an educational program featuring no required courses. In the words of the report, "Because a primary objective of the college should be to teach the student to learn, and because this process is highly individualistic, it seems advisable to have as little formal curricular structure as possible. The lack of structure has the virtue of providing at once the flexibility needed and the requirement that the student develop the self-reliance characteristic of a truly educated person."

To accomplish this, projects and independent study programs will play a major role and the student is expected to put a minimum of 25% of his total academic work into this part of the program. Two types of projects will exist:

a) Research and development projects of the type common to most technical college research programs.

b) Humanistic-technological projects. In the words of the report, "Examples of these projects might be: the effect of a new north-south toll road on the people of central Massachusetts; the economic, technical, and social implications of a law restricting pollution of the Blackstone River; . . . It is this type of involvement which is designed to bring the student to a familiarity with technology as a service to society, leading him to a sense of professionalism in the sense of assuming responsibility for some area of society's needs, and showing him the relevance of his studies of human behavior."

It is also suggested that "a fair fraction of the projects be centered off-campus."

The projects would come in four different sizes: Type A: Individual Work; Type B: Individual Team Projects: three-man units; Type C: Comprehensive Project Activities: two sub-units of three to four students each, combining upperclassmen with underclassmen and/or technical and humanistic efforts; Type D: Systems Project Divisions: Groups of fifteen from a variety of levels and study interests.

Upperclassmen and graduate students would be in positions of leadership.

Courses would be offered to "bring coherence to what has been learned in the projects . . . and to lead the student from the curricular disciplines of the American secondary schools to the unstructured system proposed."

Three main types of courses would be offered:

a) Courses designed to supply preliminary information and a transition to W.P.I.'s unstructured system; b) Short courses of the "how-to-do-it" type to aid in acquiring specific techniques as they are needed; c) Summary courses. These would be of the lecture-supervision type. A lecturer would present the material to a hundred or so students and a supervisor, meeting with four students at a time, would answer questions and go over solutions to specific problems.

No prerequisites would be required for a course.

Professor Shipman, a member of the Faculty Planning Committee, commented that one critical point in the aca-

demical program would be the transition of the Freshmen from a structured high school background to an unstructured college. He said that the kinds of freshman courses would have to be a lot different from the present courses, and would have to be designed to lead a student to learn on his own, and that a freshman would be involved in project work. He suggested that such courses as "*The Philosophy of Science*" and "*The History of Science*" might be appropriate.

In regard to the student body in general, he stated his belief that a "much larger percentage of the present students could handle the suggested program than the faculty believes." He also felt that we could attract students from a much wider area than we do presently.

Although only the degree of Bachelor of Science would be given, students will be able to "major" in a Study Group or Division Area. This quote from the report may help explain the Committee's concept of study groups:

"Because of the problem orientation of the program and the increasing overlap of the various traditional disciplines, it seems wise at this point to abandon the departmental structure of the faculty and to regroup into common areas of study - Study Groups. It is not to be inferred that there need be any permanence to a Study Group, for in the course of time it will be necessary to dissolve some and establish others. The Dean of Academic Resources must bear the ultimate responsibility for seeing that the Study Groups remain relevant. It is important to recognize that the common denominator in the Study Groups is the problem orientation rather than the academic background of the members. The Study Groups are collected into three divisions."

The following degree requirements were suggested:

1. "Acceptable advanced-level work on two projects or independent study programs. a) It is strongly urged that at least one be of the humanistic-technological type. b) It is strongly urged that at least one of the qualifying projects be centered off-campus.

"Advanced level work must produce a tangible result (usually in the form of a written report) which shall be judged not only for technical content but also for manner of presentation both by the project supervisor and external examiners . . . Grades will be assigned for all project work as follows: A-Acceptable; AWD-Acceptable with Distinction; NA-Not Acceptable.

2. "A minimum residence of two years is suggested because of the importance of the environment to be established."

3. "Examinations: a) A comprehensive examination in a division or study group area. This examination may include oral as well as written parts, should be of the "open library" type, and must be the work of the student alone . . . the examination should confront the student with the unfamiliar. b) Two "sufficiency" examinations in areas



other than that of the comprehensive, at least one of which should be in a different division from that of the comprehensive.

"Grades for these examinations will be A or AWD (an unsuccessful attempt is not recorded) and the examinations may be taken at any time after matriculation with the approval of the student's advisor."

#### ADVISOR EXPLANATION

A different part of the report explains the advisor. "The entering student is assigned to an advisor who sees the student through the program . . . it is essential that the student records be computerized so that the advisors can have at hand all information for counseling the student. Obviously, the project supervisor may have the best and closest contact with the student and can give considerable assistance to the advisor. The exact relationship of the student to his advisor will depend in large measure on the student living group structure."

Provision is made in the model for the expulsion of a student "who consistently fails to do acceptable work."

The school year would be divided into four eight-week terms for "flexibility in course offerings, project-logistics, and scheduling." The student would carry "four units of work" each term (for example, three courses and one project [not including how-to-do courses], four courses, etc.). Courses would extend from one to four terms.

The above academic program was reached after seven months of deliberations by the President's Planning Group during the last school year. During that time they studied Tech's present status, developed a set of possible objectives, and published a set of two reports, "The Future of Two Towers," Parts 1 and 2. Then, during the summer, the fac-

ulty - elected Planning Committee created the program above.

One of the reasons why they chose to try to educate a "humane technologist" was, in the words of the Report, "a growing feeling throughout the nation that many science and engineering educators have become so concerned with a narrow form of professionalism that they fail to react adequately to disturbing signs . . . For a decade we have seen a loss of interest in engineering on the part of high school students; the disenchantment of students enrolled in engineering programs is notorious; and we have heard much about the importance of relating science and engineering to the needs of the people." Another was in the form of a conclusion: "the major contribution of the independent college is to leaven the national educational scene with diversification and a source of innovative energy which lies beyond the capability of the public institutions."

The failure of the present structure was also cited as a reason.

"Attempts to broaden the student by offering, and even requiring courses in the humanities have largely failed . . . because of the failure to show the students the relevance of their work in humanities to their professional careers. The student finds his learning activities more or less "locked in" to a course program and satisfaction of his curiosity hampered by a formidable set of prerequisites. A further factor is . . . isolation of the faculty from the students as people who have a view of life, who practice what they preach, and who themselves are continuously learning . . . students find campus life devoid of interest. Intellectual interchange is the exception rather than the rule." As one result of this, "the Committee had decided to relegate to an inferior position the argument that 'our students have limit-



J. M. Boyd  
Mechanical Engineering



W. R. Grogan, '46  
Electrical Engineering



C. R. Hevanthal, Jr.  
English



R. L. Moruzzi  
Electrical Engineering



C.W. Shipman  
Chemical Engineering



J.P. van Alstyne  
Mathematics

ed capability.' This argument appears to be false and has so pervaded the thinking of both students and faculty that it has strongly affected the quality of W.P.I.'s present program."

The Committee then outlined what they felt were essential considerations in determining W.P.I.'s goal:

1. "It is hopeless to attempt to provide the student with enough information and technique to see him through a lifetime of professional work. It is far better to develop the student's learning capability so that he can learn what is necessary to solve the problem at hand — to meet the unfamiliar situation competently.

2. ". . . society is being well supplied with technologists who, given time and money, can eventually solve nearly any technological problem from development of an anti-polio vaccine to placing a man on the moon safely. However, decisions as to what technology shall be developed and what problems attacked are made by the lawyer, the sociologist, and the politician who are, for the most part, unaware of the nature of technology itself.

3. "The strongest motivating factor in student learning is the student's own interest . . .

4. "The essence of the college experience is the environment — the nature of the community. There is no stronger motivation for intellectual development than the inspiration of one's associates. Delight in learning is infectious . . . there is not now a single college - level program which has adequately come to grips with the challenge of developing and encouraging the necessary human understanding in its science and engineering students."

Professor Shipman outlined four criteria that he felt a program would have to fulfill, and that he felt the model did fulfill: 1) Students would be involved and responsible; 2) There would be a community of spirit; 3) It would have to be innovative enough to justify a private existence;

4) It would have to be flexible.

The report declared that, under this model, the following objectives of the original twelve listed in the first and second reports could be executed:

1. High Quality Pre-Graduate Education in Engineering and Science
2. Education for Leadership and Decision-Making in a Technological Society
3. Classical Education in Engineering and Science in the Oxford - Cambridge Manner
5. Middle College
7. Educating the Underprivileged
8. Invention and Entrepreneurship

Objective 4 (Research-Oriented Graduate Center) was excluded because it was not felt to be attainable at this time and that there would be too much competition from such schools as M.I.T. The Committee rejected Objective 9 (General University) because they felt student support for this was mainly due to a desire to facilitate shifting to a different major field. The faculty Planning Committee felt that combining with Clark as a way of achieving a general university would not be an answer because there was no assurance that the simple act of combining would solve Tech's problems, there was a problem with the distance between the two schools, and that colleges which had combined had had problems combining departments. Objective 6 (Bachelor of Science Degree in Technology) was excluded because no one seemed to want Tech to become that type of a school.

According to Professor Shipman, this proposed program is unique. He did say that there were "precedents for any part of it," mentioning that one public high school in New York City had gone to an unstructured curriculum, but added that no program in any technical school has this orientation towards the "humane technologist."



# Admissions:

## *An Important Role*



**Donald F. Berth '57**

Don received his BS and MS degrees in Chemical Engineering from W.P.I. in 1957 and 1959 respectively. Since graduation he has been at Cornell University for a majority of the time, holding positions as Assistant to the Dean of Admissions, Director of Admissions in the College of Engineering, and Administrative Assistant in the College of Engineering. At present Don is Director of College Relations, College of Engineering, at Cornell and he is also National Chairman of the Alumni Admissions Program for Tech.



**Kenneth Nourse**

Ken is presently Associate Dean of Student Affairs and Director of Admissions at Tech. He received his Bachelors Degree from Middlebury in 1952 and became Assistant Director of Admissions at Clarkson College of Technology in 1953. In 1957 he moved to Rochester Institute of Technology as Director of Admissions, but he returned to Clarkson one year later as Director of Admissions. He held that position until 1965 when he joined the staff of W.P.I. as Associate Dean of Student Affairs and Director of Admissions.



## PART I:

# A VIEW FROM WITHIN

by  
KENNETH NOURSE

"DO YOUR THING '73" . . . so reads the pin handed to each member of the freshman class during registration. Whether or not they do will in no way remove the class from its position of being the largest freshman class in the history of the college. On September 8 we registered 637 of them. We were looking for 500. We had an overrun. In September 1968 we were looking for 450 freshmen and came in with 360. We were shy by 90. In one year, we increased freshman enrollment by a whopping 80%. Why?

The summer of 1968 was particularly long and particularly hot for Admissions. It was agreed that a repeat of the low frosh enrollment of 1968 would be unacceptable . . . a euphemism for disastrous. An Admissions game plan was developed in outline form identifying five general areas and encompassing 27 specific approaches. The plan was reviewed with the Trustees at the Worcester Club in October 1968. It was suggested that if the plan worked in its entirety we might have an overrun. Trustee Fran Harvey commented that such a problem would be welcome.

It is difficult to single out particulars because we were operating with so many variables. However, I can mention some educated guesses that will probably stand up. Our financial aid allotment was increased substantially. This was extremely important because it helped us regain a competitive position. We were able to make it possible for more of the better students to come. We were slipping badly in this area. The tuition shows a recent history of increasing on alternate years, but the financial aid allotment remained static. Hence, we were regressing. We now have an understanding that financial aid is a critical factor in the admissions activity and hope we shall be able to maintain our regained momentum.

The Early Decision program was given special attention and the number accepted under this plan more than doubled from a year ago . . . 139 as opposed to 60. Financial aid was offered to this group in sizeable amounts for the first time. Highly qualified candidates with or without need who indicated that W.P.I was a strong first choice were "in the fold" as early as December 15.

The number of "risk" students was doubled to 30. This is a faculty-approved program to admit X number of candidates who appear to be statistically unacceptable but who, through a particular achievement or for one of a number of subjective reasons, seem desirable. Data on this group in the Classes of '71 and '72 indicates that 60+% are

working successfully toward a degree. In the Class of '71 (based on four semesters) the C.Q.P.A.'s range from 1.46 to 2.99. In the Class of '72 (based on two semesters) the C.Q.P.A.'s range from 1.75 to 3.44. This is a most interesting Admissions approach because it tends to prove that we should not overrate such things as College Board scores and counselor recommendations. All these students were encouraged to participate in a new five-week summer program (we called it Pre-College Study) of compensatory work in the verbal and math areas. The remaining members of the class were invited, but not encouraged, to participate. Twenty students were ultimately involved. Their experience will be carefully measured as they progress through the freshman year. As soon as meaningful data has been assembled, perhaps a report will be presented.

Our new degree programs and increased flexibility in the freshman curriculum have given us broader appeal. Many candidates who feel that a science-oriented education is timely and relevant are unable to pick specific programs of study so early in their educational careers. Our general to specific approach is very saleable and very sensible. The current flexibility available within the general boundaries of scientific orientation seems to be very appealing. Parents paying a tuition of 2,400 American dollars per year are pleased that there is lateral movement available. Guidance counselors, long used to the vicissitudes of teenage thinking, nod their heads in agreement when we explain our flexibility. But, most important, the bright, sensitive, articulate student seems to be appearing in Boynton Hall for a personal interview in greater numbers. If we can land some, and we shall, the faculty will find it timely to improve our climate for learning.

There is reason to believe that our required personal interview brought many more prospective students to the campus than a year ago. It may sound like schmaltz, but this campus does a pretty fair job of selling itself. In comparative terms, the place is immaculate. The maintenance people do an outstanding job and it is noticed by visitors. There is definitely a warm and friendly atmosphere throughout and in spite of our new age of liberalism it is obviously impressive. To give you some perspective, I quote statistics relative to campus interview traffic. The personal interview was not required for the Class of 1972. Between May 1967 and May 1968 we conducted 994 campus interviews. We then required a personal interview for the Class of 1973. From May 1968 to May 1969 we conducted 1,378 campus interviews . . . a 45% increase. We believe the interview serves three positive purposes:

1. it brings the candidate to the campus
2. it gives us a chance to explain our position in detail
3. it serves as a quasi-declaration of intent on the part of the candidate.

I do not mean to infer that all was peaches and cream, but I more than infer that differences were resolved with-

out violence or without any interruption of the educational process. It is my observation that whoever is paying the tuition of 2,400 American dollars per year is pleased about that, too.

I am certain that there are other factors, but I cite these as major. As we set our sights on the Class of 1974 which will number about 550, we have already introduced a new variable in the form of a re-organized Alumni-Admissions Counselor program. It is intended to affect the quality and not the quantity of the Class of 1974. On paper, Bill Elliott and Don Berth have constructed a well-oiled piece of machinery. A year from now perhaps we shall be given the opportunity to report on its progress or lack of it.

Looking to the future we hope to continue working closely with the Faculty Committee on Disadvantaged Students chaired by Prof. Bourgault and the Ad Hoc Committee on Admissions chaired by Prof. van Alstyne. Both committees are proving to be very desirable reaction groups to ideas conceived in the Admissions Office.

## PART II:

# ALUMNI INVOLVEMENT

by

DONALD F. BERTH, '59

W.P.I. alumni may often feel that the only support they can give their alma mater is through their checkbooks. But another, equally significant kind of support may be provided by participation in one of the most critical activities of the Institute — the recruitment of quality students. To this end an alumni secondary school organization has been established. Its regional chairmen will hopefully serve as spark plugs; they will be responsible for organizing and sustaining an *effective working committee of alumni*. In the following paragraphs I shall try to outline the need for and the nature of alumni support in this most vital effort.

W.P.I. is essentially a specialist college, emphasizing undergraduate programs in the physical sciences, mathematics, and the major fields of engineering. In the past fifteen years there has been little or no increase in national student populations enrolled in these subject areas. Consequently, since college populations have more than doubled in this period, the proportion of students in these areas has been halved. At the same time, the number of undergraduate colleges offering work in the subject areas which Tech offers has increased by 25 percent.

These facts spell a number of consequences. First, it is harder to find a high school student who is interested in science or engineering than it was fifteen years ago. Second, it is harder to sell him on a private college in view of much improved state university programs in these areas. Third, he

is likely to cost more in financial aid than he did fifteen years ago.

W.P.I. has an outstanding admissions staff and a quality education. But, as many Tech men who have spent years in informal secondary school recruitment efforts can attest, it is still the localized, personal interest that an alumnus can give to a particular student that counts in the long run — catalogs, campus visits, and admissions officers interviews notwithstanding.

For the past seven years some of my professional attention has been directed to student recruitment for Cornell's College of Engineering. And one lesson is clear. The best schools owe much to the devotion and skill of alumni who seek and then sell the best prospects on the virtues of their alma mater and its programs. While the size of the alumni body, its geographical diversity, and a widespread public knowledge of a college all help its recruitment efforts, time and again I have witnessed the loss of valuable recruits because alumni were not "working" their areas as hard as other colleges were. On other occasions I have seen colleges win applicants because of efforts by enthusiastic, knowledgeable, honest, and skillful alumni.

The competition among alumni groups in the field is keen. And because of the increased organizational sophistication of many of these groups, it is essential that W.P.I.'s alumni get busy to gain for Tech its share of the best talent.

The alumnus whose participation as a committeeman is desired is the one who wants to lend a hand but is not sure of the best way to do it. Many have recognized the importance of student recruitment and, with little guidance or support, have already become involved in sponsoring dinners for area guidance counselors and helping in the interviewing of Tech applicants.

We need more men who are enthusiastic about W.P.I. and W.P.I. *today*. Not the college that they graduated from in 1934, 1948, or 1957, but *W.P.I. today*. This does not mean that recent graduates will be best as committee members, but that homework will be required. The alumni secondary school organizational framework will provide regional workshops for alumni at least once a year.

We need men who are genuinely interested in young people (both men and women) and who would like to be of service to those who might profit from their college experiences. And we need men who can seek out prospective Tech students, not perfunctorily, but imaginatively, in such a way that admissions representatives will find audiences acquainted with W.P.I. when they visit secondary schools.

Alumni in the field can be instrumental in multiplying efforts in student recruitment by several orders of magnitude. The general regard for W.P.I. alumni by secondary school personnel is of obvious value. By becoming well acquainted with the teaching and counseling staffs — particularly with the math and science teachers and college counselors — of a particular school, an alumnus can make his



name and presence synonymous with W.P.I. He can seek out superior secondary school prospects and encourage them to consider W.P.I. if their educational interests can be served through one of the Institute's programs. In addition, he can assist the W.P.I. Office of Admissions in the interviewing process by exploring and assessing the non-intellectual qualities of a candidate. He can sell W.P.I. to accepted candidates by personal follow-up and get-acquainted programs where numbers warrant.

Alumni have an important stake in the well being of their alma mater. If we do not see to it that more and more of the very best young minds and young leaders go to W.P.I., who will? And who will insure the value of our own degrees?

I hope that when you may be contacted by your area's regional chairman, you will be ready to say yes to his call for help.

## ORGANIZATIONAL PLAN OF ACTION

### Alumni Secondary School Organization

The first priority of the Alumni Secondary School Organization is to develop a quality organization that is prepared to do some work. Casual and ill-planned efforts yield complementary results. At the outset, the organization's efforts will be in areas where W.P.I. is known and where alumni live in some concentration. In some instances these regions will approximate chapter boundaries; in others they will transcend these boundaries. In no organizational way are the efforts of the secondary school organization tied to those of the chapters.

*Executive Secretary:* William Elliott, '66, Assistant Director of Admissions

The executive secretary is the contact man at W.P.I. for planning, staffing, and coordinating all "field efforts." He will:

1. plan the annual workshops for regional chairmen and plan and schedule workshops for regional committeemen to coincide with admissions staff visits.
2. have necessary materials (brochures, posters, flyers, etc.) prepared as required to maximize recruitment effectiveness.
3. in essence, represent W.P.I. in all planning and coordination of alumni efforts and provide the on-campus continuity required to sustain this volunteer, part-time effort.

#### *Regional Chairmen:*

Their responsibilities include:

1. seeking W.P.I. alumni as committeemen.
2. planning regional workshops (assisted by W.P.I. admissions personnel).

3. planning at least one luncheon or dinner meeting for guidance and/or teaching staffs in specific areas of their region annually.
4. scheduling at least one major student recruitment meeting in each area of their region each year (coordinating and complementing ongoing programs of the chapters, the Society of Families, and the admissions office).

Regions	Regional Chairmen
Boston and North Shore	to be announced
Boston West Suburbs and South Shore	Charles Frary, '34
Connecticut Valley (Hartford and Springfield)	Henry Nowick, '56
Rhode Island	Robert Dunklee, '40
Northern New Jersey	Edward Peterson, '43
Southern Connecticut (Bridgeport, New Haven, Stamford)	Charles Walters '55
Long Island	James Adams, '49
Mid-Atlantic (Baltimore Washington, D.C.)	Walter Bank, '46
Delaware Valley (Philadelphia, Wilmington)	Thomas Flynn, '30
Capital District (Albany, Schenectady, Troy)	Robert Fulmer, Jr., '51
Mid-West (Chicago, Milwaukee)	Leon Bassett, '51
Western Pennsylvania	Ken Parker, '61
Eastern Ohio	David Pratt, '56
Upstate New York (Buffalo, Rochester, Syracuse)	Don Girard, '46
Michigan	Edmund Judd, '50
New York City and Westchester County	to be announced

Concerned alumni will provide the "grass roots" contact for W.P.I. which will determine whether this secondary school student recruitment effort is a success or failure. The committeemen in each region (the number will vary depending on alumni concentration and secondary schools to be serviced) should become thoroughly familiar with the secondary schools in their area. About the one or two for which they will be responsible, they should know the teachers, counselors, and the outstanding juniors each year. The presence of each of these committeemen in a secondary school should be synonymous with the presence of W.P.I.

Won't you beat your regional chairman to the punch by writing to him (care of Bill Elliott, Admissions Office, W.P.I.) and telling him you can be counted on for support?

# ANNUAL ALUMNI FUND REPORT — 1968-69

The following is a summary of the 1968-69 Annual Alumni Fund. Although the percentage of alumni participating was low — only 34% of our alumni contributed — a new record for individual gifts was set with a total of \$119,822 being contributed. In addition \$14,547 was contributed by companies with matching gift programs, \$132,124 was contributed to the college as unrestricted gifts, and \$245,753 was contributed as alumni bequests. Thus the total of *all* alumni giving to Worcester Tech for the period 1968-69 was \$512,246.

## MEMBERS OF CLUBS

### THE PRESIDENT'S CLUB

Earl C. Hughes, '14; Frederick R. Butler, '20; William E. Hanson, '32; Arthur E. Smith, '33; James J. Clerkin, '45.

### THE DEAN'S CLUB

E. Donald Beach, '11; Arthur B. Schofield, '13; Ralph M. Johnson, '15; George W. Smith, Jr., '15; Moses H. Teaze, '17; Weston Hadden, '22; Wayne E. Keith, '22; J. Kendall Fullerton, '29; Arthur W. Knight, '29; Carl W. Backstrom, '30; Francis S. Harvey, '37; Charles C. Bonin, '38; George W. Knauff, '41; Irving James Donahue, Jr., '44; Robert C. Wolff, '51.

### THE JOHN BOYNTON CLUB

Frank S. Nutting, '00; James J. Shea, '12; Edmund K. Brown, '13; Frank G. Gifford, '16; E. Leland Durkee, '19; George R. Rich, '19; Helge S. Johnson, '24; Luther B. Martin, '25; Milton E. Berglund, '26; Dwight E. Jones, '28; Russell C. Wiley, '29; Aram Kalenian, '33; Leonard G. Humphrey, Jr., '35; Frederick W. McIntyre, Jr., '35; Richard F. Burke, Jr., '38; Robert M. Taft, '38; Robert A. Muir, '41; Leonard H. White, '41.

### THE CENTURY CLUB

William A. Jordan, '02; Alfred E. Rankin, '04; Edwin M. Roberts, '04; Harold B. Larned, '05; James E. Smith, '06; Percy M. Hall, '07; Fritz A. Hedberg, '07; Arthur J. Knight, '07; Percy C. Smith, '07; George A. Barratt, '09; Oliver B. Jacobs, '10; Daniel H. Reamy, '10; Edmund M. Flaherty, '11; G. Allan King, '11; Earl W. Gleason, '12; Fred G. Munson, '12; Wilfred L. Peel, '12; Frederick S. Carpenter, '13; George C. Graham, '13; David G. Howard, '13; Harry B. Lindsay, '13; J. Arthur Planteroth, '13; Leon H. Rice, '13; Donald M. Russell, '13; Roland H. Dufault, '14; Carl F. Fritch, '14; George Ross, '14; Henry C. Whitlock, '14; Frederick P. Church, '15; G. Noble Davidson, '15; Benjamin B. D'Ewart, '15; Everett Hutchins, '15; Raymond P. Lansing, '15; Edwin T. Warren, '15; Coburn L. Berry, '16; Carl H. Burgess, '16; Leslie J. Chaffee, '16; Roland D. Horne, '16; Harold W. Howarth, '16; Arthur Nutt, '16; Selden T. Williams, '16; Aurelio E. Zambarano, '16; Ronald E. Greene, '17; Herman Hollerith, Jr., '17; Andrew B. Holmstrom, '17; John M. Leggett, '17; Philip C. Pray, '17; Russell H. Smith, '17; John R. Wheeler, '17; Levi E. Wheeler, '17; Edmond E. Moore, '18; Oakley C. Walker, '18; Howard S. Foster, '19; Thomas B. Rutherford, '19; Paul M. Abbott, '20; Arvid E. Anderson, '20; C. Harold Berg, '20; Herbert E. Brooks, '20; Milton W. Garland, '20;

Raymond B. Heath, '20; Burton W. Marsh, '20; Carlton J. O'Neil, '20; Robert A. Peterson, Sr., '20; George L. White, '20; Frank K. Brown, '21; Philip K. Davis, '21; Cyril Israel, '21; William L. Martin, '21; Lyle J. Morse, '21; Paul S. Sessions, '21; Lincoln Thompson, '21; Harold B. Whitmore, '21; Charles I. Babcock, '22; Lawrence K. Hyde, '22; Lloyd F. McGlincy, '22; John V. Russell, '22; Edwin L. Sholz, '22; Edwin B. Coghlin, '23; Wallace C. Hathaway, '23; Percival E. Meyer, '23; Richard Walberg, '23; Edward G. Beardsley, '24; Thomas L. Counihan, '24; Roger A. Fuller, '24; Alfred K. Morgan, '24; John N. Styffe, '24; Donald B. Wilson, '24; David C. Bailey, '25; Charles H. Bidwell, '25; Raymond L. Copson, '25; Henry L. Mellen, '25; L. Ivan Underwood, '25; Richard S. Boutelle, '26; Philip R. Delphos, '26; Charles N. Healey, Jr., '26; Chandler W. Jones, '26; Howard G. Lasselle, '26; Donald F. Sears, '26; Victor E. Hill, '27; Nelson E. Parmelee, '27; Carleton R. Sanford, '27; Ralph V. Karlson, '28; Frederick H. Knight, '28; A. Everett Lawrence, '28; William A. Manty, '28; Alexander L. Naylor, '28; Frederick G. Sandstrom, '28; Lothar A. Sontag, '29; C. Eugene Center, '30; Charles H. Cole, '30; John W. Conley, '30; Clifford B. Ives, '30; Paul B. Morgan, Jr., '30; Daniel F. O'Grady, '30; Fred P. Peters, '30; M. Lawrence Price, '30; Warren C. Whittum, '30; Albert M. Demont, '31; Oliver B. Merrill, '31; Eben H. Rice, '31; Trueman L. Sanderson, '31; Herbert A. Stewart, '31; Oliver R. Underhill, Jr., '31; Robert S. Williamson, '31; William W. Asp, '32; Clement R. Barlow, '32; Dana B. Carleton, '32; Donald J. McGee, '32; Henry B. Pratt, Jr., '32; William F. Reardon, '32; Leon D. Skuropat, '32; Sidney Thune, '32; Waldo E. Bass, '33; Robert E. Ferguson, '33; Harry T. Jensen, '33; Edwin L. Johnson, '33; John A. Birch, '34; Warren H. Davenport, '34; Dwight J. Dwinell, '34; Clayton E. Hunt, Jr., '34; Luther C. Leavitt, '34; Charles W. McElroy, '34; Howard E. Stockwall, '34; Edward J. Abendschein, '35; Raymond J. Quenneville, '35; M. Kent Smith, '35; William R. Steur, '35; Plummer Wiley, '35; Carleton W. Bordan, '36; Harold F. Henrickson, '36; John J. O'Donnell, '36; Stadman W. Smith, '36; Arthur D. Tripp, Jr., '36; Robert C. Wright, '36; Erving Arundale, '37; Philip G. Atwood, '37; Martin G. Caine, '37; Gordon F. Crowther, '37; Morton S. Fine, '37; Charles R. Michal, '37; Richard J. Donovan, '38; Richard M. Elliott, '38; Thomas B. Graham, '38; Raymond J. Perreault, '38; Walter L. Abel, '39; Jack F. Boyd, '39; Wilder R. Carson, '39; William L. Kay, '39; Robert W. Martin, '39; George E. Monchamp, Jr., '39; Billia A. Schmidt, '39; Frans E. Strandberg, '39; Fred N. Webster, '39; Donald R. Batas, '40; William S. Brooks, '40; Malcolm S. Burton, '40; Raymond J. Forkey, '40; Howard G. Freeman, '40; Joseph M.



Halloran, Jr., '40; Russell A. Lovell, Jr., '40; Lawrence C. Neale, '40; S. Merrill Skeist, '40; Stanley M. Terry, '40; Donald T. Atkinson, '41; George A. Cowan, '41; Joseph P. Jurga, '41; Donald F. Palmer, Jr., '41; William C. Richardson, '41; Roy F. Bourgault, '42; Philip J. Hastings, '42; Howard C. Warren, '42; Raymond Wynkoop, '42; Clifton B. Kinne, '43; Herbert Asher, '44; George W. Collins, '44; Nicholas N. Economou, '44; Harrison E. Holbrook, Jr., '44; David M. Field, '44; Fred S. Moulton, '44; Joseph D. Carrabino, '45; Robert M. Edgerly, '45; Anson C. Fyler, '45; Howard D. Gerring, '45; Philip A. Henning, '45; William C. Howard, Jr., '45; Robert E. Scott, '45; George E. Comstock, '46; Edward A. Pendleton, '46; Peter B. Myers, '46B; Allan Glazer, '47; Albert S. Goldberg, '48; Clark L. Poland, '48; Peter J. Dalton, Jr., '49; James M. Genser, '49; Edward A. Luiz, '49; Alfred Strogoff, '49; Burl S. Watson, Jr., '49; John H. Williams, '49; Arthur O. Bouvier, Jr., '50; John P. Burgarella, '50; Robert F. Stewart, '50; Russell W. Waldo, '50; G. Albert Anderson, '51; Martin G. Bromberg, '51; Robert N. Cochran, '51; Frank A. MacPherson, '51; John Marley, '51; Owen Ott, '51; John M. Tracy, '52; Orren B. McKnight, Jr., '53; Anthony J. Ruksnaitis, '53; Richard D. Kirk, '54; Douglas B. MacLaren, '54; Harry L. Mirick, Jr., '54; Walter A. Reibling, '54; Edwin Shivell, Jr., '54; Robert L. Chang, '55; Louis Gaumont, '55; Harold S. Sauer, '55; Edwin B. Coghlin, Jr., '56; John W. Braley, Jr., '57; Edward J. Moineau, '57; Philip M. French, '58; Roger A. Jolicoeur, '58; Marian C. Knight, '58; Peter J. Zanini, Jr., '58; John L. Wheeler, '59; William M. Aitken, '60; Dwight M. Cornell, '60; Benjamin B. Morgan, '60; Arthur W. Kroll, '61; Robert E. Seamon, '61; Nicholas Cotsidas, '62; Keyren H. Cotter, Jr., '62; Joseph V. Buccaglia, '63; Arthur E. Goddard, '63; Robert H. Gowdy, '63; Maurice R. Silvestris, '64; Stanley Szymanski, '64; Ronald G. Greene, '65; Richard B. Nelson, '66; Peter G. Stebbins, '66; Edward J. Ciarpella, '67; Thomas Y. Liu, '67; Charles F. Monnier, '27.

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*Stephen R. Alpert*, *Arthur F. Amend*, Roger V. Bartholomew, Paul B. Cherubini, *Edward S. Ciarpella*, *Joseph J. Cieplak*, *William E. Cobb*, Stephen B. Cotter, *Richard H. Court, Jr.*, Francis L. Dacri, Richard E. Degennaro, *John B. Feldman*, *Peter N. Formica*, *Steven J. Frymer*, *Edward A. Gallo*, Carl E. Gilmore, *Ronald J. Gordon*, *Joseph F. Goulart*, *Frederick P. Helm*, *William R. Hyatt*, Clinton A. Inglee, Frank T. Jodaitis, *Bradford A. Johnson*, *John L. Kilguss*, *Stephen J. Lak, Jr.*, Thomas Y. Liu, Robert E. Lundstrom, Frank D. Manter, *Robert G. McAndrew*, *Edward A. Mendez*, Mukundray N. Patel, Leslie J. Payne, William F. Pratt, *Joseph R. Pyzik*, John G. Rahaim, John S. Romano, James E. Roy, Jr., *Neil M. Shea*, David K. Smith, *John E. Sonne*, Peter H. Tallman, *Robert P. Tolokan*, Elliot F. Whipple, John Pao-an Yang, *Warren B. Zepp, Jr.*

**1968**      353 Members      44 Contributors      **12%**

Arnold J. Antak, Albert J. Attermeyer, Robert E. Balmat, Robert G. Balmer, David C. Baxter, Paul G. Beaudet, Norman A. Bergstrom, Jr., Bruce M. Blades, John M. Burns, Daniel C. Creamer, Robert H. deFlesco, Jr., Robert R. Demers, Michael A. DiPierro, Pentti O. Elolampi, George K. Fairbanks, Robert J. Gallo, Cobb S. Goff, Edward M. Harper, Robert D. Hickey, Joseph F. Hilyard, John H. Holmes, George T. Kane, Charles D. Konopka, Albert A. LaPrade, Carl D. Larson, Michael R. Latina, Andrew A. Lesick, Bruce G. Lovelace, John W. Lovell, Irving I. Mac, John D. MacDougall, Jr., David R. Martin, Robert Meader, Joseph L. Paquette, Roger L. Phelps, Roger W. Pryor, David H. Rice, Peter Saltz, Michael A. Sills, David A. Swerczewski, Richard W. Wallahora, James M. Wendell, Richard A. Westsmith, Frank S. Yazwinski, III.

**Others**

Richard J. Altobelli & Company, Alumni Wives Club, American Optical Corporation, The Carrier Foundation, Inc., Class of 1969, Cutler-Hammer Foundation, Factory Mutual Engineering Corporation, Franklin Square Agency, Inc., George W. Knauff, Inc., Morgan-Worcester, Inc., Dwight J. Potter, Rex Chainbelt Foundation, Inc., Stone & Webster, Incorporated, Textron, Inc., Harry C. Thompson, Vee-Arc Corporation, West Essex Printing Plates, Inc., Agnes S. Wiley, Worcester County Alumni Association Chapter.



CLASS TOTALS—June 30, 1969

Class	Contributors	% Participation	Amount	Class	Contributors	% Participation	Amount	Class	Contributors	% Participation	Amount
1878—1901	9	34	\$462.00	1927	39	44	1,447.00	1949	95	39	2,680.00
1902—1903	8	38	225.00	1928	59	45	2,152.00	1950	72	34	1,856.00
1904	4	50	280.00	1929	50	53	2,595.00	1951	74	38	3,490.00
1905	3	33	130.00	1930	50	42	2,778.88	1952	54	31	1,320.00
1906	4	29	180.00	1931	50	42	1,994.57	1953	55	31	1,389.00
1907	13	52	635.00	1932	48	42	2,982.93	1954	45	31	1,408.00
1908	12	48	255.00	1933	58	46	3,258.00	1955	40	30	1,078.00
1909	10	42	320.00	1934	58	49	2,002.00	1956	44	29	920.00
1910	13	41	583.00	1935	57	43	2,416.00	1957	61	29	1,666.00
1911	10	37	887.25	1936	40	36	1,625.00	1958	60	28	1,650.75
1912	21	45	1,116.00	1937	46	40	2,193.49	1959	62	24	1,287.00
1913	23	49	1,735.00	1938	61	45	2,755.06	1960	73	33	1,646.00
1914	25	51	1,755.00	1939	58	42	2,410.00	1961	71	25	1,659.75
1915	30	73	2,715.63	1940	63	40	2,139.00	1962	52	21	891.00
1916	30	41	1,811.00	1941	57	37	3,239.00	1963	59	24	1,307.00
1917	39	50	1,990.00	1942	66	41	1,824.75	1964	43	15	878.00
1918	19	37	560.00	1943	60	43	1,175.00	1965	48	16	866.00
1919	33	79	8,504.80	1944	74	47	3,965.00	1966	39	13	803.00
1920	35	48	2,637.75	1945	54	52	2,716.00	1967	43	13	633.00
1921	32	49	1,415.00	1946	33	26	1,100.00	1968	44	12	684.00
1922	44	50	2,445.00	1946B	24	22	637.00	Hon. & Others	21		4,602.00
1923	34	48	1,240.00	1946C	1	8	25.00	Totals	2,928		\$119,822.61
1924	32	43	1,727.00	1946D	17	30	445.00	Matching Gifts			14,547.82
1925	25	33	1,368.00	1947	24	32	587.00	Grand Total			\$134,370.43
1926	53	43	2,055.00	1948	65	36	1,613.00				

DISTRICT TOTALS—June 30, 1969

District	No. in District	No. of Gifts	Amount Received	1968 - 69		1967 - 68	
				% Participation	Average Gift	% Participation	Average Gift
Berkshire . . . . .	67	22	\$ 630.00	33	\$28.50	35	\$29.20
Boston . . . . .	770	269	10,924.00	35	40.60	38	34.84
Central New York . . . . .	102	37	1,180.00	36	31.90	28	35.68
Chicago . . . . .	108	29	1,115.00	27	38.40	30	65.39
Cincinnati . . . . .	44	14	380.00	32	27.00	26	21.61
Cleveland . . . . .	97	47	1,601.75	49	34.25	42	46.50
Connecticut Valley . . . . .	323	105	4,391.25	33	41.70	26	38.84
Detroit . . . . .	86	31	1,110.00	36	36.00	41	37.74
Hartford . . . . .	578	218	8,346.00	38	38.00	41	31.33
Hudson-Mohawk . . . . .	120	35	1,846.07	29	53.00	37	23.08
Los Angeles . . . . .	231	68	2,716.00	29	40.00	28	40.04
New Haven . . . . .	378	130	4,622.00	35	35.50	28	37.96
New York . . . . .	528	171	8,363.06	32	49.00	27	47.38
North Shore . . . . .	270	82	2,702.25	30	33.00	27	34.50
Northern California . . . . .	138	55	2,315.75	40	42.20	39	34.75
Northern New Jersey . . . . .	447	202	7,475.49	46	36.70	43	39.52
Pacific Northwest . . . . .	30	9	552.50	30	61.80	19	55.00
Philadelphia . . . . .	367	154	5,793.00	42	37.50	31	39.35
Pittsburgh . . . . .	96	61	3,267.93	63	53.45	61	45.68
Rhode Island . . . . .	239	135	2,831.00	57	20.90	36	24.29
Rochester-Genesee . . . . .	84	36	1,170.00	43	32.50	47	32.37
Southeastern . . . . .	111	38	1,181.50	34	31.30	31	33.26
Washington . . . . .	261	116	4,728.00	45	40.70	31	33.50
Western New York . . . . .	77	26	910.00	34	35.00	26	24.25
Worcester . . . . .	1,324	429	17,927.43	32	41.90	27	39.14
Out of District . . . . .	1,813	386	17,120.63	21	44.30	20	49.69
Others . . . . .		23	4,622.00				
TOTALS . . . . .	8,689	2,928	\$119,822.61	34%	40.58	31%	41.43

# UNDERGRADUATE VIEWPOINT

by

GLENN WHITE, '71, Feature Editor,

*The Tech News*

An engineering college has often struck me as having a split personality. It teaches science and engineering, which are basically innovative and constantly seeking a better way to do something or produce a better product. But the engineering college itself seems resistant to change and afraid of innovation, in the face of growing signs that engineering education is simply not working. The old saying "Those who can, do; those who can't, teach," comes into mind, and one reflects that perhaps that could be the trouble. The engineering college may be run and taught by engineers who can't innovate (and therefore are failures as engineers), who can't look at a new idea objectively and judge it on its merits without dismissing it because it is different.

I don't really believe the above, but, with the publishing of "The Future of Two Towers — Part III: A Model," Tech is now in a position where the above hypothesis will be tested and where we find out if this college community can look objectively at a vastly different educational system and analyze it; not on the basis of what has been, but on the basis of what could be. The model suggested by the Faculty Planning Committee deserves neither our blind rejection nor blind acceptance, but rather careful deliberation by the entire Tech community on whether it is the best plan and, if so, how best to implement it.

The plan appealed to me, although I have some reservations to parts of it (for example, how could a person majoring in theoretical mathematics do advanced - level project work of the

humanistic-technological type?). Overall, though, the plan impresses me, mainly because it confronts so many of the problems in society today.

The Planning Committee's model would deal with the present feeling in so many engineering students that their courses aren't relevant to their future as engineers. Under the proposed system, the student selects his own courses and at the same time does project work. The project work would give him an idea of what he needs to know in his particular field and he takes what to him are relevant courses, that he now knows he needs.

The "humane technologist" is becoming more and more necessary every day. Since the 19th century, the technologist had flourished in this country and has produced an affluent society unimaginable a hundred years ago. Unfortunately, the affluent society is not satisfying many people. The growth of technology has produced a society where one feels like an IBM card, where pollution and violence is making the Great Society the Ugly Society, and where starvation exists not far from low-cholesterol diets. The age of Science is ending, the age when one could trust blindly in Science for the salvation of the human race. A new age is dawning, in which men realize that science and technology is only a tool, that technology is neither good nor bad in itself, that only man is, and that man will have to direct technology (and not simply let it grow like Topsy) to produce not only affluence and more affluence for the majority, but a superior way-of-life (not necessarily wealthier) for all.

To do this, mankind will have to re-

late science and the humanities. Unfortunately, liberal arts students and graduates seem to be in a revolt against science, in which they want nothing to do with technology. The science and engineering student must then be the one to cross over and become familiar with the relationship between science and society. And what better way to make them familiar with that relationship than to confront them with actual situations involving this, as the report so well pointed out.

The abolishment of the academic departments may well lead to a fundamental change in scientists and engineers. No longer would a person be a physicist or a chemical engineer. Rather, he would be a scientist or engineer studying optics or an engineer studying chemical processes. The old lines of academic disciplines, which divided scientists and engineers into almost arbitrary classifications and narrow fields of interests and which are already being increasingly crossed, would be abolished.

A sense of boldness impresses me as I think of what the model could result in. We will be venturing, if we accept the model, into an educational system that is unique, into, actually, the unknown. There is danger involved, of course. Perhaps we cannot attract the money to maintain the program. Perhaps the graduates of American high schools will not be able to adjust to the proposed unstructured curriculum. But what is the alternative? Can we continue as we are now, safe for the moment in our structured framework, which no one likes?

I remember one evening this summer watching men walk on the moon, men there because a man had the boldness to say, "I believe this nation should permit itself to achieve the goal, before the decade is out, of landing a man on the moon and returning him safely to earth," because scientists and engineers and a nation (actually two) had the boldness to venture into the unknown. It is time that we applied the same boldness to technical education and to the problems of society.



# IN MEMORY

**Leo S. Jansson,  
Trainer and Equipment Man**

To many alumni, Leo Jansson was just another name on the football program at Homecoming, but to the Tech athletes and students who have graduated since 1959, his name means much more. It is these people who know how deeply Leo felt about Worcester Tech and, above all, "his" athletes.

Bob Pritchard, head of the Athletic Dept., described him best when he said, "Leo was a unique individual; he never thought first of himself but always, and I mean always, of the other person. He spent untold and unheralded hours in helping a boy get back into shape. He went far beyond the call of duty in working with Tech athletes."

"He had a unique personality; he was never harsh or unfair, and always wore a smile. He was a very effective trainer because of this, and I'm sure that hundreds of Tech athletes can recall helpful kind acts that Leo had performed for them. His loss is immeasurable."

Leo was born in West Sutton, Mass. and served for 20 years in the Navy. During his Navy career, he was stationed at the Worcester Reserve Training Center several times. During World War II he was with the First Marine Division and participated in numerous landings, receiving five battle stars. Leo served as a pharmacist's mate and joined Tech four days after he completed his Navy career in 1959. Since then he had been healing, both physically and mentally, his Tech



*Leo S. Jansson  
1921-1969*

athletes.

He was a member of the Quinsigamond Lodge of Masons and was a 32nd degree Mason. He was also an honorary member of the Alumni Association.

He leaves his sister, Mrs. Ruth Hatfield; two brothers, Henry R. and Arthur J.; and several nieces and nephews.

The Tech athlete has lost a good friend, and his friendship will be deeply missed. Perhaps the largest void will be the absence of the familiar voice in the training room: "Hi ya, kid, how's it goin'?"

## **Albert Leslie Bliss '02**

*Albert Leslie Bliss, '02, of 30 Crofut St., Pittsfield, Mass., died at his home on May 15, 1969 at the age of 88.*

Born in W. Brookfield, he attended Worcester English High School and studied electrical engineering while at Tech.

Upon graduation, he taught at Pratt Institute of Brooklyn briefly, and in 1916 moved to Pittsfield to work for General Electric. He retired in 1944.

He was long active in community affairs. In 1948, Mr. Bliss was given Scouting's highest honor, the Silver Beaver award. At that time he was called "one of the most valuable" men in the Scouting movement. He formerly served on the Berkshire County Boy Scout Council Board.

In 1949, Mr. Bliss became the first Berkshire County member of the Society

for Prevention of Cruelty to Children to serve on the state board. In 1964, he was presented with the John B. Whiteman award in recognition of his "outstanding service" to the society. In his 25 years of service he had held all but one major office and had served on many committees.

Mr. Bliss was active in the Community Fund and was chairman of its budget committee. He also served as a director.

He leaves two daughters, Miss Elizabeth B. Bliss and Mrs. Frederick H. Merrill; and four grandchildren.

## **Ernest O. Wheeler, '02**

*Ernest O. Wheeler, '02, died December 6, 1968, at Jordan Hospital, Plymouth, Mass. He resided at 14 Old Bridge Rd., Hanover, Mass.*

He was born October 17, 1878, in

Marlboro, Mass.; where he attended Marlboro High School. While at Tech he was a member of the Society of Automobile Engineers.

After leaving Tech he taught at vocational schools in Connecticut and Berlin, Mass.

He was past president of the Wollaston Golden Age group, former vice commodore of the Squantum Yacht Club, and a member of the Hanover Grange and Senior Citizens. In the early 1900's he built automobiles. One of his cars, which was called the Wheeler Runabout, is now in the antique auto museum in Athol, Mass.

Husband of the late Florence B. (Allen) Wheeler, he is survived by a daughter, Mrs. Louise B. Morse; a sister, Miss Eva B. Wheeler; two grandchildren; and four great-grandchildren.

## **George Daniel Goodspeed, '03**

*George Daniel Goodspeed, '03, of Holiday Point Rd., Sherman, Conn., died on December 20, 1968.*

He was born February 3, 1880, at Gardner, Mass. and attended Gardner High School. When he left Tech he became a designer for Bullard Machine & Tool Co., Bridgeport, Conn. He left there to take a position as plant engineer at Heywood Wakefield Co., Gardner, Mass. In 1935, he took a position with the Mahoney Chair Co. as a mechanical engineer until his retirement in 1955.

In 1912 he married the former Bernice E. Lucas. They had one daughter, Barbara.

## **Albert Willis Darling, '04**

*Albert Willis Darling, '04, of Street Rd., Kennett Sq., Pa., died on May 21, 1969. Born on September 7, 1881, in Worcester, he attended Worcester English High School. While at Tech earning his degree in Mechanical Engineering, he was a member of Sigma Alpha Epsilon Fraternity.*

Upon graduation he became a mechanical engineer for Graton & Knight Mfg. Co. In 1926 he took a similar position with Norton Co. until he was employed in 1932 by Reed Rolled Thread Die Co. He became plant engineer and director there until his retirement in 1953.

Husband of the late Marjorie (Elder) Darling, he is survived by a son, A. Bennett; a sister, Mrs. Robert C. Benchley; a brother, Syrus; two grandchildren and two great-grandchildren.

## **Alfred Ernest Rankin, '04**

*Alfred Ernest Rankin, '04, of 18 Norton St., Worcester, Mass., died August 21, 1969, at Hahnemann Hospital, Worcester.*

Born December 31, 1883, in Worcester, he attended Worcester public schools until his entrance to Tech in 1900. While at Tech he studied mechanical engineering and was a member of Phi Gamma Delta Fraternity.

After his graduation, he joined the U.S. Envelope Co. of Worcester. From 1906 to 1914 he worked at several jobs in the New York area before returning to U.S. Envelope. From 1914 to his retirement in 1949, he was the director of engineering.

He was a former member of the Worcester Common Council, a former Worcester Public Library trustee, a former director of the Worcester Chamber of Commerce, and former president and formerly director and treasurer of the Worcester YMCA, a trustee and honorary trustee of Peoples Savings Bank, past president of Worcester Kiwanis Club, Worcester Community Council, and Southern Worcester County Health Association.

He was also a member of Worcester Country Club, the University Club, the Bohemians, Worcester Economic Club, Worcester County Republican Club, Worcester County Mechanics Association, Appalachian Mountain Club, and the Newcomen Club. He was elected a 33rd degree Mason in 1948.

He leaves a sister, Miss Ethel M. Rankin, with whom he made his home; a niece, Miss Alice C. Rankin; three nephews, John R. Rice, Benjamin B. Rice, and Alfred W. Rice. His brother, William J.A. Rankin, '00, died in 1942

#### Ralph Parker Norton, '12

*Ralph Parker Norton, '12*, of 9 Oakland St., Manchester, Conn., died July 30, 1969, at a Manchester convalescent home.

He was born August 23, 1888 in Manchester. He attended Worcester (Mass.) Academy prior to his entrance to W.P.I. While at Tech he majored in electrical engineering. He also received an advanced degree in 1919 from Tech in the same field. He was a member of Sigma Alpha Epsilon Fraternity.

Since 1931 he was affiliated with the Norton Electrical Instrument Co., where he served as secretary-treasurer until 1954, when he became its president.

He was a member of Manchester Lodge of Masons, and in June of 1963 received his 50-year membership pin from the Lodge. He was a York Rite Mason and a member of the Sphinx Temple Shrine in Hartford, (Conn.). He also was a 55-year member of King David Lodge of Odd Fellows.

Survivors include eight cousins.

#### John Axtell Canton, '13

*John Axtell Canton, '13*, of 43 E. Chestnut St., Sharon, Mass., died July 11, 1969, at Norwood (Mass.) Hospital.

He was born July 12, 1890 in Everett, Mass., and was educated at Chelsea (Mass.) High School. While at Tech he majored in civil engineering.

For 40 years he was with the M.B.T.A., retiring in 1955. He was a member and past Grand Knight of Belmont Council No. 332

K. of C., a member of the Catholic Alumni Sodality of Boston, and a member for over 50 years of the Holy Name Society.

He is survived by one son, John A. Canton, Jr.; and two grandchildren.

#### Nels Albin Nelson, '14

*Dr. Nels Albin Nelson, '14*, a nationally known leader in public health, and founder of the Nesserian Medical Society of Massachusetts, died August 24, 1969, in Crescent City, Fla.

A native of Fitchburg, Mass., he attended Fitchburg High School before his entrance to Tech. While at Tech he studied chemistry which led him, upon graduation, to a medical degree from Long Island College and a master's degree from Johns Hopkins School of Public Health.

He devoted his life to public health as director of the American Red Cross Tuberculosis Commission in Sicily, after which he joined the Massachusetts Dept. of Public Health. While in this capacity he was associated with the Harvard School of Public Health, Tufts University, and Simmons College. In 1942 he was appointed deputy state health officer in charge of venereal disease control in the Maryland Dept. of Health. During this period, he was a lecturer at Johns Hopkins Medical School.

He leaves three sisters, Miss Florence A., Mrs. Eric J. Anderson, and Mrs. Kenneth H. Wyatt.

#### Major Nathan Carlos Avery, '15

*Major Nathan Carlos Avery, '15*, died June 8, 1969, in Long Beach, Calif. He resided at 233 Canada West, San Clemente, Calif.

Born February 7, 1893, in New Britain, Conn., he was educated at Westfield (Mass.) High School. After leaving Tech he received a Bachelor of Philosophy degree from Yale University. He had 20 years of service in the Navy and Army Reserve. He was supervisor, of plant and maintenance at the Connecticut Veterans Home and the Southbury Training School.

He was a member of the American Legion, Rotary Club, and was a Mason. He is survived by his wife, the former Myrtle Cox; a daughter, Mrs. Harriet A. Day; a brother, Sherman F.; two sisters, Mrs. Arthur D. Bradley and Mrs. L. P. Forker, Sr.; three grandchildren and several nieces and nephews.

#### Clifton Perry Howard, '15

*Clifton Perry Howard, '15*, of 1147 Main St., Holden, Mass., died July 22, 1969.

He was born September 18, 1891 in Worcester, where he attended Worcester English. He studied mechanical engineering while at Tech. He was elected to Tau Beta Pi and also worked on the college yearbook.

He had retired in 1957 from the Rock-

wood Sprinkler Co. where he had been employed since his graduation from Tech. He was factory manager at the time of his retirement.

He was a former chairman of the Worcester Chapter of A.S.M.E. and a former director of the Worcester Economic Club and the Worcester Safety Council. He was a former president of the City Missionary Society, the Worcester Engineering Society, and the Worcester Kiwanis Club.

He leaves his widow, the former Juniata Burlingame; two daughters, Mrs. Richard S. Day and Mrs. Harry W. Burns; six grandchildren; and one great-grandchild.

#### Leonard Maynard Krull, '16

*Leonard Maynard Krull, '16*, of Vinal Hill Rd. in Westboro, Mass., died July 14, 1969.

Born in Molkwerum, Netherlands, he moved to the United States at the age of five. After two years of high school, he attended Mt. Hermon School for two years before coming to Tech. While at Tech Mr. Krull was a member of the Glee Club. He received his B.S. in mechanical engineering.

After his graduation, he went to work for Norton Co. in Worcester. While in Norton's employ, he spent two years in French, British, and Dutch Guinea in search of bauxite.

In November of 1922, with two associates, he founded the Bay State Abrasive Products Co., which later became Avco Bay State. As the success of the firm grew, Bay State Abrasives became one of the largest industries in its field in the United States. Mr. Krull became Chairman of the Board in 1949 and Honorary Chairman in 1958.

In 1951, Mr. Krull was elected to the Board of Trustees at Tech and was elected to life membership in 1956. In 1967, he was honored by his Alma Mater when he received an honorary doctor of engineering degree.

Mr. Krull had served as vice-president and director of the Westboro National Bank, trustee of the Westboro Savings Bank, and, for 17 years, a member of the town Finance Committee. He also served on the Westboro Appeals Board.

He leaves his wife, the former Pauline F. Fairbanks; three daughters, Mrs. Ida May Elby, Mrs. Cornelia Hutt, and Mrs. Lenice Hirschberger; two sisters, Mrs. Rintze Haringa and Mrs. Gert Youngsma; and eight grandchildren.

#### Lester Willis Kimball, '17

*Lester Willis Kimball, '17*, of 1894 Palm-as Dr., San Marino, Calif., died instantly of a massive coronary on June 6, 1969 while on vacation in the San Bernadino Mountains.

Born March 14, 1892 in Lynn, Mass., he attended Saugus (Mass.) High School. After



two years at Worcester Tech, Lester transferred to the University of Maine where he majored in economics and sociology. He left the University for two years to serve in the Army Medical Corps during World War I and returned to graduate from Maine in 1919. While at Tech he was a member of Phi Sigma Kappa Fraternity. He was an honorary member of Phi Kappa Phi.

Since his graduation, he had been in the security business, first in New York City and later in Los Angeles.

He is survived by his wife, the former Kate G. Shoaff; a daughter, Mrs. Kate Harris; a son, Robert S.; a brother, Charles F.; a sister, Mrs. Esther Kohlhoff; and seven grandchildren.

#### Winchester DeVoe, Jr., '21

*Winchester DeVoe, Jr., '21, of 203 Kingsley Ave., Mahoning Manor, Danville, Pa., died on November 25, 1968, in Hallandale, Fla. He had been staying at his winter home in Hollywood, Fla., at the time of his death.*

He was born July 29, 1897, in Brooklyn, N.Y., where he attended Manual Training High School. Upon graduation from Tech as an electrical engineer, he worked for General Electric of Schenectady, N. Y. A year later he became the district manager of Pennsylvania Power and Light Co., Danville. Then, in 1930 he established his own insurance and real estate business in Danville.

Mr. DeVoe was active in many civic fraternal organizations. He was a member of Mahoning 516; F&AM; the Caldwell Consistory; the Danville Elks; Danville Moose; and the Friendship Fire Company. He was a veteran of World War 1 where he served in the U.S. Navy. He is past Commander of Danville American Legion Post 40. He was also a member of the Danville Board of Health.

He leaves his wife, the former Catherine M. Koons; two daughters, Mrs. Grant Summers and Mrs. Victor Schwab; one brother, Bryan R. Devoe; and three grandchildren.

#### Carleton Thomas Gilbert, '21

*Carleton Thomas Gilbert, '21, of 32 Wildwood Gardens, Port Washington, N. Y., died May 8, 1968.*

Born March 6, 1898, in Thomaston, Conn., he attended Worcester Academy before earning his degree in electrical engineering in 1921. While at Tech he was a member of Sigma Alpha Epsilon Fraternity and served on the Inter-fraternity Council.

Upon graduation, Mr. Gilbert joined the New York Telephone Co., where he remained until he retired in 1960. While employed there he served as supervisory and project engineer for the Hempstead (Long Island)

branch of the company.

Among his survivors is his son, Carleton T., Jr.

#### Edwin Augustus Stewart, '27

*Edwin Augustus Stewart, '27, of 588 Main St., Agawam, Mass., died June 5, 1969, at his home.*

He was born November 15, 1905, in Worcester, where he attended Commerce High School. While at Tech he earned a degree in electrical engineering. He was a member of Lambda Chi Alpha Fraternity, was on the basketball team, and was captain of the golf team.

Shortly after graduation he joined the General Fibre Box Co. in Springfield, Mass., where he remained and eventually became plant manager.

He is survived by his wife, the former Beatrice Stone; his mother, Mrs. Clara (Lagerstrom) Stewart; a son, Edward A.; and a sister, Mrs. Cyril McQueen.

#### Edwin Augustus Stewart, '27

*Arthur Stanley Marshall, '29, of 797 Grafton St., Shrewsbury, Mass., died at Peter Bent Brigham Hospital, Boston, on March 5, 1969.*

Born November 8, 1908, in Westboro, Mass. he was educated in local schools. While at Tech he was a member of Tau Epsilon Omega Fraternity, which was the original chapter of Sigma Phi Epsilon.

He worked for Savage Arms Corp. of Utica, N. Y., as foreman and product Engineer. In 1950 he joined Crompton and Knowles in Worcester as Superintendent of Maintenance. In 1958 he was made plant manager.

#### Julian Hopkins Ray, '34

*Julian Hopkins Ray, '34, of 1700 Sherwood Rd., Silver Spring, Md., died Sunday, June 22, 1969, at the George Washington University Hospital after a brief illness.*

Born in Framingham, Mass., on August 21, 1912, he was educated in the Framingham School System. He earned his Bachelor and Master of Science degrees at Tech in the field of electrical engineering. While at the school he was a member of Lambda Chi Alpha Fraternity.

He was a nationally known development engineer, and the founder, past president, and chairman of the Board of Directors of Washington Technological Associates Inc., a Rockville (Md.) based research and development company. Mr. Ray was also a director and member of the executive committee of Quanta Systems Corp., which he helped found in 1968.

After serving as a research and electrical transmission engineer at the American Steel and Wire Co., in Worcester between 1935

and 1942, he went to the Applied Physics Laboratory of the Johns Hopkins University in Silver Spring, Md.

At the Applied Physics Laboratory he had important roles in the accelerated development of the proximity fuze during World War II, and later participated in the development of advanced underwater guidance and control. His last assignments at APL were concerned with support and fire control systems for the TERRIER and TALOS guided missiles. In 1950 he left APL to found the Washington Technical Associates, Inc.

He has been an active member of the Science Industry Committee of the Washington Board of Trade, and of numerous other professional, technical, and management societies.

He is survived by his wife, the former Betty J. Gunst of Silver Spring, Md.

#### Leon James Volley, '34

*Leon James Volley, '34, died February 7, 1969, in Union Memorial Hospital, Baltimore, after a long illness. He resided at 1311 Kitmore Rd., Baltimore, Md.*

Born May 23, 1913, at Springfield, Mass., he was educated in St. Petersburg, Fla., before attending W.P.I. While at Tech he belonged to Lambda Chi Alpha Fraternity. After leaving Tech, he attended Strayer College of Accountancy, Washington, D.C., where he received his B.C.S. and M.C.S. degrees.

For several years after his graduation he did general accounting for several firms such as Western Electric Co., Inc., Consolidated Terminal Corp., and Colony House, Inc. The high point in his career came when, in 1945, the partnership of Koetting & Volley was formed. This was an accounting, auditing, and tax firm.

He is survived by his wife, Mary F. Volley; two children, a daughter, Mrs. Harriet W. Schuette, and a son, David C.; and two granddaughters.

#### Everett Leslie Vaughn, '35

*Everett Leslie Vaughn, '35, of 22 Granite St., Uxbridge, Mass., died Saturday, May 31, 1969, in Rutland Heights Hospital. Born in Worcester on September 27, 1912, he was a graduate of Commerce High School. While at Tech he earned a degree in electrical engineering. He belonged to the A.S.M.E. and the A.I.E.E.*

His first job was with Heald Machine Co. as a designer. He then moved and became N.E. district manager of Warner & Swasey Co., Cleveland. Finally he returned to Heald Machine Co. to become their eastern manager of dealer sales.

He was a member of Uxbridge Evangelical Congregational Church and served as its

deacon for several years. He was a member and past patron of Orion Chapter, Order of Eastern Star, and a member of Solomon's Temple Lodge of Masons. He also served as secretary of Boy Scout Troop 22.

He leaves his widow, the former Ruth A. Bassett; a son, 2/Lt. Richard B., '68, stationed at Ft. Bliss, Tex.; two daughters, Mrs. Ruth L. Phillips and Mrs. Susan C. Donham; a sister, Mrs. Viola Cushman; four grandchildren; and two nieces.

Dixon Chapman Burdick, '36

Dixon Chapman Burdick, '36, of Washington, D.C., died on July 22, 1969, at Providence Hospital in Washington.

Born September 17, 1914, in Norwich, Conn., he attended Manchester (Conn.) High School prior to entering Tech. While at Tech he majored in chemistry. He was a member

of the basketball team and Skeptical Chymists.

He was a research scientist at the Navy Research Bureau at Anacostia, Md. He was a veteran of World War II, and a captain in the Naval Reserve.

Surviving are two daughters and three sons; his wife, the former Mary E. King; a sister, Mrs. Phyllis B. Howenson; and a niece, Mrs. Richard Dziadus.

Benjamin Allen Lambert, '40

Benjamin Allen Lambert, '40, passed away in Pittsburgh's Western Pennsylvania Hospital on June 2, 1969. He resided at 101 Algonquin Rd., Pittsburgh.

He was born in Brockton, Mass., March 14, 1918. He earned a degree in chemical engineering at W.P.I. Ben was very active while at Tech. He earned letters in both

football and baseball, was sports editor on the *Tech News* and served on the Interfraternity Council. He was a member of Sigma Alpha Epsilon Fraternity and was honored by election to The Skull.

He originally started work for E.I. duPont de Nemours and Co. and later for the Polaroid Corp. in Cambridge, Mass. He then moved to Arthur D. Little, Inc. of Cambridge where he was a senior engineer. He remained at this firm until 1965, when he was appointed director of market development and planning for Dravo Corp., Pittsburgh.

He leaves his wife, the former Constance Keene, and five sons: Benjamin A., Jonathan K., Christopher G., Alexander D., and Anthony B. He also leaves his mother, Mrs. Deborah (Doane) Lambert, and a brother, Stevens.

## YOUR CLASS AND OTHERS

1917

Former Worcester City Councillor *Andrew B. Holmstrom* was awarded a citation for meritorious service at Quinsigamond Community College's fifth commencement. He served as chairman of the Community College Committee of the Worcester Area Chamber of Commerce which was instrumental in locating the college where it is today. . . *William L.G. Mackenzie* writes, "Still working after 52 years with same company." He is President of Fiske-Carter Construction Co., Greenville, S.C.

1919

Rear Admiral *James E. Arnold*, (Ret.) has recently completed a book called *Hardscrabble Hall*. The book is published by Vantage Press, Inc. of New York who state, "Hardscrabble Hall is a delight to read if only for the story it tells." . . . Rear Admiral *Richard S. Morse* is now fully retired from the U.S. Navy.

1921

We have learned that *Edward Rose* has retired and is now living in Hallandale, Fla. He formerly was employed by Fred S. Dubin Assoc., W. Hartford, Conn., as Chief Sanitary Engineer.

1922

*Kenneth J. Lloyd* writes, "I retired from Turner Construction Co., Boston, Mass., on Feb. 1, 1969, after 47 years as construction engineer on general types of buildings." . . .

*Fred P. Millard* has recently joined the Mogabgab Co., Real Estate and Insurance, in New Canaan, Conn. . . *George A. Walker* writes, "I am now somewhat less 'retired' than I have been in the last three years. A consulting organization that prepares specifications for municipal water distribution and sewage disposal plants here in New Jersey has asked me to handle their electrical power specifications. Officially then I am now a Consulting Engineer in Electric Power . . ."

1923

*Edmond G. Reed* has retired from the Factory Insurance Association in Springfield, Mass. He and his wife now live in E. Boothbay, Me.

1925

*O. Arnold Hansen* has retired from Bell Aerosystems Co. to become a Consultant in Cryogenic Engineering, a field in which he spent 33 years with the Linde Div. of Union Carbide Corp. . . We received a note from *Urban R. Lamay*: "I retired on Feb. 1, 1969, after 43 plus years with the General Electric Co. . . Our retirement plans include visits to our seven children and eighteen grandchildren. . ." . . *Leonard F. Sanborn* is a Sr. Engineer for Fay, Spofford & Thorndike, Inc. and is presently at a project office in Worcester.

1926

We have learned of the retirement of *Henry G. Mildrum*. He leaves The Hartford Insurance Group after a 43-year career. He had

been a Vice-President of the company since 1967. . . *Mabbott ("Mab") B. Steele* has retired after 41 years with Republic Steel Corp., Steel and Tubes Div. He was District Sales Manager for the New York-New England District, Steel and Tubes Div. He is now living in Centerville, Mass. . . *Howard G. Lasselle* has retired after 42 years of service with New England Electric System. He had served as Vice-President and General Purchasing Agent of the New England Power Service Co. since 1958.

1927

We received a letter from *Richard E. Bliven*. He writes, "On December 1, 1968, I retired as Senior Engineer from the New Jersey Power and Light - Jersey Central Power and Light Co. I had been with the company for the past sixteen years." . . . *Victor E. Hill* has informed us that he retired from the Duquesne Light Co. in Pittsburgh on May 1, 1969 after almost 42 years of service.

1928

*Arthur T. Simmonds* has retired from the New England Power Co. after nearly 42 years of service. He was the Director of Hydro Production before his retirement on May 1, 1969.

1929

*Allerton R. Cushman* has retired from the New England Power Co. where he was a Senior Engineer. He and his wife now live in Sedona, Ariz.

1930

*C. Eugene Center* was Chairman of the Program Arrangements Committee in planning for the 1969 Annual Meeting of the American Association of Cost Engineers held in Pittsburgh, June 29 - July 2, 1969. There were 48 technical papers presented in 4 symposia. . . Our sincere sympathy to Her-



bert W. Davis whose wife, Gladys, died suddenly April 23, 1969. His son, Gary, is an instructor at St. Albans School, National Cathedral, Washington, D.C. Herb was elected President of the Industrial Equipment Manufacturers Council, a National Trade Association, at the annual meeting held in Anaheim, Calif. He is Vice-President, Research, at Triumph Machinery Co., Hackensack, N.J. . . M. Lawrence Price, Vice-President and Dean of Faculty at Tech, was recently honored by the ROTC cadet brigade. He was named an honorary cadet colonel in recognition of his leadership of the college since his undergraduate years.

1931

Edward J. Bayon took part in the main program of the spring meeting of the Holyoke (Mass.) Hospital Aid Assn. The topic of the program was "To Save a River." Mr. Bayon, who is presently a director of the New England Water Pollution Assn., discussed what was being done locally to prevent and correct pollution of the Connecticut River.

1932

John W. Greene has been named Vice-President of Public Relations for the Sturbridge (Mass.) Fairgrounds recreational development. He will assume his new position along with his present position as executive director of the Central Massachusetts Chapter of the National Safety Council. . . CF&I Steel Corp. has named Timothy D. Crimmins to the post of Chief Plant Engineer at their Roebing (N.J.) Plant. He previously held the position of Staff Engineer.

1933

Edwin L. Johnson has been elected Vice-President-Engineering and Operating of The Connecticut Light and Power Co. . . Arthur E. Smith, who recently received an Honorary Doctor of Engineering Degree from WPI, has been elected a Term Trustee of Rensselaer Polytechnic Institute. He is President and Chief Administrative Officer of United Aircraft Corp.

1935

Raymond L. Moeller retired March 1, 1969 after 34 years of service with General Electric Co. He began with G.E. upon graduation and spent most of his career with them at their W. Lynn (Mass.) Plant. He was Manager of Professional Employee Relations at the time of his retirement. . . William E. Parker, Jr. has retired as Chairman of the Science Dept. of Wethersfield (Conn.) High School. He also served on the Board of Education in Wethersfield.

1938

It has been announced that Richard J. Donovan will chair the Water and Sewer Board of Winchester, Mass. He is president of R.J. Donovan, Inc. in Winchester. . . Capt.

George B. Cattermole has retired from the U.S. Navy and is now self-employed. He and his family live in Hamburg, Pa. . . John G. Despo is now Manager of Construction for the Chicago District of The U.S. Steel Corp.

1939

Walter L. Abel was elected Vice-President of United Shoe Machinery Corp. in Beverly, Mass. He had previously been in charge of research. . . Leo G. Rourke, Jr. has moved to Martin Marietta in Orlando, Fla., where he is an Advanced Systems Engineer, Senior. . . Roland N. Anderson is a Project Engineer for the U.S. Army Tank Automotive Command in Warren, Mich. . . John W. Hughes is now on the staff of the Oceanography Dept. at the University of California at Berkeley.

1940

Howard G. Freeman has received the "Heart of the Commonwealth Award" from the Society for Advancement of Management at their third annual banquet. President of the Jamesbury Corp. of Worcester, he received the award in recognition of his being "an outstanding business management executive." . . . Benedict K. Kaveckas writes, "I am employed as Chief Mechanical Design Engineer at a recently formed company, Information Transfer Corp., located in Wellesley Hills, Mass. . . " . . . Philip E. Meany has been elected a Director of The Heald Machine Co. in Worcester. He is also serving as Vice-President and Manager of the Bore-Matic Div. . . Lt. Col. Willard R. Terry, Jr. (USAF, Ret.) is an Asst. Prof. of Law at Ferris State College in Big Rapids, Mich.

1941

Charles L. Hoebel is now Manager of Marketing Research with Elliott Co., a Division of Carrier Corp., in Jeannette, Pa. . . It has been announced that Stephen Hopkins has been named Director of Engineering Research and Evaluation at Texaco Research Center, Beacon, N.Y. He was formerly Supervisor of the Combustion Section.

1942

John Ford, Jr. is a Project Superintendent for Peter Kiewit Sons Co. in Richmond, Calif. He and his family live in Corona del Mar. . . William H. Moulton has joined the Phalo Corp. of Worcester as Production Control Manager. He was previously employed by U.S. Steel Corp.

1943

Born: To Mr. and Mrs. H. Henry Ferris, Jr., a son, Jeffere Harold, on January 13, 1969. The Ferris' live in La Jolla, Calif. Nelson M. Calkins, Jr. has been elected President of the Central Massachusetts Chapter of the Massachusetts Society of Professional Engineers. He is presently employed as a Senior Engineer at Norton Co. of Worcester.

In Bridgeport, Conn., Theodore H. Meyer is Manager of Quality Control for General Electric's Accessory Equipment Dept. He and his wife live in Easton, Conn. . . E.I. duPont deNemours & Co., Inc. employs James S. Proctor at their Jackson Lab in Wilmington, Del., as a chemist. . . Jose L. Zaragoza is now a Quality & Reliability Assurance Engineer for the U.S. Navy Dept. of Defense, in Charlestown, Mass. . . Mobil Oil Corp. has named Behrends Messer, Jr. Manager of Marketing Engineering in their New York City Engineering Dept.

1944

Texaco has announced the appointment of Everett M. Johnson as Planning Director (Engineering) in the Scientific Planning Section of the Managerial Div. at Texaco Research Center, Beacon, N.Y. . . Jesse R. Watt is a Research Engineer for the National Highway Safety Bureau. He and his family live in Long Beach, Calif.

1945

Harold D. Fleit is President of Climatrol Industries, Inc., a subsidiary of Worthington Corp. He is also a member of the board of directors of Worthington Air Coils Ltd., Ontario, Canada, and the Air Conditioning and Refrigeration Institute. . . Robert A. Sten-gard is on a special assignment concerning urethanes for CPC International at Moffett Technical Center, Argo, Ill. . . George V. Uihlein, Jr. is now Dean of Men at Loyola College in Montreal, Canada.

1946

Roger H. Brown is a Senior Engineer for FMA Inc., Div. of Cutler-Hammer, Inc., in Los Angeles, Calif. . . Richard H. Merritt, Senior Product Engineer and Manager, abrasive engineering at Avco Bay State Abrasives Div., was chairman of two abrasive machining sessions at the American Society of Tool and Manufacturing Engineering Conference held at the Tool Exposition in Chicago.

1946B

John P. McCoy is a salesman for the firm of Hopper, Soliday, Brooke, Sheridan, Inc. in Philadelphia, Pa. . . Dr. Edward R. Funk, Professor at Ohio State University, was the main speaker at Tech's Honors Banquet for dean's list students. He addressed the students about a "balance" he said is necessary for "healthy nonconformity." . . Paul F. Gorman has been appointed Vice-President and Project Manager of Jackson & Moreland, a Div. of United Engineers & Constructors Inc., Boston, Mass. He had previously headed the Jackson & Moreland power department. . . Robert E. Willis is now with General Electric Co. as a Sales Engineer in St. Louis, Mo. . . Theodore A. Balaska is now Director of Engineering & New Product Development for the Bishop Manufacturing Corp. in Cedar Grove, N.J. . . Paul R. Mul-

laney is a Project Engineer for Revere Copper & Brass in Scottsboro, Ala.

#### 1946C

Philip G. Duffy is a Marketing Manager for Fairbanks Morse, Weighing Systems Div., in St. Johnsbury, Vt.

#### 1946D

Leslie Flood has become Vice-President of Hutton Publishing Inc. of Manhasset, N.Y. He and his family live in No. Kingston, R.I.

#### 1947

Robert Fletcher is an Electronic Engineer for The Federal Aviation Administration, D.O.T., in Washington, D.C. . . The Boeing Co. employs Robert S.Y. Yoseph as an Engineering Manager in Seattle, Wash. . . Two members of the class have received Master of Science degrees: Wilfred L. DeRocher, Jr. from the University of Colorado in Applied Mathematics and Vincent A. Zike from Rensselaer Polytechnic Institute.

#### 1948

Thomas D. Hess writes, "In July, 1968 I was promoted to Director of Engineering, Fuel Injection Equipment. My former title was Chief Engineer, applications. In this new position, the responsibilities cover the design, development and customer application of all fuel injection products of Standard Screw

Co., Hartford Div." . . . Edmund J. Salate is Supervisory General Engineer for N.A.S.A. Electronic Research Center, Cambridge, Mass.

#### 1949

Raymond A. Brandoli has been elected Chairman of the Western Massachusetts Chapter of American Society for Quality Control. He is Manager of Quality Assistance at Studebaker Worthington Inc., Construction Equipment Div., in Holyoke, Mass. . . . Lawrence C. Brautigam is now Vice-President of Diversified Packaging Inc., Kensington, Conn. . . The new Manager-Product Development at Modern Machines Co. in Portland, Ore., is Robert M. Jodrey. . . Daniel L. McQuillan is the new Senior Vice-President of the Aerovox Corp. He will be in charge of their New Bedford (Mass.), Moncks Corner (N.C.), and Hamilton (Ont.) plants. . . Dr. Sidney Baldwin is a Professor of Political Science at California State College in Fullerton. His latest book, Poverty and Politics, has been universally acclaimed by the professional journals in economics, history, sociology, and political science. . . Gordon S. Brandes has moved from Syracuse, N.Y., to become Sales Supervisor for the Northern New England territory for Norton Co.'s grinding wheel sales force. He and his family will live in Topsfield, Mass. . . Robert E.

Miller, Jr. is Division Manager for Connecticut Light & Power . . . Arthur H. Dinsmoor is District Supervisor for Marshall R. Young Oil Co. in Midland, Texas. . . Donald Taylor has resigned as President of George F. Meyer Manufacturing Div. of "Automatic" Sprinkler Corp. of America and has accepted the position of Executive Vice - President of Nordberg Manufacturing Co. in Milwaukee, Wis.

#### 1950

David G. Humphrey is now a Sales Engineer for the Sprague Meter Co., Div. of Textron, Bridgeport, Conn. . . Charles D. Seaver is an Architectural Mechanical Engineer for the University of Illinois in the office of the Campus Architect . . . Alexander T. Cyganiewicz is Chief Estimator for S.J. Curry & Co., Inc. in Albany, Ga.

#### 1951

Newly elected Vice-President of Diesel Construction, Div. of Carl A. Morse, Inc., Donald A. Knowlton, will be in charge of the company's Boston operations . . . John B. Seguin is the District Sales Supervisor for Norton Co. in Philadelphia, Pa. . . Theodore A. Mellor should be proud of his son Theodore, Jr., who with another youth helped prevent a Worcester girl from being assaulted. Police commended Mellor and Dunbar



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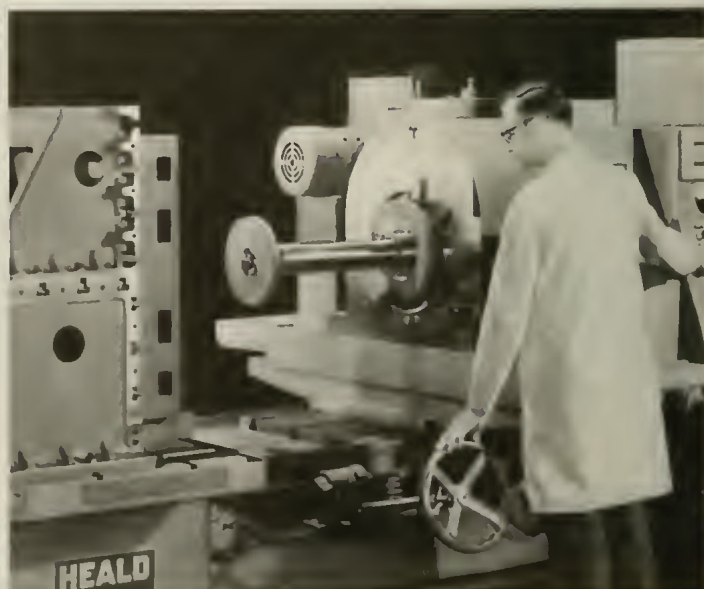
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(the other youth) for "getting involved to help this girl."

#### 1952

*John W. Diachenko* is a Senior Sales Engineer for the Torin Corp. in Torrington, Conn. He and his family now live in Simsbury, Conn. . . Raytheon has named *Donald M. Krauss* Manager of Product Development for the Ocean Systems and Equipment Dept. at their Submarine Signal Div. in Portsmouth, R.I. He and his family live in Bristol, R.I. . . *William T. Mehalick* is Area Supervisor for E.I. duPont deNemours & Co., Inc. in Circleville, Ohio.

#### 1953

*Married: Lucian H. Millard* to Miss Theresa Vera Bryce of Erie, Pa., on May 24, 1969. Lucian is employed by General Electric Co. in Erie, Pa.

*Born:* To Mr. and Mrs. *Stephen J. Abrams*, a daughter, Sharon Lynn, in May, 1969. He is at Riverside Research Institute in New York, N.Y. . . *Alfred C. Bafaro* is President of Albro Construction & Engineering Corp. of Framingham, Mass. . . We received a note from *John E. Flynn*: "My wife, Mary, and I are enjoying our Monsanto International assignment immensely (plant manager of Monsanto's Oakville operation near Toronto, Ont.) Now have two children . . ." . . . *Joseph A. Holmes* has been appointed Chief Chemist of the Color Picture Tube Div. of Admiral Corp. He has been with Admiral since 1964. . . Texas Gulf Sulphur Co. of Aurora, N.C. employs *Edward Markarian* as a Maintenance Engineer-Mine. . . Over the summer, *Dr. Herbert Slotnick* (M.S.) taught a course to assist greater Hartford industrial chemists called "Colloids and Surface Chemistry." *Dr. Slotnick* is an Assoc. Prof. of Chemistry at Central Connecticut State College. . . Mobil Research and Development Corp. has announced the appointment of *Paul W. Snyder, Jr.* as Supervisor of the Engineering Research and Development Group at their Paulsboro (N.J.) Laboratory. . . W.P.I. Prof. Fred N. Webster, '39, writes that "While in Iceland on a tour this past summer my wife and I had the good fortune to be able to have dinner one night with *Jon Steingrimsen* and his wife. Jon is with the National Electrical Power Board in Iceland, and was kind enough to take us on a personally conducted tour of Reykjavik one afternoon. Among the sights were a new gas turbine power plant that was being installed in connection with power service for a new aluminum plant, and also Jon's new home which he is building in one of the suburbs of the city. Jon wished to be remembered to all his friends here on the Hill." . . . *Richard R. Carlson* has been appointed Project Engineer in the Plant Engineering Dept. of Avco Bay State Abrasives Div., Westboro, Mass.

#### 1954

*William H. Hills* remains with Monsanto Co., at their Chemstrand Research Center, Inc. in Durham, N.C. He is Head of the Engineering Dept. there. . . *Harry L. Mirick, Jr.* writes, "In May, I accepted the position of Director of Manufacturing, Military Products Div., Hamilton Watch Co., in Lancaster, Pa. In my new position, I am responsible for the manufacture and support functions for the production of Ordnance fuses and allied devices. . ."

#### 1955

*John E. Edfors* is Section Head of the Hardware Technology Dept. of Honeywell Inc. in Waltham, Mass. . . *Peter H. Horstmann* has been promoted to Vice-President of Engineering at Coppus Engineering Corp. in Worcester, Mass. . . *Raynald P. Lemieux* is Asst. Manager of Technical Service & Sales, Petroleum Catalysts, for the Engelhard Minerals & Chemicals Corp. in Newark, N.J.

#### 1956

*Howard H. Brown*, Manager of the Motor Control Div. of the Vee-Arc Corp., has been elected to the firm's Board of Directors. He and his family live in Westboro, Mass. . . *William E. Lloyd* tells us, "Still employed by Bethlehem Steel Corp. Recently promoted to Assistant General Mechanical Foreman in the Coke Dept. at the Johnstown, Pa. plant. Have three boys aged, 9, 6, and 3."

#### 1957

*Allan T. Devault* has been named Manager of the newly created Control Products Line by Digital Equipment Corp., Maynard, Mass. . . Itek Corp. employs *Robert A. White* as a Senior Manufacturing Engineer in Lexington, Mass. . . *Richard P. Johnson* has received his MBA from Northeastern University. He is employed as a Product Sales Engineer for the Foxboro Co., Foxboro, Mass.

#### 1958

*Born:* To Mr. and Mrs. *Norman J. Taupeka*, a daughter, Mary Ann, on July 14, 1969. Norm and his family live in Eatontown, N.J. *Richard H. Campbell* is now at David Clark Co. of Worcester, Mass., as a Consulting Electro-Acoustical Engineer. . . *Frederic F. Cossick* is presently employed by Burgess & Behr of Carmel, N.Y. as a land surveyor. . . DeSoto, Inc. has announced the promotion of *Michael M. Galbraith* to Production Manager of their Chicago Heights Plant, Chemical Coatings Div. . . *Robert H. MacGillivray* is in Fukui-ken, Japan, where he is a Field Engineer in Nuclear Power for General Electric Technical Services Co. . . *Harry R. Rydstrom* is District Plant Superintendent for the Bell Telephone Co. in Oakmont, Pa. . . . *Norman J. Taupeka* was awarded the

U.S. Army Electronics Command certificate of educational achievement. He works for the U.S. Army Electronics Command's Communications-Automatic Data Processing Lab., Fort Monmouth, N.J. . . *Larry Dworkin* has received his Ph.D. in Electrical Engineering from the Polytechnic Institute of Brooklyn. . . . *Gabriel N. Gaulin* is an Installation Engineer for Pratt & Whitney Aircraft, Div. of United Aircraft Corp., in East Hartford, Conn. . . *Marian C. Knight* has received his M.S. in Electrical Engineering from Northeastern University. He is employed as an Advanced Development Engineer by Sylvania Electronic Systems. . . *Peter J. Zanini, Jr.* is a Power Supply Engineer for Hi-G Inc. in Windsor Locks, Conn.

#### 1959

*Married: Charles N. Coniaris* to Miss Eileen Theresa Feeley on May 4, 1968. He is presently an Airport Designer for the Port Authority of New York and is also studying for his Masters in Transportation Planning at Polytechnic Institute of Brooklyn. *Robert A. Bleau* is an Electronic Engineer for Sanders Associates in Nashua, N.H. . . Computer Data Systems employs *Fred D. Blonder* as a Division Manager in Miami, Fla. . . *V. James Cinquina, Jr.* is a Design Engineer at St. Regis Paper Co. in W. Nyack, N.Y. . . Two members of the class have joined the clergy. *Rev. Harvey E. Egan, S.J.* was ordained to the priesthood in the Society of Jesus (Jesuits) by Richard Cardinal Cushing, Archbishop of Boston on May 31, 1969. . . *Richard E. Thompson* graduated magna cum laude with a bachelor of divinity degree from Drew University on May 31, 1969. He has been named associate pastor of Wesley Methodist Church in Worcester. . . *Walter M. Gasek* has received his MBA degree from Clark University. He is presently General Manager of Kenmore Research, Framingham, Mass. . . *Frank B. Goudey, Jr.* is the owner of his own construction company, Goudey Construction Co., Inc. in E. Bridgewater, Mass. . . *Chester F. Jacobson* is a Design Engineer for General Electric Co. in Schenectady, N.Y. . . *David S. Miller* has become Plant Manager and Asst. Div. Manager of Sprague Electric Co., Filter Div., Annapolis Jct., Md. . . *Norman L. Monks* and *David A. Sawin* received promotions from Hobbs Manufacturing Co. Monks will be Manager of the Manufacturing Div. while Sawin will head the Planning Div. . . *Francis J. Pakulski* is a Development Engineer for the IBM Corp. in Essex Jct., Vt. . . *David H. Treadwell, Jr.* has gone into partnership to form the new firm of Panatek, a design and engineering oriented organization. He and his family live in Foxboro, Mass. . . *George B. Constantine* is a Sales Engineer for General Electric Co. in So. Portland, Me. . . *Robert W. Hoag* received his MBA degree



from the University of Rhode Island. He was recently promoted to Senior Design Engineer, Energy Products Dept., Texas Instruments Inc. in Attleboro, Mass. . . *Robert A. Steen* is President of Recreational Enterprises, Inc., located in Killington, Vt.

1960

*Raymond P. Abraham* has become manager of the new downtown store of Al Abraham in Norwich, Conn. . . The Carlson Corp. in Cochrane, Mass. employs *George S. Beebe* as a project planner. . . Dr. *Robert A. Condrate* writes: "I am now an assistant professor of spectroscopy at Alfred University, Alfred, N.Y. My first Ph.D. student has passed his final oral exam. Besides our daughter, Barbara, we also have a son, Robert, Jr., who is now two years old." . . . *Frank A. Droms, Jr.* has received his M.S. in industrial administration at Union College, Schenectady, N.Y. . . *David A. Johnson* remains in the Eastman Kodak Co. System but has moved to Oak Brook, Ill., where he is a Technical Sales Representative. . . The new Manager of Engineering at Trump-Ross Industrial Controls, Inc., No. Billerica, Mass. is *Peter A. Lajoie*. . . Warrant Officer *Robert M. Neal* will serve in Vietnam for the next year. . . *Robert R. Nelson* is employed by The General Electric Co. of Fitchburg, Mass. . . The Royal Thai Army employs *Thavalaya Prapapant* as a structural engineer. . . . *Harry F. Ray* has become manufacturing representative and start-up superintendent for 3 new rubber chemical units for Monsanto Co. in Nitro, W. Va. . . *H. David Sutton* is a Sr. Electrical Engineer at Sanders Associates, Nashua, N.H. . . *James F. Teixeira* remains at Sylvania in Waltham, Mass. where he is now an Advanced Research Engineer. He has been awarded a patent for an electronic device designed to aid the entering of data in a computer. . . *Shepard B. Brodie* received his M.S. in Aerospace Engineering and Mechanical Engineering from the University of Arizona in 1967 and 1968 respectively. He is presently employed as a Staff Engineer for the Martin Marietta Corp. in Denver, Col. . . *John R. Haavisto* is a Technical Editor for the Hughes Aircraft Co. in Fullerton, Calif.

1961

*Married: Ralph M. Dykstra* to Miss Connie Kaye Brown of E. Alton, Ill., on April 12, 1969. The couple will live in New York where Ralph is a Flight Engineer for Trans World Airlines. *Mark Britanisky* is program manager and manager of program control at Fairchild-Hiller, Stratos Div., in Bay Shore, N.Y. . . *Phillip M. Crimmins* is now at Oxford Paper Co.'s New York City office where he is a Sales Engineer. . . Digital Equipment Corp. has named *Martin S. Gordon* manager of its Control Systems Group. He and his family live in Maynard, Mass. . . *Allen L. Johnson*

is an Electronic Contract Engineer for Pollock & Skan of Chicago, Ill. . . Dr. *Arthur S. Kamlet* has received his Ph.D. from the University of Michigan. Arthur works for Bell Telephone Labs in Whippany, N.J. . . *Ward D. MacKenzie* is Product Development Manager for Digital Equipment Corp. in Maynard, Mass. . . *Alan C. Novaco* is a Sr. Systems Engineer for Westinghouse in Baltimore, Md. . . Philip Hankins Inc. in Arlington, Mass. employs *David Q. Olson* as a Programmer/Analyst. . . *Pierce E. Rowe* is employed as a Civil Engineer by Pittsburgh DesMoines Steel Co., Idaho Falls, Idaho. . . Dr. *Robert E. Seamon* has joined the staff of Los Alamos Scientific Laboratory in New Mexico to work with the Reactor Development Div. . . *Robert H. Whyte* is working for General Electric in Burlington, Vt. . . *W. Dana Wilcock* received his M.S. from the University of Connecticut. . . Major *Norman I. Ginsburg* is now Chief, Television Operations, Armed Forces Radio & Television Service, in Los Angeles, Calif. . . *John H. Herron* has been appointed Director of Manufacturing for the Fairfield Optical Co., Inc. in Mansfield, Mass. . . *Charles S. Cook* has received his M.S. degree in Transportation Planning from Polytechnic Institute of Brooklyn. . . *Robert W. Schomber* is Asst. to the President of the Pacemaker Corp. in Egg Harbor City, N.J.

1962

*Married: Laurent A. Beauregard* to Miss Evelyne N. Mehl of Eatontown, N.J., on June 9, 1968. Larry is working towards a Ph.D. at Indiana University in the field of History & Philosophy of Science. He writes, "The whole idea is to get a better understanding of physics using its history and philosophy as tools."

*Born: To Mr. and Mrs. David L. Goodman*, their third son, William Louis, on April 18, 1968. Dave has been named Plant Manager of the Chlorox Co. in Chicago. . . *Edward B. Allen, Jr.* is a Product Planner with RCA Information System Div., Cherry Hill, N.J. . . *William A. Brutsch* has left the Air Force and is presently employed by Draper Div., North American Rockwell Corp., in Hopedale, Mass. as a Product Development Engineer. . . *David W. France* is a Project Engineer for United Shoe Machinery Corp.'s Development Labs in Beverly, Mass. . . Computer Transceiver System, Inc., employs *Thomas J. Tully* of Mahwah, N.J., as senior development engineer. . . *Ralph H. Griswold* is an Engineer K.A.D. for Eastman Kodak Co. in Rochester, N.Y. . . Dr. *James D. Quirk* received his Ph.D. from the University of New Hampshire. He is a Professor at Keene State College and is also President of Quirk's Marine Rentals in Keene, N.H.

1963

*Married: Joseph V. Beaulac* to Miss Elizabeth Rita Mills of Lunenburg, Mass., on

April 19, 1969. *Paul G. Abajian* was best man. Joe is a group leader at Raytheon in Wayland, Mass. . . *W. James Budzyna* to Miss Kathleen Ann Kelliher of Whitinsville, Mass., on June 7, 1969. They will live in Whitinsville.

Dr. *Paul G. Abajian* has been appointed an Assistant Professor of Chemistry at Johnson State College, Johnson, Vt. . . Stone & Webster Engineering Corp. of Boston employs *Henry A. Dowgielewicz, Jr.* as a Cost Engineer. . . *Norman Fineberg* is now attending Law School at Boston University. . . *Richard A. Garvais* is at the Fall Brook Plant of the Corning Glass Works, Corning, N.Y., as Manager of the Process Engineering Dept. . . Capt. *Philip M. Howe* is a research physicist at the U.S. Army Ballistic Research Laboratories located at the Aberdeen Proving Ground, Md. . . *John B. Lojko* is a Marketing Representative for Service Bureau Corp., a subsidiary of IBM Corp., in New York City. . . *Thomas M. Owens* is employed by Norton Co. in Worcester. . . Dr. *Daniel J. Pender* has graduated from the University of Pennsylvania Medical School and will intern at the Pennsylvania Hospital. . . *Donald M. Wood, II* has started his own business, Wood's Marine Supplies, in Lake Park, Fla. . . Dr. *Robert E. Murphy* is now Asst. Astronomer at the University of Hawaii Institute of Astronomy. He received his Ph.D. last February from Case Western Reserve University. . . *James D. Clark* is New Product Planner for the Xerox Corp., Communications Product Div. in Henrietta, N.Y. . . . *Robert S. Magnant* is a Systems Engineer and Technical Manager for U.S. Army ECOM at Ft. Monmouth, N.J. . . *George P. Vittas* received his M.S. degree in Transportation Planning from Polytechnic Institute of Brooklyn. . . *Roger M. Winans* is an Actuarial Asst. for the Travelers Insurance Co. in Hartford, Conn.

1964

*Married: Alfred H. Hemingway, Jr.* to Miss Julie Ellen Murphy of Framingham, Mass. on June 10, 1967. He is now studying Patent Law at Stanford University Law School, Stanford, Calif. . . *Thomas S. Baron* to Miss Dorothy Serafin of Worcester, Mass., on April 26, 1969. Tom is a Junior Civil Engineer for the Metropolitan District Commission, Construction Div., Boston, Mass. He is now back at Tech on a one year's educational leave of absence, working for his master's in civil engineering. . . *Manmohan S. Gill*, MS, to Miss Mary Jane Perry of W. Swanzy, N.H., in 1967. He is employed as a Mechanical Engineer in the Research and Development Center of the General Electric Co., Schenectady, N.Y.

*Bruce M. Juhola* is a Technical Sales Representative for Calgon Corp., Redwood City, Calif. . . Ensign *David H. Laananen*, who received his Ph.D. from Northeastern Univer-



sity last year, is now a Scientific Officer for the U.S. Navy, Office of Naval Research, in Washington, D.C. . . Church and Dwight Co., Inc. of Syracuse, N.Y. recently promoted *M. Stephen Lajoie* to Manager of Research and Development. . . Dr. *Frank A. Marafioti*, MS, has received his Ph.D. from the University of Connecticut and is now employed by General Dynamics, Electric Boat Div., as a Research Specialist. . . *Robert H. Morse* was recently appointed as Manager-Sales Promotion for MB Electronics, Div. of Textron Electronics Inc., New Haven, Conn. . . . Dr. *Robert A. Peura* has received his Ph.D. in Biomedical Engineering from Iowa State University. . . *James C. Ward, Jr.* is an Engineer for the Northeast Utilities Service Co. in Hartford, Conn. . . The State of New York employs *William H. Clark, III* as a Research Engineer at the State Campus, Albany, N.Y. . . *Peter Baker* is now in Saigon where he is on assignment for the Pacific Architects & Engineers of Los Angeles, Calif. . . During the summer we received a letter from Lt. *Paul B. Watson* bringing us up to date: "Right now I'm on leave, about to start flying the C-141 Starlifter at Dover AFB, Del. Since joining the USAF in January 1968, I've completed OTS, flight school, survival school, and the C-141 co-pilot course at Altus AFB, Okla."

**1965**

*Married: Patrick T. Moran* to Miss Mimi Moylan of Hammond, Ind. in June of 1969. Pat received his M.S. in Industrial Engineering from Purdue in June also. . . *Thomas P. Arcari* to Miss Marie Bartumioli of New Britain, Conn., on June 14, 1969. Tom is a Structural Design Engineer for Combustion Engineering in Windsor, Conn. . . *Wayne D. Pobeznik* to Miss Patricia Ann Ciuffreda of Pittsfield, Mass., on June 21, 1969. Wayne is employed as a Field Engineer by General Electric Co. in Pittsfield.

*Born: To Lt. and Mrs. William E. Zetterlund*, their first child, Stefanie Lauren, on October 24, 1968. Bill is presently Public Works Officer and Resident Officer in Charge of Construction at the U.S. Naval Radio Station, Isabela, Puerto Rico.

There are several members of the Class who are now in the Armed Forces: Pvt. *Lee A. Chouinard*, stationed at Fort Sam Houston, Texas; Lt. *David B. Herrmann, Jr.*, based at the U.S. Naval Base, Gulfport, Miss.; Capt. *Frank J. Pinhack, Jr.*, decorated with the Distinguished Flying Cross at Nha Trang AB, Vietnam, will soon be stationed at Otis AFB; Army Capt. *John M. Porter* who is presently in Vietnam and recently received the Air Medal near Bac Lieu; Lt. (U.S. Naval Reserve) *Francis X. Watson*, FPO San Francisco, Calif.; Lt. *William H. Wyman*, who left the Navy in September after four years in the Submarine Force; and Capt. *John G.*

*Zwyner*, stationed at Stewart AFB, Newburgh, N.Y. . . *George W. Cordes, Jr.* is presently employed as a Development Engineer at Hamilton Standard, Div. of United Aircraft Corp. in Windsor Locks, Conn. . . *Donald G. Franklin* is working for the U.S. General Accounting Office in Washington as an Accountant-Auditor. . . The U.S. Army employs *William S. Hagar* as a Mechanical engineer. . . *Charles F. Hunnicutt* is a member of the Technical Staff at Bell Telephone Labs in Whippany, N.J. He received his MS from R.P.I. last year. . . *Robert D. Klauber* writes, "Got my M.S. in M.E. from Syracuse University. Working for last 16 months at MIT Instrumentation Lab on inertial guidance system for Apollo Project. Planning to take at least a year off as of June 1, 1969 to travel around the world." . . . *Harvey J. Rosenfield*, MS, is now working as a Marketing Representative for IBM in Waltham, Mass. . . After a three year training program with the U.S. Bureau of Public Roads, *Jefrey W. Thwing* is now working in their Arlington, Va. office as a Highway Engineer. . . *Earle R. Weaver*, M.S., is an Engineer with General Electric Co. of So. Portland, Me. . . Two members of the Class have received M.S. degrees from Polytechnic Institute of Brooklyn: *Joseph J. Osvald* in System Science and *Takashi Tsujita* in Mechanical Engineering. . . *Philip B. Ryan* is an MBA candidate at the Harvard Graduate School of Business Administration. . . *Thomas F. Moriarty* has received his Ph.D. in Engineering from the University of Illinois. He will be associated with Gulf Atomic in San Diego, Calif.

**1966**

*Married: Michael R. Mauro* to Miss Elaine M. Shepard of Guilford, Conn., on May 17, 1969. . . *Ronald Swers* to Miss Gwen M.

Herman of Worcester, Mass., on May 18, 1969. Ron is a Mechanical Engineer with General Electric Co., Lynn, Mass. . . *Jonathan H. Pardee* to Miss Susan L. Matthews of Media, Pa., on June 22, 1968. Jon is a Service Representative for E. I. DuPont de Nemours Co. in Wilmington, Del. . . *David H. Stone* to Miss Marie Frances Fiefhaus of Levittown, Pa. on April 12, 1969. Dave received his M.S. in Chemical Engineering last year from Cornell Institute and is employed by Rohm & Haas Co. of Bristol, Pa. as a Research Engineer. . . *Frederick F. Valego, Jr.* to Miss Martha Ann Doros of No. Brookfield, Mass., in June 1969. Fred is working for Monsanto Chemical Co. in Springfield, Mass., as a Chemical Process Development Engineer.

*Born: To Mr. and Mrs. Gary P. Cassery*, a daughter, Karen Gail, on May 21, 1969. Gary is a Graduate Student at the University of Tennessee working towards an MBA. . . To Mr. and Mrs. *Andrew J. Kudarauskas*, a son, Thomas A., on September 22, 1968. Andy is still working for Niagara Mohawk Power Corp. in Syracuse, N.Y. as Supervisor of Natural Gas Construction and Maintenance. . . To Mr. and Mrs. *Donald W. Petersen, Jr.*, their first child, Gail Kristin, in September of 1968. Don is now working as a Systems Engineer for Dialog Computing, Inc., Milford, Conn. . . To Mr. and Mrs. *Jesse R. Stalker, Jr.*, their first son, Kevin David, who is now one year old. Jesse has resumed work after two years in the Army, with Goodyear Tire & Rubber Co., Windsor, Vt. Lt. *Garner W. Duvall, Jr.* is now serving in the U.S. Navy. . . Western Electric Co. of No. Andover, Mass., employs *A. Ralph Fiore* as a Development Engineer. Ralph received his MS in engineering management from Northeastern this year. . . *Ronald F. Naventi*

# MORGAN

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is an Application Engineering Specialist for The Foxboro Co., Foxboro, Mass. . . *William J. Remillong, Jr.* is employed by American Cyanamid Co. of Bound Brook, N.J., as an Analytical Project Chemist. . . Capt. *Shelton B. Wicker, Jr.* is presently stationed at Fort Richardson, Alaska. . . *Peter K. Sommer* has begun studies at the Washington College of Law of the American University in Washington, D.C. He hopes to specialize in Patent Law.

#### 1967

*Married: Richard H. Court, Jr.* to Miss Sandra L. Wright on May 18, 1968. Dick is a Research Assistant at Geigy Chemical Corp. in Ardsley, N.Y. . . Capt. *John P. Dow* to Miss Vickie Lee Herold on February 22, 1969 in Frankfurt, West Germany. John has just started a tour of duty in Vietnam. . . *William R. Hyatt* to Miss Cynthia Marie Vinberg of Leawood, Kansas, on February 8, 1969. Bill is now with Ebasco Services, Inc. in Sioux City, Iowa. . . Lt. *Peter H. Tallman* to Miss Ellen Marie Maher of Munhall, Pa., on May 17, 1969. Pete is presently at the Pentagon, Washington, D.C. . . *Ralph C. Olsen* to Miss Gale Madeline Haznar of Chicopee, Mass., on June 21, 1969. Ralph continues his studies at Polytechnic Institute of Brooklyn while he works for Hazeltine Corp. of Greenlawn, N.Y. . . *Harry E. Taylor* to Miss Lynda Hope Weston of W. Hartford, Conn., on May 31, 1969. Harry received his M.S. degree in engineering from Rensselaer Polytechnic Institute.

*Born:* To Mr. and Mrs. *William O. Messer*, a boy, William Joseph, on March 24, 1969. Bill is presently a Technical Representative for Hercules, Inc., Environmental Services Div., in Houston, Texas. . . To Mr. and Mrs. *Charles J. Sisitsky*, a daughter, Tamar, on May 19, 1969. Charlie received his Master of Community Planning degree from the University of Rhode Island and is currently a Project Planner for Roy F. Weston, Inc. in West Chester, Pa.

*John R. Daugherty* is working as a Mathematician/Analyst for the U.S. Government in Washington, D.C. . . Edwards & Kelcey of Boston employs *Steven J. Frymer* as an Assistant Civil Engineer. . . 2nd Lt. *Wayne C. Garth* has been transferred from Holloman AFB to the Satellite Control Facilities in Los Angeles, Calif. . . *Robert F. Hellen* is a Graduate Student at Cornell University. . . *Frank T. Jodaitis* is now serving his active duty in the Army, and will soon be serving in Vietnam. . . *David W. Loomis* has received his M.S. in Electrical Engineering from the University of Pennsylvania and is now a Senior Research Engineer at Sylvania Electric Corp. . . *Arnold R. Miller* is now an Electronic Design Engineer for the Eagle Signal Co. . . *John E. Sonne* has received his M.S. degree in Biomedical Engineering from

Drexel Institute of Technology. . . Ensign *Robert G. McAndrew* has received his M.S. degree from Texas A&M University in Nuclear Engineering. He is stationed at Port Hueneme, Calif., where he will continue his officer training.

#### 1968

*Married: James A. Raslavsky* to Miss Janet Cheryl Ferrante of Shrewsbury, Mass., on April 12, 1969. Jim remains at International Silver Co. in Meriden, Conn. as an Industrial Engineer. . . *Jeffrey E. Shaw* to Miss Carole Ann Marie Mistretta of Methuen, Mass., on April 12, 1969. *John Korzick* served as an usher at the wedding. Jeff is an Electrical Engineer at Western Electric Co. in North Andover, Mass. . . *Marshall B. Taylor* to Miss Nancy Hamilton Smith of Grafton, Mass. on June 7, 1969. *Kenneth R. Blaisdell*, *John R. Farley*, and *Gregory H. Sovas* served as ushers at Marshall's wedding. Marshall is a systems analyst with Allis-Chalmers in Hyde Park, Mass. . . *Bruce M. Blades* to Miss Linda Barbara McGaughey of Framingham, Mass., on June 7, 1969. Bruce is a Foreman for Howard M. Blades Construction in Framingham, Mass. . . *Robert J. Horansky* to Miss Linda Dunkel of Torrington, Conn., on June 14, 1969. Bob received his M.S. degree in Electric Power Systems from Rensselaer Polytechnic Institute and will be employed by Northeast Utilities Service Co., Hartford, Conn. . . *Allen Palmer* to Miss Rosemary Jean Plante of Shrewsbury, Mass. on June 14, 1969. Allen is a Test Engineer for the Hazeltine Corp., Electro-Acoustic Systems Lab, in Braintree, Mass.

*Born:* To Mr. and Mrs. *Robert C. Gosling*, a daughter, Lisa Ellen, on June 14, 1969. Bob is studying for his M.S. in the Civil Department at Tech.

*David C. Baxter* and *Richard J. Scaia* are now working as Design Engineers for Torrington Co. in Torrington, Conn. . . Lt. *Daniel C. Creamer* is now serving in the U.S. Army. . . Digital Equipment Corp. of Maynard, Mass. now employs *Ronald F. Golaszewski* as a programmer. . . *David A. Hopkinson* has been commissioned a second Lt. in the U.S. Marine Corps. . . *Douglas W. Klauber* is presently a Research Engineer at Hollingsworth & Vose Co. in E. Walpole, Mass. . . Ensign *William R. Nordstrom* is serving aboard the U.S.S. Corry out of Norfolk, Va. . . 2nd Lt. *John J. Orciuch* is stationed at Fort Hood, Texas. . . *Michael R. Paige* has received his M.S. from the University of Illinois and will continue there as a Research Assistant working for his Ph.D. . . . *James M. Perkins* is serving as a Light Weapons Infantryman in the U.S. Army. . . *Lawrence J. Roger* is now an Ensign in the U.S. Navy. . . *Richard F. Weiner* is working for Raytheon Co., Equipment Div., in Waltham, Mass. . . Pvt. *Richard A. Westsmith*

writes, "At present I'm in Vietnam with the Army working as a mechanic on one of their observation planes. . . Having only one year left of Active Duty, I hope to continue my Masters next year." . . . *Piyush P. Amin*, MS, is presently employed by Michael Baker, Jr. in Harrisburg, Pa., as a Bridge Design Engineer. . . Ensign *R. Gregory Balmer* is stationed aboard the Battleship U.S.S. New Jersey. . . *Norman E. Brunell* is an Electro-Mechanical Designer for the Foxboro Co., Foxboro, Mass. . . *Theodor A. Heidt, Jr.* is a District Sales Engineer in Training for the Torrington Co. in So. Bend, Ind. . . *John E. Keenan* is now with Keenan's Oil Service in W. Warwick, R.I. . . *Jeffrey H. Semmel* is a Research Engineer for Norton Co. in Worcester, Mass. . . *Kenneth H. Turnbull* is an Assoc. Mechanical Engineer for Texaco, Inc. in Beacon, N.Y. . . *William J. Krikorian* received his M.S. in Civil Engineering at the 101st Commencement of Tech. . . 2nd Lt. *Richard G. Perreault* is stationed in Schweinfurt, Germany, with the Army.

#### 1969

*Married: Brian D. Chace* to Miss Elizabeth Marian Maxwell of Marion, Mass., on June 14, 1969. Brian is with Sylvania Electronics Systems Division in Needham Heights, Mass. *Roger J. Dashner* was best man, and *James P. Atkinson* was an usher. . . *Anthony J. Crispino* to Miss Linda Ann Czyzewski of Fiskdale, Mass., on July 5, 1969. Tony is a mechanical engineer with the Boeing Co. in Seattle, Wash. . . *Joseph E. Doran, Jr.*, to Miss Ann Marie Meunier of No. Attleboro, Mass., on June 13, 1969. The best man was Bernard J. Dodge, '70, and among the ushers were *Daniel A. Lipcan* and E. Wayne Turnblom, '68. Joe is a management engineer employed by Avco's Lycoming Div. in Stratford, Conn. . . *James W. Foley* to Miss Ella Mae Beaudin of Rutland, Mass., on August 23, 1969. The best man was *Robert P. Kusy*. Jim is at Case Western Reserve University in Cleveland, Ohio, working toward his master's degree. . . *Mark S. Gerber* to Miss Sandra Frances Sowers of Shrewsbury, Mass., on June 6, 1969. . . *William E. Hallock* to Miss Judith Ann Groesbeck of Scotia, N.Y., on June 21, 1969. Among the ushers were Cornelius J. Collins, '71, and Wayne M. Chiapperini, '67. Bill is with Shell Oil Co. in E. Hartford, Conn. . . *Jeffrey A. Hynds* to Miss Linda Jean Wilson of Cumberland Hill, R.I., on July 12, 1969. Among the ushers were Roy Lampinski, '72, and *Christopher J. Masklee*. Jaff is employed by Public Service Electric & Gas Co. in Newark, N.J. . . *Donald G. Johnson* to Miss Janet Alice Johnson of W. Springfield, Mass., on June 21, 1969. Among the ushers was *David W. Swenson*. Don is with the Conn. State Highway Dept. in Wethersfield. . . *Robert P. Kusy* to Miss Gisela Baur of W. Boylston,



WORCESTER POLYTECHNIC INSTITUTE

WINTER ATHLETIC SCHEDULE - 1969-70

**VARSITY BASKETBALL**

Head Coach — JAMES HERRION

Dec. 2	Dartmouth	A 8:00
6	Brooklyn College	H 8:00
10	Wesleyan	A 8:15
13	Brown	H 8:00
16	Amherst	H 8:00
18	Assumption	A 8:15
Jan. 7	M.I.T.	A 8:15
10	Bowdoin	H 8:00
13	Lowell	H 8:00
31	A.I.C.	A 8:00
Feb. 3	Williams	H 8:00
5	Tufts	A 8:15
7	Boston Univ.	H 8:00
10	Springfield	A 8:00
14	Bates	H 8:00
17	Trinity	A 8:15
21	Colby	H 8:00
26	Coast Guard	H 8:00
28	Suffolk	H 8:00
Mar. 3	Clark	A 8:15
5	Brandeis	H 8:00

**VARSITY WRESTLING**

Head Coach — JOHN A. VINO

Dec. 6	Brandeis	A 2:00
10	Coast Guard	H 7:30
16	M.I.T.	A 7:30
Jan. 10	Williams	H 3:30
Feb. 7	Tufts	H 3:30
11	Holy Cross	H 7:30
17	Hartford	A 7:30
21	Brown	A 2:30
25	U. of Mass.	A 7:30
28	Dartmouth	A 3:00
Mar. 6-7	New England at Springfield	

**VARSITY SWIMMING**

Head Coach — CARL S. PETERSON

Dec. 4	Holy Cross	H 7:30
13	Trinity	H 2:00
16	Clark	H 7:30
Jan. 10	Tufts	H 2:00
13	Babson	A 7:00
Feb. 7	Coast Guard	A 3:30
11	U. of Mass.	A 8:00
20	Brandeis	A 4:30
25	Lowell	H 7:30
Mar. 12, 13, 14	New England at Springfield	

**HOCKEY CLUB**

Head Coach — LEONARD T. BOWEN

Nov. 29	M.I.T.	A 7:00
Dec. 1	Worcester State	H 9:15
3	Assumption	H 7:45
15	Nichols	H 9:15
17	Holy Cross	H 7:45
Jan. 7	M.I.T.	A 7:00
Feb. 2	Holy Cross	H 7:45
4	Worcester State	H 7:45
9	Nichols	H 7:45
11	Pending	H 9:15
16	Bentley	H 9:15
20	St. Anselms	A 8:00
23	Assumption	H 7:45

HOME GAMES PLAYED AT THE WORC. ARENA

**FRESHMAN BASKETBALL**

Head Coach — KENNETH J. KAUFMAN

Dec. 2	Dartmouth	A 6:00
6	Becker Jr.	H 6:00
10	Wesleyan	A 6:30
13	Brown	H 6:00
16	Amherst	H 6:00
18	Assumption	A 6:15
Jan. 7	M.I.T.	A 6:15
10	Worcester Academy	H 6:00
13	Lowell	H 6:00
Feb. 5	Tufts	A 6:30
7	Boston Univ.	H 6:00
10	Springfield	A 6:00
14	Worcester Jr.	H 6:00
17	Trinity	A 6:30
21	Quinsigamond	H 6:00
26	Coast Guard	H 6:00
28	Suffolk	H 6:00
Mar. 3	Clark	A 6:30
5	Brandeis	H 6:00

**FRESHMAN WRESTLING**

Head Coach — JOHN A. VINO

Dec. 16	M.I.T.	A 6:00
Jan. 10	Williams	H 2:00
Feb. 7	Tufts	H 2:00
21	Brown	A 2:30

**FRESHMAN SWIMMING**

Head Coach — CARL S. PETERSON

Dec. 10	Assumption Prep.	H 4:00
18	Nichols	H 7:30
Jan. 10	Tufts	H 2:00
Feb. 7	Coast Guard	A 2:00
10	Worcester Academy	H 4:00
14	Dean Jr.	A 2:00

H — Home A — Away





Married on June 27, 1969. Bob is in graduate school at Drexel Institute of Technology in Philadelphia. . . *Ronald C. Lewis* to Miss Judith Ellen Carney of Southwest Harbor, Me., on June 14, 1969. Ron is in the Navy. . . Lt. *Gordon R. Miller* to Miss Carol Elizabeth Sargent of Reading, Mass., on June 15, 1969. Among the ushers was *John L. Walkup*, and the best man was *Donald L. Sharp*. Gordon is in the Army, stationed at Ft. Benning, Ga. . . *Stephen F. Nagy* to Miss Barbara Ann George of Ashland, Mass., on June 14, 1969. The best man was *Ronald P. Rosadini*, and among the ushers were George P. Moore, '70, Domenic J. Forcella, Jr., '70, and Charles E. Basner, '70. Steve is with Westinghouse Electric Corp. . . *Michael G. Ouellette* to Miss Barbara Van Kleeck of Westboro, Mass., on July 12, 1969. Among the ushers was *Peter R. Walsh*. Mike is a product engineer with G.E. in Pittsfield, Mass. . . *Stephen E. Platz* to Miss Judith Evelyn Dickinson of Kennebunk, Me., on August 23, 1969. . . *John F. Poblacki* to Miss Gail Ann Piehler on June 15, 1969. Among the ushers were *Richard J. Sandora* and *Ronald G. Roberts*. John is a civil engineer for Metcalf & Eddy Engineers, Boston, Mass. . . *Robert J. Rose* to Miss Margaret Faith Weir of Framingham, Mass., on July 19, 1969. Among the ushers was *Charles M. Zepp*, and the best man was *Craig L. Madring*. Bob is a chemical research engineer with Dupont in Niagara Falls, N.Y. . . *Joseph A. Senecal* to Miss Linda M. Renzi of Marlboro, Mass., on August 16, 1969. Among the ushers was *Jerry L. Johnson*. Joe is a graduate student at Stanford University, Stanford, Calif. . . *Raymond B. Stanley* to Miss Penny Jane Bellinger of Westford, Mass., on June 21, 1969. Ray is with Western Electric Co. in Greensboro, N.C. . . *John A. Taylor* to Miss Maureen Maynard of Worcester on June 14, 1969. John is a development engineer with Eastman Kodak in Rochester, N.Y. . . *Thomas F. Taylor* to Miss Jeanne M. Petracone of Barre Plains, Mass., on August 23, 1969. The best man was Roger L. Gariepy, '67, and among the ushers was *David E. Kilpatrick*. Tom is a mechanical engineer for G.E. in Lynn, Mass. . . *John S. Thompson, Jr.* to Miss Helen Marie Grady of Natick, Mass., on June 15, 1969. *David G. Healy* was the best man, and among the ushers were *Peter T. Grosch*, *Douglas A. Nelson*, *Roger W. Miles*, *Frederick G. Spreter*, and *Richard M. Gross*. John is attending Harvard Business School in Cambridge, Mass.

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