

■ APRIL 1974

WPI Journal

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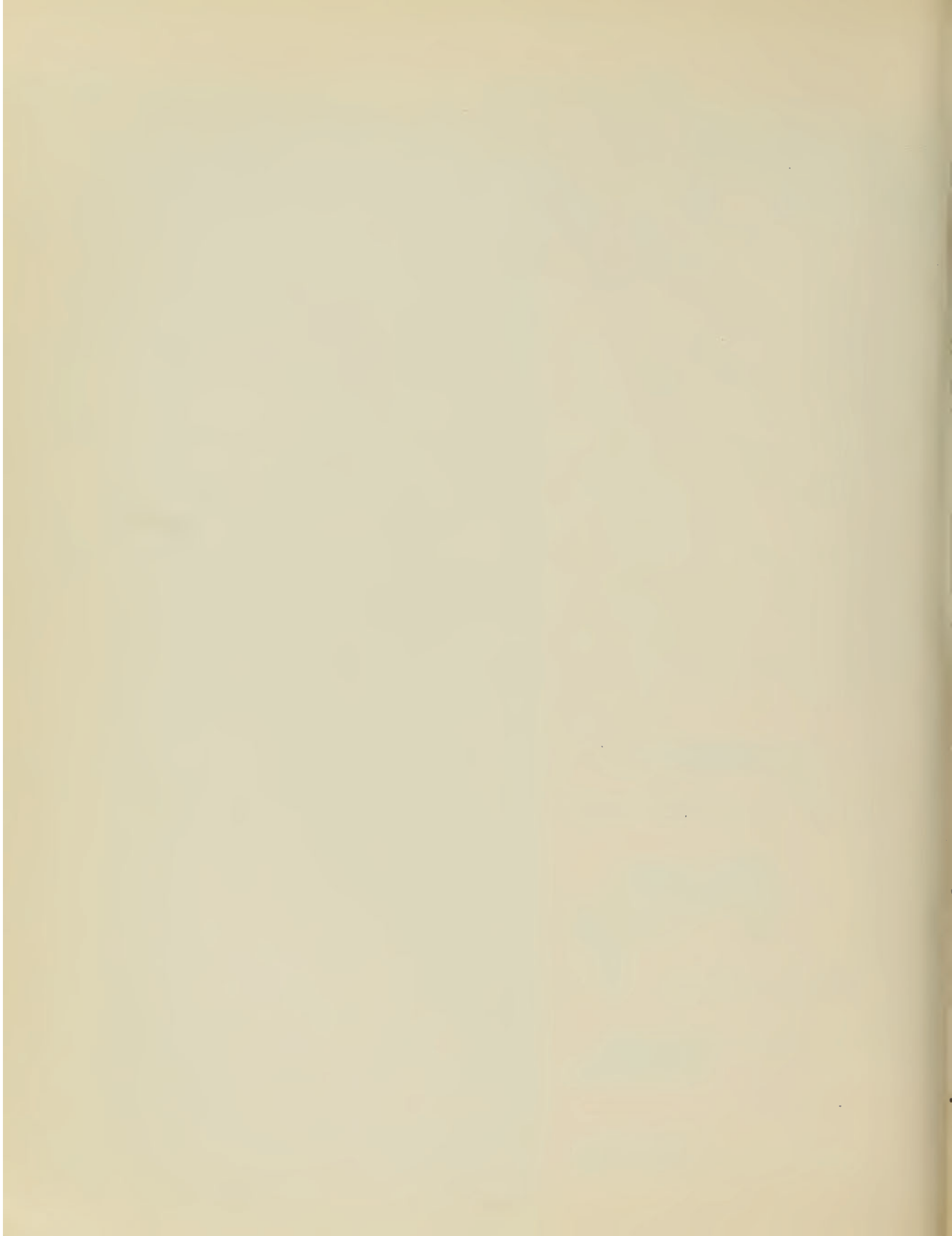
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THE FRATERNITIES



WPI Journal

Vol. 77, No. 6

April 1974

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feedback

Letters to the editor are welcome. All points of view can find a forum in this section, and we encourage the exchange of ideas and opinions here. For reasons of space, variety, timeliness, and interest to other readers, we may not publish all letters received and will occasionally excerpt portions of letters, but those that do appear here are an accurate reflection of our mail.

Readers Chill Blaine

This letter may never appear on the printed pages of the Journal but, at least, the writer will have the satisfaction of writing it.

The writer does not know Joseph W. Blaine '42 who wrote the diatribe which appeared on "Feedback" in the February issue so that his remarks herewith are obviously impersonal. The writer feels that Blaine's letter was ill-considered and mildly abusive. It was read by him with rising indignation and the feeling that some sort of rebuttal should be made.

While the writer has never had any direct connection with the modern WPI Journal he does have a certain ancient connection with it. In 1911-13 he became sophomore editor of the old-time Journal under the friendly guidance of Dr. George H. Haynes, of memory, who was the guiding force behind its make-up and publication. In the years immediately following the writer became junior and then senior editor. This was in the early days when Dr. Haynes appointed a man from each of the three upper classes to care for the business affairs of the Journal and an equal number for editorial duties.

No one is perfect and departures from the ideal are frequently encountered in most of our modern publications. Errors and inadequacies are bound to creep into any enterprise which involves the written word. It goes without saying that everyone cannot be pleased. And, again, what pleases one may not please another.

The writer has been critical at times of the modern Journal but never to the point of committing his feelings to written comment. He found for instance that to his mind the Alpha and Omega article was incomprehensible but refrained from commenting on it, although others did, pro and con. For the most part the Journal is an excellent vehicle of communication between Tech and its alumni. It serves most of its intended objectives efficiently and well. The writer looks forward to each issue with pleasurable anticipation.

Mr. Blaine says midway in his letter that "since about 1968 I have not had the slightest interest in WPI". If this is true it seems strange that he would take the time and effort to write his lengthy letter. He must have had some slight interest as he obviously has been reading the Journal in the six years that have elapsed since 1968.

It is interesting to note that, with all his criticism, he makes no constructive suggestions for the improvement of the Journal or, for that matter, of WPI. He deplores the use of "unused white space". So-called white space in the writer's opinion can lend balance and dignity to any publication if judiciously used. In this connection the writer well remembers a Tech Banquet of at least sixty years ago. A well known figure, whose name has now passed into limbo, was the principal speaker. In the course of his remarks he referred critically to the attractive banquet program which was printed on a single sheet of paper which had been folded twice to make a neat and attractive four page leaflet. The speaker said he was very surprised that a leading technical school would have permitted the inefficiency inherent in the design of the program inasmuch as it utilized only half of the paper involved. (Actually it was fifty percent "white space".) At this juncture the same Dr. Haynes rose and interrupted the speaker abruptly. In his quiet, characteristic way he said, "We designed it this way for efficiency and economy because it only had to go through the press once."

M. G. Steele, '15
Rome, N.Y.

I read with interest the letter written by Mr. Blaine in the February issue of the WPI Journal. He brings up several points which are worthy of comment.

To begin Mr. Blaine accuses the Institute in general of "degenerating beyond recall," and while this is his opinion he also states that the WPI way was archaic when he graduated. If he had been informed as to the happenings on campus he would have known that since 1968 several interesting and unique changes have taken place. The archaic system he mentions has been revised substantially. The school is attempting to bring purpose and relevance back into its curriculum. In short he has condemned the system which produced him and is also condemning the people who are changing it. A most admirable bit of confused logic—which may prove his first contention.

The school probably changed the most during my four years as an undergraduate. It went from a traditional engineering school to a progressive and individual institution. Yes, there were some problems with the conversion, but making a change of this type not only means changing the physical layout but some thinking as well. While I was not on the Plan I believe that the concept which it is attempting to instill is valid. An engineer who is able to interact with his environment in a positive way will greatly aid technology as a whole.

Your publication is a reflection of the change that has taken place on campus. I believe that is what your purpose should be—to reflect WPI as it is now with a balance accorded to the traditions and accomplishments of its alumni. If Mr. Blaine had spent more time reading the Journal he might have been able to see that the college is moving to make itself less archaic. I might add that it seems to have worked, in that our freshman enrollment was down slightly at 500 students while other engineering colleges are being forced to schedule courses every other year for lack of students.

Joseph J. Magri, '73
Roslindale, Mass.

Our Name Again!

Some time ago, some one complained about the size of the title on the cover of the Journal, it seems that the letters, WPI, were lost. Recently, I received a magazine with the word Journal in large letters. I opened it and noticed all those Norwegians and realized that it was a North Dakota publication. The latest Journal is improved in the matter of title, but somehow, you people could do better. My youngest daughter is a student at Brown. As a parent, I receive the Brown Alumni Monthly. There is only one word that stands out—Brown. I like that.

I have been meaning to tell you that the innovations taking place at Tech sound exciting and stimulating. Anyone who believes that the engineering education of those youngsters is being watered down has a dim concept of what is really happening! In fact, there is only one thing that excites me more, and that is the unveiling of Richard the nixon!

Thomas R. d'Errico, '41
Fargo, N.D.

on the hill

WPI Sports—NOT in the News?

One of the most frequently asked questions of Association secretary-treasurer Steve Hebert, '66, as he travels across the country is why WPI sports scores aren't carried in newspapers across the country.

A large number of people want to see the figures for WPI, particularly for football and basketball, and apparently few newspapers carry the information. They have it available, Athletic Director Bob Pritchard assures us, on both the AP and UPI wire services.

So if you aren't hearing about WPI sports in your local newspaper, wherever you live, the best thing you can do is to let *them* know what you want. If enough people pester any paper, they'll print the scores just to get rid of your phone calls.

Dean of Admissions Resigns

Kenneth Nourse, head of admissions at WPI for nine years, has resigned to become director of public affairs at Middlebury College, Middlebury, Vermont, his alma mater.

Dean of Students Donald Reutlinger, in announcing the resignation, stated that, "having come to us from Clarkson College to organize our first admissions office, his planning, counsel, and encouragement have brought nearly a decade of classes to WPI. As one of the senior admissions officers in New England, in point of service, his dedication, resourcefulness, hard work, and optimism will be sorely missed."

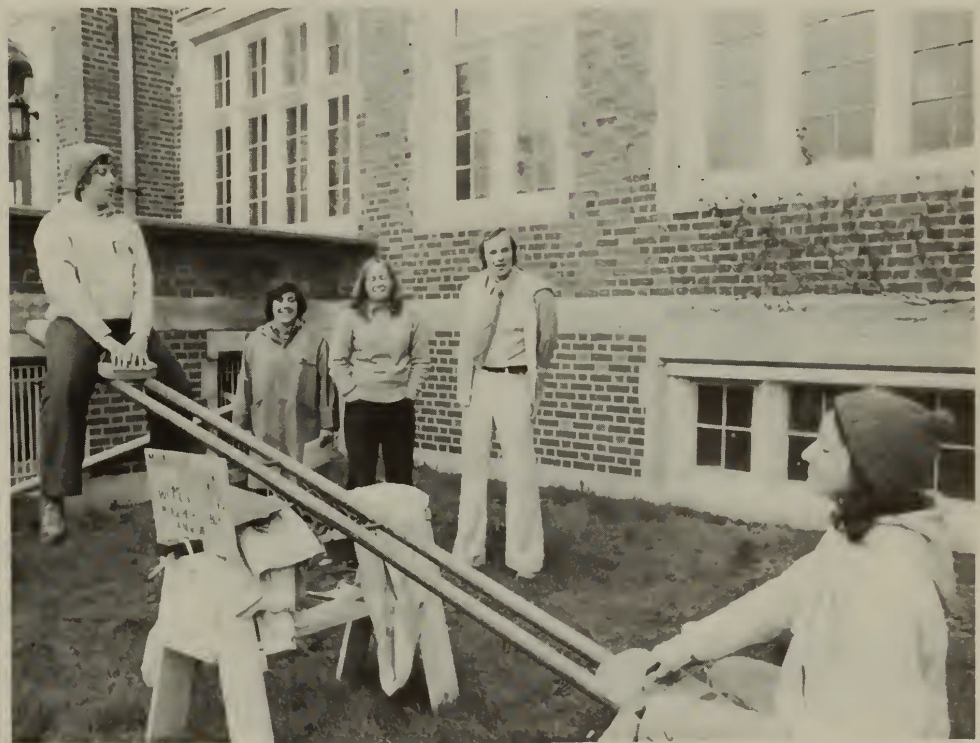
Goodwin Named to Head New Social Science Dept.

Leonard Goodwin, a research associate in the governmental studies program of the Brookings Institution, Washington, D.C., has been appointed to head up a new department of social science and policy studies. The present economics faculty of WPI will join three new faculty hired to provide expertise in other social-science areas in the new department.

The new faculty will be working at the boundaries between technology and other areas of human endeavor—politics, psychology, sociology, bureaucracy. The emphasis will be not so much on specific educational backgrounds as on interest in the interfaces among the areas. The department will be undergraduate in scope, offering

basic courses in its fields and participating in a major way in interactive projects. It will be responsible for the existing major program in economics and whatever other programs may be generated in others of its areas.

Leonard Goodwin, the new head, holds bachelor's degrees in mathematics, physics, and English from the University of Michigan. He has a master's in educational psychology from the University of Chicago and has done graduate work in social psychology at Brandeis and Columbia. His first book, *Do the Poor Want to Work?* was published in 1972, and another, *Can Social Science Help Resolve National Problems? Welfare, A Case in Point*, will be published next spring. He has taught at Earlham College and has worked in industry as a research engineer and physicist.



See Saws Sell Shells

While seesawing is not your average college student's normal occupation, two members of the women's crew team spent ten hours riding up and down in a marathon effort to raise money for a new rowing shell.

The project was conceived in the brains (and executed by the seats) of Kristina Perry and Lexy Chito, both freshmen (freshwomen? freshpeople?). With a seesaw borrowed from the Worcester Parks Department, the pair set out to collect the \$250 which was pledged. The day began gray, turned rainy, and finished up with a downpour in the middle of the afternoon. For a while the women were coming down into three-inch-deep puddles, until a campus carpenter took pity on them and brought out some duckboards.

Passersby contributed another \$100 to the fund. The shell they are working toward costs \$4,400, or about \$6 an inch, so they now have about five feet worth.

When the long, wet, tender day finally ended at 8:00 in the evening, Tina and Lexy were barely able to stagger off home. Reliable reports indicate that neither did much sitting that weekend.

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The WPI fraternities Today

For most WPI graduates, fraternity membership was a normal part of their college experience. In fact, up until about five years ago, around 80 percent of all WPI students were affiliated with one or another of the twelve fraternities.

But in the last few years the situation has changed dramatically, to the point where now only about 40 percent of eligible students are joining the fraternity system. Admittedly, in the same time period the male enrollment in the freshman class has increased from 325 to 500.

With this in mind, we are devoting most of this issue to the fraternity system at WPI—its present status, activities, problems, and some looking toward the future. On the following pages we will examine various aspects of fraternity life at WPI through the viewpoints of the people involved. Toward this end, in February the Journal convened a discussion group of some twelve people, each of whom spoke from a different point of view. All but two of the participants are, or have been, intimately involved with the fraternities at WPI.

A brief description of the people involved in the making of this fraternity issue is in order. They are:

John van Alstyne, dean of academic advising and former advisor to the IFC, who moderated the discussion.

Gary Balboni, senior, president of Phi Gamma Delta.

Bernard Brown, associate dean of student affairs.

Danny Funk, freshman, pledge at Phi Gamma Delta.

Bill Giudice, sophomore, non-fraternity member.

Alexander Gordon, '36, treasurer of the Alpha Epsilon Pi alumni board.

William R. Grogan, '46, dean of undergraduate studies and past national president of Phi Kappa Theta, current advisor to PKT.

Frances Harvey, '37, WPI trustee and Phi Kappa Theta alumnus.

Stephen Hebert, '66, secretary-treasurer of the WPI Alumni Association, president of the Cluverius Society (the alumni IFC), and Sigma Phi Epsilon alumnus.

Mike Parker, junior, president of the Interfraternity Council, and member of Lambda Chi Alpha.

Brad Thatcher, sophomore, non-fraternity member.

Robert Wilcox, executive director of Phi Kappa Theta national fraternity.

Changing Times

THE MOST SIGNIFICANT fact of life for WPI fraternities today is that they are in a period of change, readjusting to a larger student population and to the new educational approach of the WPI Plan. While the total number of fraternity members is about the same as before, only about 40 percent of eligible students are pledging fraternities today, half of what it used to be. What are the reasons for this decline? And what does it mean for the future of the fraternity system?

There are two factors operating here. One is a national trend among college students away from fraternities. The other is the changed situation at WPI.

Locally, the WPI fraternity system has had to contend with a significantly larger entering freshman class in recent years (540 in 1973 vs. 390 in 1966), with a greater variety of WPI operated housing available to students, with WPI's reorganization of the entire educational structure, and with many more social and recreational activities made available to students by the college.

OF THE NATIONAL situation, Robert Wilcox, executive director of the Phi Kappa Theta national, has this to say:

"Fraternities across the country, all nationals, have shown cyclical trends. My guesstimate would be that the bottom of the current cycle was about 1971, and the bottom of another cycle was World War II. We, and the other national fraternities, would classify the current situation as equal to or worse than the World War II crisis. At that time the problem was basically manpower. This time it was the loss of members because of ideology, and because in one sense fraternities represent the establishment.

"Everyone is experiencing a tremendous resurgence of interest. It is greatest in the South, which never really felt the terrible crunch that hit the Northeast and the Far West. But even at schools like the University of Wisconsin and the University of California at Berkeley, interest and membership are up."

Wilcox also comments on the support fraternities can give one another — but often don't. "Fraternities, I think, are their own worst enemies. There's always infighting to some extent, and back-biting and so on, especially in the IFC organizations. And that's unfortunate. If there is an 'enemy' (if we want to use that word of language), it would be non-fraternity men. It's not the other Greek houses, although for some reason we always look to each other and say that we've got to get more pledges than XYZ fraternity. We've got to beat them out in every respect.

"Healthy competition is OK up to a point, but not when we're talking about our very lifeblood in terms of new membership. I know there are some fraternities on the WPI campus that don't have full houses. Maybe if the IFC sat down and took a good hard look at the overall approach to rushing, some of the bigger and more successful houses could help the smaller ones. The thing is that it hurts the entire fraternity system for one house, just one house on campus, to be doing poorly. And I think a lot of that can be eliminated with cooperation. I notice a tremendous amount of cooperation on the national level."

Dean of Students Donald Reutlinger has said that he doesn't think the student body can support twelve fraternity houses any more. And one of the twelve, Alpha Epsilon Pi, is in serious financial trouble. Several consecutive years of small pledge classes were aggravated by a lack of undergraduate leadership and a moderately unsavory reputation. AEPi has been unable to meet the heavy tax and mortgage burden of a new house built in 1969. WPI owner of AEPi's mortgage, has had to foreclose.

Thus the stresses of change have had a definite impact on the WPI fraternity system. How well the system is able to cope with these changes and the problems presently confronting it will determine the direction of WPI fraternities for some years to come.

FRATERNITIES AS MEMBERSHIP GROUPS

Why Join?

WHY JOIN, INDEED? Membership, obviously, is the lifeblood of the fraternity. Each year the twelve WPI houses make a concerted effort to recruit some 230 new members, primarily from the entering freshman class. Without this influx of new members, the fraternities would soon go out of business – in both economic and social terms.

But what is the basis for their attraction? Why should an entering student join the minority of fraternity members? Is it the attraction of house living and the camaraderie that seems built-in? The promised social life? The availability of other members (particularly upperclassmen) for help with studies when you're in a bind? In fact, it would seem to be all of these and more.

Steve Hebert, '66, secretary-treasurer of the Alumni Association: "When I entered as a freshman in 1962, people pledged more out of necessity than I believe is the case today. We joined a house because that was where the action was, whatever action there was."

Danny Funk, freshman, pledging Phi Gamma Delta: "When I looked at fraternities I decided that, unless I joined one, I might draw myself into a shell and become something I didn't want to. The fraternity would force me to be outgoing, meet people, to live with other people, which I always felt was what life was all about."

Gary Balboni, president of Phi Gamma Delta: "Primarily, people come to WPI for an education – the book-learning education we're all familiar with. And anybody in this kind of pressure situation needs some relief. The fraternities can provide that relief, that extracurricular activity. And that's why, during rush, you're not going to see a picture of somebody studying, or exams laid out on a table, but instead rush books, maybe showing football games we've had or the parties. In recruiting new members, I think the fraternities try to present an overall view of what *extra* you can get from your time in college.

"It's too bad, in a way, because I don't think I could have done as well in this school if I didn't have this fraternity behind me. You have a tutor in every field of education – mathematics, physics, chemistry – you've got upperclassmen majoring in everything. You've got somebody you can go to who's right there, who will give you his time without question, any time of the day or night. And that's something hard to find outside the fraternities. You can't find professors in this school that will give you that kind of attention, but you can find students living in the next room who will. And sure, the guy living next to you in the dormitory might be able to help you in one thing, but where's the guy who can help you in the next subject?"

This particular argument carries some weight at WPI. Because of the historical pattern of most students joining fraternities, WPI-owned student housing has always been somewhat scarce. Only this year, with the opening of the Ellsworth and Fuller residence complexes, has the supply even begun to approach the demand. With all entering freshmen guaranteed dormitory rooms, 1,500 upperclassmen must compete (in a lottery) for the 500 or so remaining vacancies. And they must compete again every year, a situation which has caused no little resentment among students who want to retain their present rooms for the following academic year. So the fraternity, with its guarantee of renewable housing, has some significant attractions just from that point of view. And since it is in the upperclassmen who are short-changed on dormitory housing, it is in the fraternities and not the dormitories that one will find upperclassmen in large numbers.

Mike Parker, president of the Interfraternity Council, member of Lambda Chi Alpha: "The fraternity process is getting people to learn to live with other people. When it comes to fraternities, I'm something of an idealist. I think fraternities teach the lesson that no one person can do it all alone. You need people when you get out into society, when you leave WPI. You're going to have to be constantly working with other people. You can't just do everything on your own. In one way, too, the fraternity doubles as your family when you're away from home.

"Also, you have a constant change; every year there are new people coming in and seniors leaving. At times it provides for a lack of continuity. You wind up making the same mistakes someone else did. But you're meeting different people, seeing their problems, using your experience. And I haven't seen very many guys come into the house with a problem that somebody else hasn't had before."

ANOTHER WAY of asking the question at hand is: Why *don't* students join fraternities?

Bill Giudice, sophomore, non-fraternity member: "I looked into pledging one of the fraternities, but I didn't like the idea of doing things exclusively with the house. Several of my friends joined that fraternity, and that was the main reason I was going to pledge. And now those friends don't do anything except with their brothers. It's a cliquish thing.

"I don't think that just hanging around with the brothers is going to provide me with the social growth I look for in school. Also, I don't like the idea of pledging. The whole first-year program is not something that makes it attractive to join a fraternity: having to go down and learn all the brothers' names because they forced you to, and get their signatures and know their girlfriends and know their towns. And hell week. It's not the kind of growth I'm looking for.

"If you join a fraternity, you're sort of cutting yourself off. You eat dinner with the house; you go bowling with kids from the house; and that's because you're living with them. You're not forced into situations where you have to go out and find some other friends. When you're not in a fraternity, you do have to go out; you don't just call down the hall. You have to go out and visit some friends, and maybe they have some other friends over. It's more a process of being able to look toward the horizon."

Brad Thatcher, sophomore, non-fraternity: "The fraternity, in my mind, is instant friends, instant buddyhood, plus it's a place to live, which last year was kind of shaky because they didn't have the other dorms. But I decided that I already had a million friends, that I didn't feel I needed more, that I was fairly stable the way I was. I also wasn't as interested in the extra activities that fraternities seem to represent. You can still go to parties and things without being in a fraternity. And I guess I was sort of scared of all the obligations that come along with a fraternity; you're obligated to participate in an awful lot of activities.

"My roommate was pledging, and he had a little book with all the brothers in it. He had to learn their girlfriends, and where they're from. And he did go to a fraternity, and I wondered: When I get out of school, what fraternity am I going to join then so I can have people around to help me . . . to tell me everything is OK? If you're not in a fraternity and you want to do something, you have to go scrape up somebody to do it with. And you run into more people that way. At the same time, you might be unsuccessful in finding someone, and if you're generally that type of person you probably should join a fraternity. I feel there are two types of people. The type that definitely is happiest in a fraternity, that needs or wants or almost has to be in a fraternity to be happy. And there's another set of people who are different, who really don't feel they belong in that type of environment. You're always going to have the two types, and I don't think the difference has anything to do with intellect."

WHAT ABOUT the students who do join the fraternities, the 40 percent we're studying?

John van Alstyne, dean of academic advising: "I keep hearing the Plan is attracting a different type of student. And it's not the kind of student that some fraternities say they want. Now the question is, What's wrong with them? Is it that the student isn't the kind of person who's socially oriented? Or is it that the fraternity is just not with it? You must have heard that in your IFC meetings, Mike, when you're talking about the traditional meat market, dividing up the people: you don't want too much turkey."

8 Mike Parker: "I've talked with a lot of people about their impressions of the students we're getting here. And the general consensus is that we're getting some very highly intellectual students who are attracted to the school because of the Plan, because of the intellectual freedom. We're also getting some borderline, marginal students, who are coming here because they think they can get through and the school accepts them under the negotiated admissions policy. The general feeling is that we're not getting too many middle or average students. We're getting the high people and the low people, but we're losing the ones in the middle, the average people. And a lot of fraternity people say that this is the type of person that fraternities have attracted.

"In years past, I don't think we had the feeling on campus that there were so many marginal people around. I don't want to sound like an intellectual snob, but there is that feeling on campus, whether it's true or not. And it disturbs a lot of people that we're losing this middle stratum, if you want to call it that."

John van Alstyne: "Statistically, we're not. But the extremes are always more noticeable than the middle; and therefore if the class is larger, we have more that are at the top and more at the bottom, and immediately one tends to assume that this represents the whole class. He forgets the middle, and he's pretty nearly all wrong in doing so."

THUS IT SEEMS that a student today joins a fraternity because it represents a social pattern, a living pattern, that appeals to him. It offers a supportive group atmosphere that makes him feel at home. Because of changing housing patterns and needs, the fraternity is no longer necessary as a place to live. The student who joins a fraternity in 1974 does so because he wants to, not because he is forced into it by the lack of housing and the lack of other campus social activities. And because of this, today's fraternity members represent a more homogeneous and presumably more dedicated bunch of students than ever before, a group which is probably less diversified than any of their predecessors. In the short term, there are definite problems for the fraternity system and the individual houses; in the long run, this increased homogeneity may be the downfall of the system—or it may be its salvation. The fraternity leaders at WPI believe that the future is bright.

More Than Just Social Life?

ASK A fraternity member what he gets out of house life, and the odds are he'll tell you the fraternity has helped him come to terms with his own possibilities. We asked one.

Gary Balboni: "We're involved in every major activity on campus. It's the kick in the pants the house gives you. I know I couldn't ever have become as active as I am without those guys in the upper classes urging me on. I was the kind of guy who had it in me, but it wasn't going to come out without some help. The fraternity has given me a chance to realize my potential.

"Another thing about fraternities is that you're living in a structured group. WPI now has the Plan, and the Plan is a very individualized sort of education. They want individuals. You come here and you're not in a class any more; you're not in a group. You're by yourself, planning your own curriculum, your own course of study. In our civilization it's been proven that group living, one way or another, the family unit, is the best way. The family structure is what has carried us on over the years. And individuals can't make it on their own. I think fraternities can provide that structure, help round out an individual's life.

"The fraternity is a very responsible place to be. You consider it your home, not your dorm room or an apartment or something you can walk away from. We're all owners in this establishment we call fraternity. I'm going to care about this house until the day I die. I don't know if you could say the same thing about Ellsworth or Fuller or Daniels. I know guys who live in Daniels who throw knives into the doors. People just don't care about something they can walk away from, but they do care about fraternities.

"Finally, I feel very strongly that an individual's education, especially in an engineering school, has to enable him to deal with people. And I don't know of any courses I could ever have taken, even if I had a master's degree in business administration or

psychology or sociology, that would have equipped me to deal with people as well as my three and a half years in the fraternity. The experience of being president, trying to make decisions for people — people you care about and don't want to hurt — is a tough thing to do. And it's tough with forty, never mind two thousand. I can really take my hat off to what this fraternity has done for me and a lot of other people ahead of me and behind me."

ON THE OTHER END of the academic log, there are more reservations. The two deans most involved with the implementation of the WPI Plan, and thus the future of Worcester Polytechnic Institute, are concerned about the impact of the fraternities on students.

William R. Grogan, dean of undergraduate studies: "I think that probably the greatest non-changers in the world are fraternity sophomores and fraternity alumni one year out. They really don't want to see anything changed from the way they saw it. I think this acts as a very deadly force.

"Fraternities have started, painfully, getting rid of the Gatsby-era image that has been so damaging to them. But it's up to the undergraduates. I don't see how anybody else can change their image. There has been a kind of fundamental anti-intellectualism that must be changed. As the college undertakes a much more challenging type of program, where the individual is really on his own to a much larger extent, the fraternities can make or break people much more easily. Any associations people get into can. A fraternity can be a tremendous support to anybody, but if the fraternities' total program — social events, athletics, and so on — does not help create a positive intellectual climate, then people are going to be in trouble. It's not just a matter of homework, but of encouraging people to be adventuresome and curious. We've started a little

study to see the types of projects that fraternity and non-fraternity people do. I'm not sure that it's going to show any significant differences, but we've had some tremendous activity on both sides. We've known before that people who are in fraternities never did all that badly under the old QPA grading system. We didn't find a great percentage of very top honors people there; it had a sort of median effect. But we just wonder whether that will happen as we get into opportunities for far more challenging intellectual activity. That worries me. The fraternity per se doesn't mean one thing or another; it depends on the attitude that develops within the system.

"In my farewell speech as national president of Phi Kappa Theta, I said that one of the things that can keep fraternities in the dark ages is their own attitude toward the type of things characterized by secret initiations. A pledge program well run is a very supportive thing for a fraternity. It can be a very fine experience. On the other hand, if it gets overdone by counting how many times people go to the house, or all kinds of other little things, then the whole process becomes untenable.

"For the last fifteen years I've heard about how much school spirit we would have if we didn't have fraternities. The implication is that fraternities by their nature obstruct school spirit. I don't think that's true at all.

"I think the problem of school spirit concerns everybody — fraternities, non-fraternity people, commuters. The problem is a basic sense of identification with the college. It's very hard for the fraternities to identify with the college when it has been a college with which it has been hard to identify on any basis at all. If you look at any number of areas, what is the central focus of the college? It certainly hasn't been our athletic teams. Maybe that's the answer — maybe if we had a winning basketball team up there on Saturday nights, WPI would mean something to people.

"I think the problem is typified by Kaven Hall and Atwater Kent. Our buildings are designed to face out, away from the campus rather than in. And this has been the mental attitude too. If the fraternities didn't exist, there still wouldn't be any more campus spirit; there would just be more people going home on weekends. There is something lacking at the core.

"WPI doesn't have the same ring to it that many other colleges, even in the city, have. Collectively, fraternity and non-fraternity people alike, we've got to work toward that identification. It's a very elusive

thing; we haven't been able to catch it yet. We've got to be proud to identify with WPI."

John van Alstyne: "One reason why I was relieved to give up my position as advisor to the IFC relates to this. It wasn't anti-intellectualism. It was anti-interest in the college. I sometimes have the feeling that they're satellite campuses, and the only connection they have with the WPI up on the hill is the necessity to go up and take tests now and again. But the real sense of being an integral part of the college community is lacking, and that worries me terribly. It seems to me that it's part of the fact that we've forgotten what the central role of the fraternity should be.

"Fraternities were started with a great deal of idealism and somehow, in the process of expansion and solidification on campuses, they've lost a good deal of it. It seems to me that if we took a hard look at what the real purpose of a fraternity ought to be, wherein lies the real purpose of the system, if we aimed at that, then perhaps the system would again attract the kind of person that ought to be participating.

"Right now, I'm inclined to be in sympathy with the student who says I don't want to be in a fraternity because I haven't been convinced that the fraternities really have something to offer the student now. And I'm sorry about it. I think it's too bad."

Alexander Gordon, '36, treasurer of Alpha Epsilon Pi: "I can recall many years ago when I was here, some of us said that all this is a glorified trade school. What was lacking? I'm not sure.

"Certainly there were all kinds of efforts made to build up campus spirit. I think many of us felt that much of the problem perhaps stemmed from the fact that this was a technical school — just the very nature of the program, the almost complete lack of humanities. Always busy with numbers and trying to study for the quiz at eight o'clock the next morning . . . this created a much more difficult atmosphere than in the typical liberal arts college. Not to say that one way is all right and the other is all wrong, but there was some of that feeling. Perhaps some of it still exists today. I think the steps that have been taken, the new WPI Plan, the general type of curricula which have put a lot more of the humanities in the program, can go a long ways toward changing the attitude a student has toward WPI. At least I hope so."

Landlord and Taxpayer

WHATEVER ELSE they may be or do, fraternities here and elsewhere are inescapably identified with *the house*. Fraternities own houses, and fraternity members live in those houses. In their capacity as homeowners, fraternities have two problems: First, they must compete with WPI-owned housing. Second, they must pay taxes.

Balancing the budget is a difficult feat for all homeowners in these days of rising taxes, skyrocketing heating and maintenance costs, and general inflation. The fraternities face all these problems, of course, but there are a couple of added twists. Unless the fraternities are competitive with the dormitory system, with comparable charges for room and board, they cannot be economically viable and would inescapably become an elitist group of wealthier students. So there is an external constraint on what they can charge. During the 1973-74 year, fraternity charges averaged about \$1,200, compared with \$1,175 for dormitory rates. One big difference, though, is that WPI, as a not-for-profit educational institution, *does not* pay taxes. Phi Gamma Delta, for instance, paid \$8,000 in property taxes last year. With 40 members living in the house, that is \$200 a year in property taxes that *each person* must pay for the privilege of living in the fraternity house. And that, in turn, means that the fraternity has \$200 less per person to spend on maintenance of the house, on food, on necessary expenses. All this while the fraternities are housing some 25 percent of the student body. And they can't afford to keep the houses up.

Frances Harvey, '37, WPI trustee: "If we talk about a 2,000 student enrollment, the very planning of the school points out that we cannot furnish housing to the students with our own buildings. We then get to

the point, one I've made many times, where I disagree with the philosophy we have around here for recruiting students. We print a nice fancy catalog. We tell them about the nice dormitories, and all of a sudden at the end of their freshman year they find out that they've got to live in a fire trap for the next three years because the school is not taking a position to supervise anything except its own buildings with respect to where we're forcing students to live.

"Around 1965, Phi Kappa Theta made a very thorough study when it was decided that the houses we had were wearing out. And we proved then, at 6 percent money and a tax rate half of what it is today, that it was an economic impossibility to build a house in modern design and to have it supportable by students who were living in it paying rates competitive with dorm room rents."

William Grogan: "If the college does not deign to assume any responsibility for the housing of students who are in fraternities, which it has not, then I think fraternities will be priced out of the business because of taxes, because of the inability to take care of their house. The cost of remodeling, as AEPi and Phi Gam have found, is atrocious, because there is not only the mortgage but also the incredible tax burden upon revaluation. This makes it really impossible now, I think, for a fraternity to seriously consider major construction or even very significant remodeling. I think that's a long-term thing, but it's going to catch up with the fraternities. The college has not taken the route of Carnegie Mellon University, Case Western Reserve University, and others, where the fraternities were made a part of the college-owned student-housing system, becoming in effect a special kind of dormitory. I think that unless that's done, it will only be a matter of time until we have a big fire, and *then* the college will act. But it's a shame we have to wait for that."



I. STUDENT AFFAIRS: Cooperation and Responsibility

by Donald P. Reutlinger, Dean of Student Affairs

THE FRATERNITIES AND THE COLLEGE

Official Viewpoints

Our fraternities supply many vital needs for nearly a quarter of our students. Many of the values of fraternity life are so individualized and personal that only fraternity members or alumni can fully appreciate this experience. However, it is obvious to all that fraternities can provide true brotherhood at their best and a choice of a style of living distinct from that of commuting, apartment-living or dormitory life. Fraternities are a social context in which much can be learned in the give and take of interpersonal relations, helping others, community service, self-reliant management of the house's own affairs, all within the camaraderie of a sense of belonging. For all of these reasons, our fraternity system is viable and well worth preserving.

However, there is a very real question as to how many fraternities can be supported when pledges must be drawn from a relatively small student body. Clearly we could not, for example, have so many fraternities as the University of Massachusetts in Amherst, which has about 18 with 800 members drawn from a student body five times larger than ours in its male population. We have had some 450 fraternity members in twelve fraternities this past year, a number that may shrink to eleven next year.

There also seems to be evidence that two of these eleven experienced light rushing last fall. An analogy may help to make our difficulty clear: Only a few of twelve competitors can hope to derive much satisfaction from a pie that can only be cut into 9 or 10 pieces. There are only two ways for us to create a larger pie: admit larger freshman classes or generate more interest in fraternity life among the freshmen we have.

Over the past seven years the student body has grown fairly rapidly from about 1500 to 2000 students, a level at which we anticipate no increase. Freshman classes, the rushing pool, have been 469, 349, 638, 534, 607, 562 and 565. The percentage of freshmen joining fraternities has been, respectively, 66%, 67%, 47%, 42%, 38%, 36%, and 33%. (A poll of our freshmen prior to rushing indicated that 31% would join fraternities; nationally we compare well with the figure of 17%, which has also been dropping

Independence, maturity, freedom, individual responsibility and the right kind of peer group influence are, I think, what fraternity life can foster at its best.

in recent years.) It can readily be seen that fraternities are not so popular as they were even a half dozen years ago, yet some changes in rushing, worked out with the IFC and the Office of Student Affairs, seemed last fall to stem the ebb tide. In essence, there was much greater cooperation among fraternities which have traditionally been competitors rather than cooperators. The fraternity system as a system was strengthened. It was as though they had realized that they must hang together to avoid hanging separately.

It was very gratifying for me to work with the IFC, supplying an early mailing list of the freshman class, going over copy of a mailing to parents, calling attention to the values of fraternity life in my annual letter to all incoming freshmen, and suggesting successfully that all fraternities rush first in the dorms and not sit back any longer and simply wait for freshmen to visit the houses each fall.

Yet, in stemming the falling tide, it still becomes apparent that there *must* be about 220 new freshmen interested in joining fraternities each year, and each fraternity *must* get its fair share of these pledges. (A smaller admitted freshman class would be ominous.) Otherwise, some houses will continue to be in financial danger, and one or two more might fail until the number of houses declines to a point where a viable fraternity system reaches its level of survival strength.

But all of this is to speak only of the problem of numbers. The numbers of pledges and even current brothers could fall as a result of students feeling that fraternity life is trivial or unimportant or detrimental to student life.

Last fall, after the tradition of fraternity-Becker house "raids" had gotten out of hand to the point where much damage and at least one assault had taken place, I wrote a strongly worded letter to all our fraternities. I ended this letter by saying that "Our fraternities, instead of remaining male bastions with a locker-room mentality, could aid in this process of growing up." Needless to say I did not enjoy making such an observation, and many fraternity members took offense, to say the least. Some also thought that this letter signaled some kind of abandonment of interest in fraternities by WPI. Far from it; I would not have written such a strongly worded letter if I did not care. And when I said that I thought that direct financial subsidy of fraternities by WPI was inappropriate, I was speaking only of one kind of help, loans and subsidies. Further, when I told WPI Police not to protect students from the Worcester Police, I was only affirming the ordinary sense of responsibility which all citizens must have including, now, eighteen year olds. Independence, maturity, freedom, individual responsibility and the right kinds of peer group influence are, I think, what fraternity life can foster at its best. I want to see our fraternity system strong and functioning at its best. Then the fraternities will serve a vital educational role in life at WPI where our goals depend so much upon educating future graduates for lives of social responsibility.

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The fraternity system as a system was strengthened. It was as though they had realized that they must hang together to avoid hanging separately.



II. PLANNING: An Alternative Lifestyle

by Gardner T. Pierce, Director of Physical Planning and Plant Services

I view the fraternities as an optional social area that is very important to the college life – or at least to certain elements on campus. There are students who prefer fraternity life and fraternity social events, and certainly those are different from what these students would experience living on campus or living off campus in a room or an apartment house. This is what we've attempted to do, to provide diversity. You can't satisfy everyone with one set of circumstances. So we try to develop alternatives. This is one of the reasons for the type of housing we chose for the Ellsworth and Fuller dormitories we just finished building. An alternative to what we already had.

So first of all I view the fraternities as meeting a social need, for the overall benefit of the college. And then, down the list, they meet a housing requirement. They are filling somewhere between 400 and 450 beds, and that's a major part of our housing needs.

We have no more plans for building additional student housing. If, for some reason, the fraternities find they are not able to continue accommodating these 400 to 450 students, then the college will have to consider how to house them. If the fraternities drop down much below their present level, then the college will have to take some sort of action – either operate their houses, or other houses, or develop some other form of housing.

But my own personal feeling is that the fraternities ought to remain a very viable and interesting aspect of the total college life.

You can't satisfy everyone with one set of circumstances. So we try to develop alternatives.

III. FINANCES: Taxes, Mortgages, and What Constitutes a Dormitory?

by David E. Lloyd, Vice President for Business Affairs

A few years ago, after an intensive study, we worked with the Worcester tax assessor's office in developing real estate tax abatements for the renovated or newly built fraternities that were high on the real estate tax assessment list. These were Phi Gamma Delta, Theta Chi, Lambda Chi Alpha and Alpha Epsilon Pi.

Tax abatements were granted for these fraternities, but this did not solve all of their financial problems. Lambda Chi Alpha, for example, became periodically delinquent in their mortgage payments and their real estate tax payments were dropping behind. They also were having difficulty paying some of their operating bills. So, as an experiment, WPI developed a general agreement with the Cluverius Society under which, in essence, WPI took over ownership of mortgaged fraternity properties and rented the rooms to the students, thus turning these buildings into dormitories. As the first experiment WPI took over the Lambda Chi Alpha property by a legal arrangement called in lieu foreclosure.

Shortly after this it became evident that the Delta Sigma Tau fraternity members would have to move from their house on Trowbridge Road to make way for construction of the Ellsworth and Fuller dormitories. WPI had just purchased a house on 8 Boynton Street and we worked out the same arrangement with Delta Sigma Tau as we had with Lambda Chi Alpha. The College financed the reconstruction (with the students assisting the contractor and doing much of the planning and some work). That property became tax exempt because it also was developed into a dormitory.

I had misgivings frankly about this latter action, anticipating, I suppose, some of the problems that were developing with the whole tax base in Worcester. With our action on Lambda Chi the city assessor's office agreed that 12 Boynton Street would indeed become a college dormitory and thus was tax exempt. The forty people living there just happened to be Lambda Chis and they were no different from forty other students who might be living in a section of Stoddard. There is a difference, perhaps, but technically and legally the arrangement seemed to be all right.

If a fraternity could not carry its own operation, both financially and otherwise, there had to be problems beyond just the tax base.

In any event, we followed the same procedure with Delta Sigma Tau. When 8 Boynton Street was removed from the tax rolls, however, we tried to alleviate future problems somewhat by indicating that WPI would no longer take over titles of fraternities by in lieu foreclosure. If a fraternity could not carry its own operation, both financially and otherwise, there had to be problems beyond just the tax base that were making the operations financially and socially difficult.

Lambda Chi Alpha continued with some financial problems even though they had their entire tax burden removed. However, they are now getting along reasonably well with the help of dedicated leadership.

Now the problem is, what do we do in the future? Theta Chi fraternity was showing evidence of financial problems and hoped for an in lieu foreclosure arrangement. We had to tell them that this was impossible. We would try to help them with their problems, but if they wanted to retain all of the elements of the so-called fraternity independence, they were on their own. There is no way that WPI could take over their property as had been done with the other two houses.

The city tax assessment revaluation was developing and the word came to us that WPI could quite likely end up being taxed on all of its dormitories. It was made perfectly clear that the former "tax dodge" was not tolerable. I could not disagree with this honest philosophy.

And there are more problems, AEPi is financially almost bankrupt. The alumni leadership came to us a year ago and quite honestly stated that their problems were insurmountable, particularly with the tax burden. We agreed to wait until this past fall, to see what would happen in the rush period. Matters deteriorated even more. Now we have gone a whole year with no mortgage payments, they are in arrears in property tax payments and have many other debts. It's impossible for them to pull out of their financial dilemma operationally.

After studying all of the possible options, the Trustee Finance and Investment Committee decided

that the best and fairest course of action, in the best interests of both AEPi and WPI, was to foreclose on the mortgage which WPI holds.

Now, either AEPi will find a buyer for the house at a sufficient price and clear up the financial situation that way, or there will be a public auction in a few months. At that point WPI or any other interested bidder has a right to bid and acquire all rights to the property providing the deed and title are clear.

It's a shame that things have developed this way. The idea, which was formulated into a policy, of WPI granting fraternity mortgages began early in the 1960's, and it was sound then. It was designed to help the fraternities upgrade their facilities. But it seems to have created some problems now. Times change.

WPI

THE WPI FRATERNITIES

The Houses Today



FRATERNITY: Alpha Epsilon Pi
ADDRESS: 39 Dean Street
PHONE: 757-9927
PRESIDENT: Tom Carnevale
NO. MEMBERS: 17
NO. PLEDGES THIS YEAR: 8
CAPACITY OF HOUSE: 40
LIVING COSTS IN HOUSE: \$1,150
LAST PROPERTY TAX BILL: \$9,000
SPECIAL PROBLEMS: money



FRATERNITY: Alpha Tau Omega
ADDRESS: 10 Regent Street
PHONE: 756-5656
PRESIDENT: Peter Arcoma
NO. MEMBERS: 72
NO. PLEDGES THIS YEAR: 18
CAPACITY OF HOUSE: 43
LIVING COSTS IN HOUSE: \$1,100
HOUSE OWNER: ATΩ Alumni Association



FRATERNITY: Delta Sigma Tau
ADDRESS: 8 Boynton Street
PHONE: 755-4139
PRESIDENT: Robert J. Byron
NO. MEMBERS: 37
NO. PLEDGES THIS YEAR: 17
CAPACITY OF HOUSE: 21
LIVING COSTS IN HOUSE: \$1,075
HOUSE OWNER: WPI



FRATERNITY: **Lambda Chi Alpha**
ADDRESS: **12 Boynton Street**
PHONE: **791-6066**
PRESIDENT: **Mark R. Cosenza**
NO. MEMBERS: **58**
NO. PLEDGES THIS YEAR: **16**
CAPACITY OF HOUSE: **45**
LIVING COSTS IN HOUSE: **\$1,290**
HOUSE OWNER: **WPI**
SPECIAL DISTINCTIONS: **28 waterbeds at last count (highest number on campus); boa constrictor lived in house during A and B terms (!)**



FRATERNITY: **Phi Gamma Delta**
ADDRESS: **99 Salisbury Street**
PHONE: **752-9581**
PRESIDENT: **James D. Aceto, Jr.**
NO. MEMBERS: **63**
NO. PLEDGES THIS YEAR: **20**
CAPACITY OF HOUSE: **40**
LIVING COSTS IN HOUSE: **Comparable to dorms**
HOUSE OWNER: **F. A. Morse Corp.**
LAST PROPERTY TAX BILL: **\$8,000**



FRATERNITY: **Phi Kappa Theta**
ADDRESS: **26 Institute Road**
PHONE: **757-9971**
PRESIDENT: **Richard Newhouse**
NO. MEMBERS: **90**
NO. PLEDGES THIS YEAR: **32**
CAPACITY OF HOUSE: **55**
LIVING COSTS IN HOUSE: **\$1,200**
OWNER OF HOUSE: **Aquinas Association**
CAMPUS STEREOTYPE: **Jocks**
SPECIAL DISTINCTION: **Winner of 1973 Founder's Cup Award for being best PKT chapter of 65 in the country.**



FRATERNITY: **Phi Sigma Kappa**
ADDRESS: **11 Dean Street**
PHONE: **752-9483**
PRESIDENT: **Robert Brennan**
NO. MEMBERS: **52**
NO. PLEDGES THIS YEAR: **28**
CAPACITY OF HOUSE: **50**
LIVING COSTS IN HOUSE: **\$1,200**
HOUSE OWNER: **Kappa Xi Alpha Corp.**

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FRATERNITY: **Sigma Alpha Epsilon**
ADDRESS: **6 Humboldt Avenue**
PHONE: **752-9667**
PRESIDENT: **Jeffrey H. Moody**
NO. MEMBERS: **36**
NO. PLEDGES THIS YEAR: **14**
CAPACITY OF HOUSE: **36**
LIVING COSTS IN HOUSE: **\$1,200**
HOUSE OWNER: **Sigma Alpha Epsilon Corp.**



FRATERNITY: **Sigma Phi Epsilon**
ADDRESS: **11 Boynton Street**
PHONE: **798-3735**
PRESIDENT: **John J. Fitzgibbons**
NO. MEMBERS: **47**
NO. PLEDGES THIS YEAR: **16**
NO. NON-MEMBER BOARDERS: **3**
CAPACITY OF HOUSE: **48**
LIVING COSTS IN HOUSE: **\$1,233**
HOUSE OWNER: **Alumni Board**
CAMPUS STEREOTYPE: **Jocks**



FRATERNITY: **Sigma Pi**
ADDRESS: **17 Dean Street**
PHONE: **757-9308**
PRESIDENT: **Mark W. Rockett**
NO. MEMBERS: **46**
NO. PLEDGES THIS YEAR: **15**
CAPACITY OF HOUSE: **35**
LIVING COSTS IN HOUSE: **\$1,200**
HOUSE OWNER: **Psi Theta Nu Corp.**
LAST PROPERTY TAX BILL: **\$1,800**



FRATERNITY: **Tau Kappa Epsilon**
ADDRESS: **1 Massachusetts Avenue**
PHONE: **757-9701**
PRESIDENT: **Richard Mariano**
NO. MEMBERS: **49**
NO. PLEDGES THIS YEAR: **23**
NO. NON-MEMBER BOARDERS: **3 English exchange students**
HOUSE OWNER: **Zeta-Mu Corp.**



FRATERNITY: **Theta Chi**
ADDRESS: **85 Salisbury Street**
PHONE: **753-9952**
PRESIDENT: **Eric E. Paulson**
NO. MEMBERS: **34**
NO. PLEDGES THIS YEAR: **3**
CAPACITY OF HOUSE: **56**
LIVING COSTS IN HOUSE: **\$1,400**
HOUSE OWNER: **Epsilon Building Association**
LAST PROPERTY TAX BILL: **\$10,000**
CAMPUS STEREOTYPE: **Joe Average**

Now you see it, now you don't

Color: That aspect of things that is caused by differing qualities of the light reflected or emitted by them. It may be defined in terms of the observer, or of the light.

Most of us are intuitively aware of what color is, and if we're scientifically inclined we probably think of color in terms of different wavelengths of light. That's the second part of the definition above.

But there's another kind of color, related to the first part of the definition. It's called subjective color, and it involves the perception of color from black and white.

The most common means for producing subjective color is an old scientific curiosity called Benham's Top, a disc which is half solid black and half a series of black arcs (see the illustration). When this is rotated at approximately six revolutions per second, colors appear. If you cut out the disc here, mount it on a piece of cardboard for support, and spin it, you should observe the phenomenon. (If no motor is available, spin it by hand on the tip of a pencil.) When rotated in a clockwise direction, the colors red, green, and blue will appear in the inner, middle, and outermost arcs, respectively. Rotate the disc in the opposite direction and the red and blue will exchange positions. This phenomenon, known as the Provost-Fetchner-Benham effect, has been known for almost one hundred years; what causes it has not been known.

Now a WPI graduate and his faculty advisor think they have found the key to subjective color. Leonard Polizzotto, '70, first started work on Benham's Top as an undergraduate independent research project

with another student. Most of his time was spent creating new patterns to produce various subjective color sensations, trying to understand how the disc worked. One early result was the creation of a black and white movie film which yielded subjective color sensations from movie frames which were sequenced in the same pattern as the rotating disc.

After graduating, Lennie stayed on at WPI for graduate work in electrical engineering. He became interested in biomedical engineering and decided to do graduate research on human subjective color perception. Since that time he has worked with associate professor Robert Peura, '66, both while in school and later while working for AT&T-Long Lines and (currently) Polaroid (where, contrary to your expectations, he isn't involved with color at all, but rather with production).

The outcome of this work was the presentation of papers at two international conferences (one in Goteborg, Sweden, in August 1972; the other in Dresden, East Germany, in August 1973) and one domestic conference. *Vision Research*, an international journal, has accepted a joint article by Peura and Polizzotto for publication.

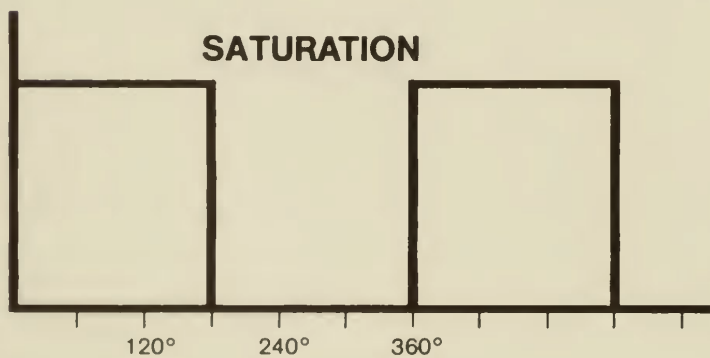
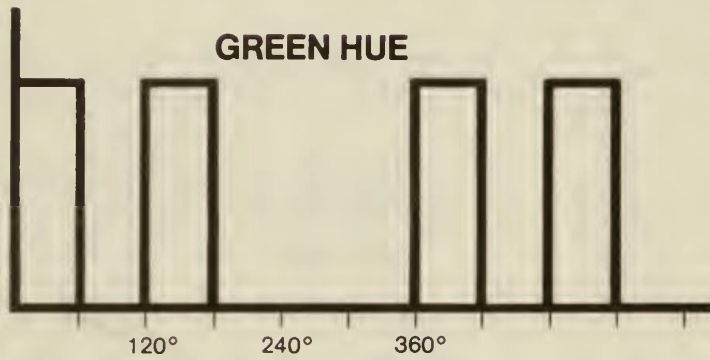
SUBJECTIVE COLOR – HOW DOES IT WORK?

It appears from their research that subjective color is caused by intermittent visual stimuli, as opposed to real, or physical, color, which is caused by steady visual stimuli. In other words, the normal color that we see in everyday objects is not dependent on time variations, or the duration of lighting. But the sensation of color can be created by various flickering patterns of black and white.

If Benham's Top is producing color sensations, it must somehow be satisfying the three variables of physical color. These variables are **hue**, the gradation of color (e.g., red vis-à-vis green); **saturation**, the purity of the color, or its mixture with white (e.g., red vis-à-vis pink); and **intensity**, the amount of light (e.g., red vis-à-vis maroon). The problem was to determine how the color variables could be related to what happens on the disc.

By changing the arc length and/or position, the subjective color changes. When the disc is rotated backwards, for example, the red and blue change places. This obviously relates to hue. Polizzotto decided to analyze the disc according to an on-off (white-black) basis. Plotting the on-off pulses for the arc that gives the red sensation, taking the right side of the demarcation line between black and white as 0° , produces a waveform that is off for 60° , on for 120° , and off for 180° . The degree amounts are converted to time increments by the six-revolutions-per-second rotation. But you can flash a light on and off in the same time sequence, and no color sensation results. This one variable, obviously, isn't enough. We must need all three.





Between each arc is a pulse which is on for 180° and off for 180°. If this arc is removed, no subjective color appears, and therefore the presence of this pulse is required. Polizzotto termed this pulse saturation. The third variable, intensity, is merely the amount of light reflected from the disc. It need only be strong enough to exceed the energy threshold of the cones in the retina of the eye.

Now that he had isolated the color variables — or at least their analogues — on the disc, Polizzotto still was faced with the task of explaining how the hue and saturation waveforms produced the color sensations. Because the eye-brain path is a type of communication system, he used statistical communications theory, cross-correlation, to analyze the waveforms and compare the signals. This showed that each color waveform had a distinctive shape and time-shifts. Converting them to the frequency domain, each color has a distinctive phase angle. This implies that the color information is transmitted in the visual pathway by means of an angle-modulated system.

Applying this information to current theories of physical color vision (itself not completely understood by any means), has indicated a possible explanation for the subjective color perception. The retina of the eye contains receptors sensitive to long, middle, and short wavelengths of light (red, green, blue). These receptors, in turn, send information to color encoders, of which there are a red-green, a blue-yellow, and a black-white. (For purposes of simplification here, the various layers of cells in the retina — bipolar, amacrine, etc. — are lumped together under the general term encoder.) Since white light contains all colors of light, the light reflected from the rotating top stimulates all three receptors which send information to the black-white encoder. This encoder, in turn, sends information to the brain which is similar to the information sent by the color encoders when they are stimulated by physical color. The brain merely interprets the information it receives, regardless of source, as color. And this is how the black-and-white flickering is interpreted as color.

Because yellow light is a mixture of red and green light, Peura and Polizzotto reasoned that if their waveform analysis was correct, combining the waveforms for red and green should result in a new waveform representing an arc that yields yellow. And this was exactly the case. Similar work with the color orange yielded positive results, further confirming the validity of their method of analysis.

Peura and Polizzotto hope that their work may and their method of examining color may hold the key to a better understanding of just how the eye perceives color, and how the brain interprets it.

your class and others

The data on which these class notes are based had all been received by the Alumni Association before April 1, when it was compiled for publication. Information received after that date will be used in succeeding issues of the WPI Journal.

1910

Class Secretary CHARLES E. BARNEY was hospitalized over the holidays, but still was able to send in the following news.

OLIVER JACOBS starts the New Year off with a bang, writing that he is looking forward to "seeing some of the gang in '75 and '80." For good measure he says, "Hooray for 1910." . . . LEONARD HOWELL recently flew to San Francisco to attend his grandson's wedding. Currently he is living at Foxwood Drive, Eastham, Mass. 02142. . . . ALVAN GROUT's address is Methodist House, St. Petersburg, Fla. He is enjoying his new location on the shores of Tampa Bay.

ED HANFF, after a stay in the hospital last summer, now feels as good as usual except for "usual old age." His wife, Tex, was also hospitalized but now "gets along O.K." . . . The GEORGE MARTINS of Westminster, Mass. were given a surprise 60th wedding anniversary party attended by 100 people last November. "Hap" is a little worried about joining the "Old Man's Club", but still went out and renewed his driving license for another four years. To date the Martin family stands at three children, 11 grandchildren, and "3 1/2 plus" great-grandchildren.

IRVING and Clara PETERS are proud of their grandson who graduated from college last year. A good athlete (basketball), he was on the Dean's list all four years. Irving recently cracked his ribs in a fall, but is coming along better now. . . . PAUL and Marion TWISS have given up their car and weaving loom. Paul's main hobby now is his Hammond organ. . . . The MILLARD CLEMENTS are getting settled in their new home in Granby, Mass. right next to their son's family. . . . CARLYLE A. ATHERTON has returned from West Germany and is now residing at Sunny Acres Farm in Contoocook, N.H.

According to the secretary, "The Barneys are in 'Good condition for the shape they are in'." Charles is recovering from a successful operation and both he and Mildred are looking forward to future 1910 contacts. They wish to thank everyone who sent them class news over the holidays.

1915

During his retirement CHARLES B. HURD has been specializing in collecting fossil sea shells and is currently in charge of fossil shells at the South Florida Museum in Bradenton.

1926

The HAP WENDINS write that this has been a banner year as they have enjoyed trailer trips to Mexico, Texas, California, Oregon, and Nevada. At home in Mesa, Arizona, Hap teaches classes in Creative Imagination and Beginner Spanish. Also Hap was a group leader and Barbara an assistant librarian for a University of Buffalo extension course held at the University of California last summer.

1930

JOSEPH H. COGHILL reports that to date he has four daughters and nine grandchildren, five of them boys. . . . IRVING JOSEPH, who formerly owned Irving Joseph's Appliance Center in Worcester, is now retired and living in Ft. Lauderdale, Fla. . . . JOHN J. LYONS has been named district highway engineer (top administrative officer) for the District 3 division of the Massachusetts Department of Public Works. He joined the DPW in 1929 in the survey section. Later he became a district materials manager and director of the Division of Research and Materials. In 1972 he was appointed deputy chief engineer for maintenance, the post which he held prior to his latest promotion.

1931

ALBERT M. DEMONT, who recently retired as manager of professional manpower development for GE's corporate research and development operation, has been named acting director of cooperative and career placement at Schenectady (N.Y.) County Community College. His office is responsible for the placement of students in cooperative education jobs and of college graduates in permanent positions.

In 1932 he joined GE and spent many years in the naval ordnance department. Later he was associated with the company's general engineering laboratory as manager of program development and manager of employee relations. He is a course leader in GE's management practice course. In 1972 he was listed in "American Men and Women of Science."

JOHN E. FLETCHER retired in March. He had been a quality control engineer at Bryant Electric Co., division of Westinghouse, in Bridgeport, Connecticut.

1932

LESTER N. LINTNER is a special projects engineer at the Torrington (Conn.) Co. . . . CONSTANTINE ("Connie") J. ORFANOS, project manager, General Electric Co. (Electric Utility Equipment Projects), was recently elected president of the New York section of the Society of Harvard Engineers and Scientists. At the December meeting of the Harvard Club of New York, he introduced the guest speaker, Dr. Thomas O. Paine, a GE senior vice president of technology planning and development.

1935

KARL H. BOHAKER is director, business development, at AMF Incorporated (electrical products group), Alexandria, Va. . . . WENDELL D. JEWELL serves as a senior design engineer at Honeywell, Inc., St. Petersburg, Fla.

1936

ALLEN C. CHASE is president of Chase Pre-cast Corp. and CUPEC in North Brookfield, Mass. . . . WALTER G. DAHLSTROM retired January 1 from U.S. Steel Corp., Worcester Works, where he was division chief of Applied Research. . . . L. BREWSTER HOWARD currently serves as vice president of American Saw & Mfg. Co., East Longmeadow, Mass. . . . FRED HYATT works at Ewing Technical Design, Hicksville, N.Y.

1937

Presently GORDON F. CROWTHER is engineering personnel administrator at Factory Insurance Association, Hartford, Conn. . . . MORTON S. FINE of West Hartford, Conn., was recently named a director of Henry Souther Engineering Co. He serves as president of Morton S. Fine & Associates, Inc., Bloomfield, Conn. A registered engineer and land surveyor in Connecticut, Massachusetts, New York, New Jersey, and New Hampshire, he is also a registered landscape architect in Connecticut and Massachusetts and a registered planner in New Jersey.

1938

Dr. ARTHUR E. MARTELL has been appointed a distinguished professor in the chemistry department at Texas A & M University, College Station.

1939

WILDER R. CARSON has retired from the U.S. Army Munitions Command, Dover, N.J., and is now traveling throughout the U.S., Canada, and Mexico.

1940

CLYDE L. GERALD is with Chesapeake Instrument Corp., Glen Burnie, Md. . . . RUSSELL A. LOVELL, JR. is the author of a new book, *Thornton W. Burgess*, which includes many photos, genealogical charts, and maps of the areas which the young Burgess knew so well on Cape Cod. The book also contains an extensive insight into the man who later influenced millions of young readers. It is being published in conjunction with the town of Sandwich (Mass.) Thornton W. Burgess Centennial which is being celebrated this year. Mr. Lovell, who resides at 9 Jonathan Lane, Sandwich, Mass. 02563, is chairman of the Sandwich Historical Commission.

1941

CARL W. BETTCHER, JR., owner of the 50-man production machine shop, Van Dusen and Meyer, Inc., for eight years, has just moved into a new 30,000 square foot plant in Shelton, Conn. The Bettchers are the parents of two teenage daughters. . . . ALVIN A. LUCE currently serves as district sales manager at the Torrington Co., Torrington, Conn.

1942

PAUL C. DISARIO has been named director of the newly formed Industrial Division at Burns and Roe Inc., Paramus, N.J. Previously he was the chief construction and engineering executive responsible for projects involving laboratories, material handling facilities, and numerous types of process plants. . . . ERIC ESSEN was recently appointed a legislative-membership chairman for National Small Business Association, the Washington-based trade organization which represents 500 different types of industry and commerce. He is a director for General Business Services in the area of North Attleboro, Mansfield, Norton, and Easton, Mass. He has had over 20 years of experience in the management of local and nationally known corporations. . . . RUSSELL C. PROCTOR is project manager at Rust Engineering Co., Birmingham, Ala. . . . HOWARD C. WARREN, chief executive officer and chairman of the Riley Co., Skokie, Ill., and its subsidiary, Riley Stoker Corp., Worcester, became president of the company in January.

1943

HENRY C. DURICK, JR. has retired after 20 years with FMC Corp., Lakeland, Fla. He is now doing consulting work, a recent assignment taking him to Cyprus. . . . JOSE L. ZARAGOZA is currently a nuclear facilities development engineer with the Navy Department in Portsmouth, N.H.

1944

DAVID M. FIELD works as supervisor-airframes design for Boeing-Vertol Co., Philadelphia, Pa.

1950

GEORGE E. ENGMAN is employed as a product support engineer at Digital Equipment Corp., Maynard, Mass. . . . Currently DAVID G. HUMPHREY works as a regional sales engineer at Sprague Meter Division of Textron in Bridgeport, Conn. He writes that he is involved with Natural Gas Utilities, and State and Federal Public Utilities Commissions in Pennsylvania, New Jersey, Delaware, Maryland, D.C., and Virginia. . . . ROBERT F. SHANNON has been named senior research engineer for the Central Research Department of Pfizer, Inc., Groton, Conn., a manufacturer of antibiotics, prescription drugs, and industrial chemicals. Formerly he was engineer in charge of design for Pfizer's central research pilot plant.

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Munro, '51



1945

HAROLD FLEIT has retired as vice president of marketing at Dorr-Oliver, Inc., Stamford, Conn.

1946

JOHN J. LANDERS is operations manager at Off-Track Betting Corp., New York City.

1949

JAMES M. GENSER serves as engineering manager at Processes Research, Inc., Cincinnati, Ohio.

1951

WILLIAM J. CUNNEEN has been appointed assistant chief control systems engineer at Stone & Webster. He will be responsible for computer systems and studies groups. Cunneen is District I vice president of the Instrument Society of America. . . . RICHARD E. HOWARD is manager of Winkfield Engineering Co., Inc., Medway, Mass. . . . DUNCAN W. MUNRO was recently elected secretary of the American Cemetery Association (ACA). He has served as a director of ACA, written extensively for the association's journal, and served as program chairman of the 1972 ACA conference in Martinique, F.W.I. Since 1967 he has been superintendent of historic Mount Auburn Cemetery in Cambridge, Mass. . . . ROGER E. WYE is vice president, program management, at Amecom Division/Litton Industries, College Park, Maryland.

Wyman-Gordon is the country's outstanding producer of forged components for America's key industries. Wyman-Gordon has supplied forgings for virtually every aircraft in the skies today, as well as for the Saturn and other space boosters. Equally important is its production of vital components for nuclear and turbine power plants, sea and undersea vessels, trucks, tractors and construction equipment.

Research is a hallmark of Wyman-Gordon; its Research and Development teams have long been recognized as industry leaders in the development of new techniques for advanced materials such as titanium and other space-age alloys.



WYMAN - GORDON



1952

ROBERT A. MEYER is now a senior group engineer at Martin Marietta Corp., Orlando, Florida.

1953

SIDNEY R. HARVEY has been named technical service manager for the Elastomers and Polymer Additives Department of American Cyanamid Co., Bound Brook, N.J. He will be responsible for technical service in rubber chemicals, Factice, specialty elastomers and plastics additives. . . . ROBERT J. HASNERL is now an engineering project manager for Bendix Corp. in Newport News, Va. . . . CHARLES E. HORNE works as a senior product engineer at the Torrington (Conn.) Co. . . . GEORGE L. ROUSSEAU, SIM, has been appointed vice president of freight car engineering for the Pullman Standard Division of Pullman, Inc. He joined the firm in 1940 and previously served as a director of freight car engineering.

1957

Presently ALLAN T. DEVAULT serves as director of standard products at General Automation, Inc., Anaheim, Calif. . . . PASCAL A. MANCINI was recently promoted to manufacturing manager of the Industrial Chemical Division of Stauffer Chemical Co. at the firm's corporate office in Westport, Conn.

1958

DR. DAVID S. CRIMMINS is currently a full-time student at the University of Pennsylvania School of Dental Medicine participating in a 24-month pilot program to get people with PhD's trained as dentists. . . . BRUCE B. STORMS is a stockbroker with Kidder, Peabody & Co., Inc., New York City. He is also a partner in Storms Harvey Equipment Co.

1959

RONALD L. MERRILL serves as a project engineer at Minnesota Mining & Mfg. Co. (3M), St. Paul, Minn. . . . NEIL A. M. PETERS is a self-employed consultant in Phoenix, Arizona.

1960

JAMES R. BUCHANAN holds the position of New York district manager at Shell Chemical Co., Stamford, Conn. . . . DR. JOEL I. LEONARD is now a senior biomedical research engineer with General Electric in Houston, Texas. He has been working with NASA on bioengineering analysis of physiological control systems and Skylab medical experiments. Last year he designed and built an ecological, self-sufficient house. . . . RONALD F. POKRAKA serves as regional sales manager at Fibreboard Corp., Englewood Cliffs, N.J. . . . DR. HOWARD A. SHOLL, who is an assistant professor at the University of Connecticut, is currently on leave at the University of Edinburgh in Scotland for the 1973-74 academic year. . . . WILLIAM M. SPRY works as senior engineer at Digital Equipment Corp., Maynard, Mass.

1961

DANIEL D. GELLER is assistant Washington metropolitan coordinator at the U.S. Environmental Protection Agency in Arlington, Va. . . . GARO PAPAIZIAN works at Digital Equipment Corp., Maynard, Mass. . . . STEPHEN D. TRITTER is principal programmer at Digital Equipment Corp., Maynard, Mass.

1962

JORGE H. CARVAJAL is now Subdirector Estudios Tecnicos at Carvajal & Cia, Colombia. . . . Presently WILLIAM J. SHEPHERD works at McGraw-Hill, Inc., New York City. . . . PHILIP DeCAPRIO was recently elected a legislative council member (6th district) in Hamden, Conn. He is an electrical engineer with the Northeast Utilities Service Co. and also serves as vice president of the Dunbar Hill PTA. He is a professional engineer in the state of Connecticut. . . . PETER J. MARTIN is the general manager, J. Derenzo Co., Needham, Mass.

1963

DR. ANTHONY E. ALLEGREZZA, JR. has joined the materials research and consulting firm of FRL (an Albany International company) as a senior research associate. At FRL in Dedham, Mass., he will be active in the development of hollow-fiber filter systems for industrial water-pollution control and water desalination processes. Formerly he was doing postdoctoral work at the University of Wisconsin and also was affiliated with duPont's Film Department at Buffalo, N.Y. He is a member of VITA (Volunteers in Technical Assistance), an organization which helps the developing countries of the free world. . . . JOSEPH BELLOFATTO serves as a staff engineer at Itek Corp., Lexington, Mass. . . . THOMAS CECHILE is a senior structural engineer at Gilbert Associates, Inc., Reading, Pa. . . .

ROBERT S. CURRY holds the position of service planning representative for IBM in Rochester, Minn.

RUSSELL E. HOKANSON is currently a shift supervisor at E. I. duPont de Nemours in Aiken, S.C. . . . RONALD E. LEMANSKY has been promoted to manufacturing manager—precision and specialty products, of the Fafnir Bearing Company, New Britain, Conn. He joined the company in 1963 and for the last four years has served as superintendent of the Super Precision Bearing Division. . . . JOSEPH MANCUSO, head of the Management Engineering Department at WPI, has written a new book, *Fun and Guts: the Entrepreneur's Philosophy*, which was recently published by Addison-Wesley Publishing Company, Inc. Mancuso has served as director of eight small businesses and as a consultant for over 300 companies in the past seven years. . . . National Life Insurance Co., Montpelier, Vt., employs DR. WILLIAM J. SAVOLA, JR. as a security analyst. . . . KEIVAN TOWFIGH is now president of his own manufacturing company, the Rangine Corporation, West Medford, Mass. His firm deals with aluminum shelving and extruded aluminum devices. Previously he was on the faculty of Tufts University and an employe of Hewlett-Packard in Medford.

Anyone interested in viewing an exciting Super-8 color motion picture film starring JOE MANCUSO, BILL ZINNO, DON ROBERTSON, ROBERT MAYNARD, RICHARD IACOBUCCI, CHARLES GODDARD, JOHN GEFFKEN, JAMES KELLY, JOHN LAWSON, BILL NEWHALL, KENNY BACKER, JOHN SISTARE, MARCEL CLAVIEN, and many other classmates and spouses should contact Dr. RICHARD IACOBUCCI at Rocrtronics Entertainment Lighting, Inc., 22 Wendell St., Cambridge, Mass. 02138. For \$3 the film will be lent to any classmate who wishes to see this never-to-be-forgotten silent classic of the 10th Reunion of the Class of 1963. A tour of the campus showing the new library, auditorium, and science building plus scenes of Lincoln Square and the new City Hall Plaza are also included in the 20-minute film.

1964

FREDERICK O. BORGESON is a senior engineer at Raytheon Co., Wayland, Mass. . . . DR. VICTOR S. DOLAT was a co-author of "L-band reflective-array compressor with a compression ratio of 5120," which was used as a reference for the article "SAW Technology" (Surface Acoustic Waves) which appeared in the Dec./Jan. '74 issue of *Microwave Systems News*. . . . Presently PETER R. FENNER serves as applications marketing manager at Systems Engineering Labs, Ft. Lauderdale, Fla. . . . DAVID L. GENDRON is production supervisor at Monsanto Co., Indian Orchard, Mass.

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F. CLARK GESSWEIN holds the position of communications specialist at the Army Warrentown (Va.) Training Center. Last summer he returned from Manila after spending three years there with the Diplomatic Telecommunications Service which was headquartered at the American Embassy. . . . GARY GOSHGARIAN, who teaches science fiction at Northeastern University, Boston, was a speaker at Technicon II, a science-fiction convention held at WPI during Intersession.

TERRANCE B. HARRIS serves as a senior field sales engineer for Union Carbide Corp., Molecular Sieve Dept., Tulsa, Oklahoma. . . . ROBERT E. MOURNIGHAN received his MS in chemical engineering from the University of Akron in December. . . . BRIAN SINDER is now project manager at Fairfield (Conn.) University. . . . PAUL B. WATSON is studying law at the University of Maine in Portland.

1965

Married: PETER D. CHRISTENSEN and Miss Lorraine Irene Morang on December 15, 1973 in Gorham, Maine. The bride is a graduate of the University of Maine. Her husband teaches mathematics at Lake Region High School, Naples, Me.

PETER J. BOWES works for Huron Cement Co., Southfield, Mich. as a masonry representative for northeast Ohio. . . . CHARLES J. DeSIMONE has been promoted to corporate banking officer in the Hartford Corporate Department of the Hartford (Conn.) National Bank and Trust. He went to HNB in 1972 from the Hamilton Standard Division of UAC, where he had been a chemical engineer. He has an MBA in finance from the University of Hartford. . . . WILLIAM R. JAMESON is a production design engineer for Ford Motor Co. . . . WILLIAM A. JOBERT works as general foreman at the Torrington (Conn.) Co. . . . ROBERT J. KOST is now a field supervisor at Hartford Electric Light Co., Hartford, Conn. . . . TERRY TRACY works at RCA in Princeton, N.J. He recently received his master's degree from the University of Michigan.

1966

ROGER J. ARMATA is a methods supervisor at the Torrington Co. in Connecticut. . . . Digital Equipment Corp., Mountain View, Ca., employs DAVID M. BURWEN as a sales representative. . . . JOACHIM W. DZIALLAS serves as general manager for Carl Edelmann GmbH, Heidenheim, West Germany. . . . Currently CAMERON W. HYDE works as district sales engineer at the Torrington (Conn.) Co. . . . MICHAEL T. PORTANOVA is a market/product specialist at Digital Equipment Co., Maynard, Mass. . . . The Massachusetts Division of Water Pollution Control, Boston, employs FRANK P. ROBINSON as a senior sanitary engineer. . . . STUART R. ROSELLE is a resident engineer at Central Illinois Public Service in Newton, Illinois.

1967

Married: JOHN A. FACCA and Miss Jane Ann Conlon on December 22, 1973 in New Britain, Connecticut. The bride is attending New Britain General Hospital School of Nursing. Her husband works at Rowland Development Corp., Kensington, Conn. . . . HARRY J. VAILLETTE to Miss Judith Ann Cloutier last fall in Leominster, Massachusetts. Mrs. Vaillette graduated from Salter Secretarial School. The groom is employed by Vaillette Electric Co., Leominster.

Born: to Mr. and Mrs. WAYNE M. CHIAPERINI their second child, Kristen Jan, on October 15, 1973. Wayne, who is resident engineer of the Water and Sewer Commission in Waterford, Conn., is currently in charge of a \$6 million water program and proposed \$30 million town sewer project.

EARL D. BERRY, SIM, was recently elected to the new position of vice president for administration of Woodbury & Co., Worcester. He had been assistant treasurer and director of customer relations. . . . CHARLES T. BLANCHARD has been promoted to engineering manager of the Pneumatic Ejector Division of CPC Engineering Corporation. In 1971 he started work at the company as a project engineer. . . . EDWARD J. BOTWICK, who recently received his Juris Doctor from the University of Connecticut Law School, has joined the law firm of King, DuBeau and Ryan in Rockville, Conn. He belongs to the Connecticut and American Bar Associations.



DeSimone, '65

DR. ROGER L. GARIEPY is a scientific systems analyst for Air Products and Chemicals, Inc., Allentown, Pa. . . . FRANK T. JODAITIS, the new administrator of the water and sewer department in Manchester, Conn., previously was with HUD in the Hartford area as a contract administrator. . . . ROBERT A. KENNEDY is a student at Northeastern University, Boston. . . . DHAVAL R. KIKANI works at Ford Motor Co., Dearborn, Mich. . . . ARVIND J. PATEL serves as a product design engineer at Ford Motor Co. Also at Ford is DINESH C. SHAH, who holds the post of product design engineer. . . . JOHN H. SOULLIERE has been appointed Northeastern District Sales Manager for Power Systems at the Foxboro (Mass.) Company. He joined the company in 1969 as a sales engineer and has specialized in power systems. From 1971 to 1973 he was field application specialist in the power division. He is currently based in the Boston regional office.

1968

Born: to Mr. and Mrs. JOHN S. MAZUR, a son, Jeremy Adam, on August 31, 1973. John is an applications engineer for Wallace & Tiernan in Belleville, N.J. . . . to Mr. and Mrs. DAVID H. RICE, a son, Jeffrey Stephen, on December 13, 1973. Rice is an information system staff member at Western Electric, Newark, N.J.

DONALD P. BERGSTROM has been promoted to area engineer for the Wilmington office of Dufresne-Henry Engineering Corp. in Vermont. . . . NORMAN E. BRUNELL, who works in the patent department of the Foxboro (Mass.) Company, passed the Massachusetts Bar Examination last November. . . . WILLIAM E. CATTERALL, JR. is a product design engineer at Ford Motor Co., Dearborn, Mich. . . . ROBERT V. GEMMER received his PhD April from Stanford University. He has accepted a position as Postdoctoral Research Associate in the Department of Chemistry at Johns Hopkins University, Baltimore, Md. . . . ROBERT J. HORANSKY has been appointed engineer in the Northeast Utilities engineering department's computer application section. Earlier he had been an assistant engineer in the same department. . . . MICHAEL A. DiPIERRO of Polyform Corporation has announced that the corporation has merged with Foam Engineering and that the new facilities are now at 69 Milk St., Westboro, Mass. Mike also runs Auto-Tech, Inc., a chain of do-it-yourself auto service centers. During Intersession in January, Auto-Tech hosted over a hundred WPI students enrolled in auto servicing courses, thanks to Mike.

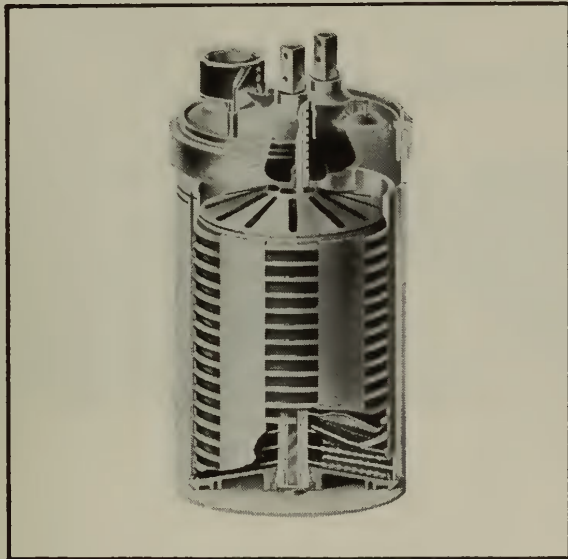
1969

Married: DANIEL C. POND to Miss Barbara M. Weller in Silver Spring, Maryland on November 17, 1973. Among the groomsmen were JAMES ATKINSON and BARRY SHIFFRIN. Mrs. Pond teaches in the Montgomery County school system in Maryland. Her husband is employed at the Johns Hopkins University Applied Physics Laboratory. . . . BERNARD WOOD and Miss Patricia Dussault in Oxford, Massachusetts on December 14, 1973. The bride is a licensed practical nurse. The groom is with Stone and Webster in Boston.

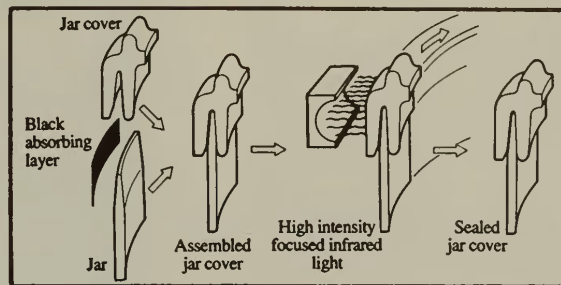
Born: Recently to Mr. and Mrs. JOHN HISCOCK a daughter, Lisa. Hiscock is chief engineer in the Second Water District in Norwalk, Conn.

FRANCIS P. ARCHAMBEAULT is an instructor at Worcester Junior/CNECT, Worcester. . . . ROGER C. DENNISON works as a project engineer at Hewlett-Packard, Waltham, Mass. . . . VALLABHDAS V. KANTESARIA works as a design engineer at Combustion Engineering, Inc., Windsor, Conn. . . . ROBERT E. NAJEMY, JR. teaches at Hawthorne House Day Care, Roxbury, Mass. . . . Currently GREGG POLLACK serves as district sales manager for Canon USA, Inc., Lake Success, N.Y. . . . ROBERT L. SIMONDS works at United Engineers, Inc., Boston. . . . JOHN S. THOMPSON, JR. is manager of Continental Investment Corp., Boston.

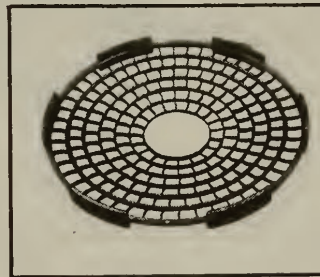
WESTERN ELECTRIC REPORTS



A cutaway view of the new lead-acid battery. For use in the Bell System, four types—each with a different ampere-hour capacity—will replace the 60 configurations currently in use over the same capacity range.



In the sealing process, focused infra-red light is absorbed in a carbon black coating at the jar-cover interface, causing localized melting of the plastic.



The positive grids are designed so that as corrosive growth occurs the space between hoops remains constant. Thus contact with the paste is maintained and electrical capacity actually increases with age as corrosion produces additional lead-dioxide material.

Developing a new lead-acid battery.

Every year, Bell System telephone companies spend over \$30 million to buy and maintain the lead-acid batteries they use as intermediate sources of standby power during emergencies.

So they know just how susceptible all lead-acid batteries are to problems caused by corrosion. Problems such as gradual loss of capacity, short-circuits and cracking that could result in acid leaks and occasional fires.

That's why Bell Labs and Western Electric engineers recently undertook the first major improvements on what is essentially a 100-year-old design.

The result: a revolutionary, cylindrical lead-acid battery with a jar and cover fabricated from an improved flame-retardant, impact-resistant polyvinylchloride. The bond between jar and cover is leakproof due to a new infra-red sealing process.

Inside the battery are circular, cone-shaped grids cast of pure lead rather than a lead alloy, then stacked horizontally in a self-supporting structure. Positive grids are cast with large grain-size to minimize corrosion. They're then filled with a paste (tetrabasic lead sulfate) whose rod-like particles interlock for maximum mechanical stability.

These new features required new manufacturing techniques. For example, how could potential suppliers best mass-produce positive plates of the required grain-size and paste the grids rapidly and efficiently, given their conical shape and the new oxide material's crystal structure?

Western Electric's Purchased Product Engineering organization and Bell Labs set up a design capability line at a company subsidiary, Nassau Smelting & Refining.

Using machinery developed at Western Electric's Kearny Works, they refined production methods and materials that made it possible for a supplier to produce the new battery economically, in commercial quantities and to Bell System specifications.

And Western Electric plans to achieve still further savings through a continuing cost-reduction program.

Conclusion: Close cooperation between Bell Labs and Western Electric has resulted in the creation of a superior lead-acid battery. Its expected useful lifetime is at least 30 years—double that of even its best predecessors. It lowers maintenance costs substantially. And its unusual design virtually eliminates the hazard of fire due to mechanical failure.



Western Electric

We make things that bring people closer.

1970

Married: JOSEPH CASCIO, JR. and Miss Barbara E. Dow on December 29, 1973 in Falmouth, Maine. The bride graduated from the University of Maine. Her husband is employed by the Foxboro (Mass.) Company. . . . JOHN N. DUCIMO to Miss Sharron J. McCullough in Boston on November 17, 1973. Mrs. Ducimo is a nurse. The bridegroom is a sales and service representative for U.S. Steel Electric Cable in Worcester. . . . ROBERT G. MERRITT to Miss Mary F. Begg in Connecticut on January 12, 1974. Mrs. Merritt graduated from Southern Connecticut State College. Her husband is employed at Olson Mfg. Company, Holden, Mass. . . . BRUCE RUCKDESCHEL to Miss Deborah Lee Scott on November 9, 1973 in Westbrook, Connecticut. The groom is employed at CompuColor, Inc., in Stratford.

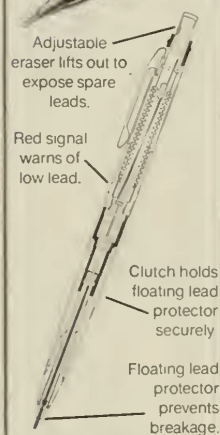
W. TODD AKIN works in the Data Processing Division at IBM in Worcester. . . . Lt. KENNETH C. BASSMANN is chief-communications/electronics operations with the U.S. Air Force in Takhli, Thailand. . . . GERRY BLODGETT serves as a patent agent with Norman S. Blodgett, Worcester. . . . DANIEL K. BREEN is a sales trainee at Warner Electric Brake & Clutch Co., Beloit, Wis. . . . Merck & Co., Inc., Danville, Pa., employs DONALD T. KREMER as a process supervisor. . . . PETER F. LALOR works at the Electric Boat Division of General Dynamics in Groton, Conn.

Lt. JEFFREY C. MANTY has been serving with the U.S. Army Ordnance Corps in West Germany as a shop officer and executive officer of a direct support maintenance company. In June he plans to return to the Bethlehem (Pa.) Steel Corporation as a production engineer. . . . KALVIN W. NGOON is a programmer at Syntex, Inc., Palo Alto, Calif. . . . JOHN P. OBER is studying at the London School of Economics in England. . . . GIRISH PATEL works at Bechtel Corp., Gaithersburg, Md. . . . GEORGE E. PHILIPPON serves as district representative at Nalco Chemical, Chicago, Ill. . . . Crowson Construction Co., Boise, Idaho, employs JOSEPH W. SHAW as superintendent. . . . LAWRENCE B. COHEN recently received his MA in chemistry from Boston University where he was a U.S. Office of Education Fellow from 1971-73. Currently he is an instructor of chemistry at B.U.

1971

Lt. DENNIS CHIN serves with the U.S. Army in Thailand. . . . WILLIAM E. HELLIWELL, JR. has been promoted to resident service engineer by Riley Stoker Corporation. He will be located in the firm's sales office in Denver, Colo. Formerly he was a field engineer at corporate headquarters in Worcester. . . . Presently ERNEST R. JOYAL works as a naval architect for the U.S. Navy, Supervisor of Shipbuilding, Groton, Conn. . . . BENJAMIN H. KATCOFF is now a compensation administrator in the Personnel Division at Polaroid Corp., Cambridge, Mass. He is also studying nights for his MBA at Boston University.

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JOSEPH B. KAYE works as manager of City Cleaners, Inc., Springfield, Mass. . . . Currently STEPHEN P. KATZ is with Digital Equipment Corp., Westfield, Mass. . . . Presently DONALD C. MILIA serves as a sales engineer at the Torrington Co., Torrington, Conn. . . . JOHN H. READ is assistant structural engineer at Boston & Maine Corp., North Billerica, Mass. . . . MARSHALL H. SHEPARD is with Bowmar/ALI Inc., in Acton, Mass. . . . EDWARD C. LOWE, III has accepted a job with General Electric's sales office in Wellesley, Mass.

Mrs. Martin, a graduate of Hood College, is a teacher. Mr. Martin is a graduate student at Central Connecticut State College.

Married: BRIAN J. SAVILONIS to Miss Janice E. McNamara of Jefferson, Massachusetts on December 29, 1973. Recently Brian was a runner-up in ASME's Arthur L. Williston Medal-Charles T. Main Award Contest. His entry, which was concerned with the civic and cultural responsibilities of the engineer was titled "An Interim Pollution Abatement Method: Artificial Aeration." At present he is a doctoral candidate at the State University of New York at Buffalo. . . . Lt. DONALD A. TAFT to Miss Mary Ellen Biggins on January 5, 1974 in Worcester.

1972

Married: PAUL A. FRITZSCHE and Miss ANNE D. RODIER, '74, on January 19, 1974 in Oxford, Massachusetts. Mrs. Fritzsche received her BS in mathematics from WPI in February. She is a pension service coordinator for Union Mutual Insurance Co., Portland, Me. Her husband is a second year law student at the University of Maine School of Law in Portland. . . . JAMES L. JARDINE to Miss Elaine C. Fagerquist on September 22, 1973 in Worcester. Mrs. Jardine is a registered nurse. The groom is a project engineer for the State of Vermont Agency of Environmental Engineering in Montpelier. . . . DAVID A. MARTIN and Miss Kathleen Nestico on December 22, 1973 in Bristol, Connecticut.

Mrs. Taft, who attended Framingham State College, is continuing her studies at the University of Maryland, College Park. Lt. Taft is a company executive officer with the 76th Engineer Battalion at Ft. Meade.

DANN DAVID is on the environmental and safety activities staff at Saab-Scania of America, Inc., Orange, Conn. . . . PETER E. DAUPERN serves as a project engineer at Cahn Engineers in New Haven, Conn. . . . PAUL W. KELLEY works at Digital Equipment Corp., Maynard, Mass. . . . ANTHONY J. MANGANO is with Polaroid Corp., Waltham, Mass. . . . KENNETH PRZYSTAS, who is employed at American Optical in Southbridge, Mass., is also the author of a new sports column, "Sports Beat," which currently appears in Webster's *SOUTH COUNTY ADVERTISER*. . . . MICHAEL C. TSIANCO is a teaching assistant at the University of Rochester (N.Y.).

1973

Married: STEPHEN J. BAUM and Miss ELIZABETH KEEGAN of Cranston, Rhode Island on August 25, 1973. Mrs. Baum is a senior at WPI where her husband is a graduate student in the Civil Engineering Department. . . . PHILIP BRODEUR and Miss Rosemary P. Bailey on January 19, 1974 in Holyoke, Massachusetts. Mrs. Brodeur graduated from Bryant College, Smithfield, R.I. The groom is coordinator at Bailey Realty. . . . MARK D. ERASMUS and Miss Dianne M. Valas in Oxford, Massachusetts on December 22, 1973. The bride attended St. Vincent Hospital School of Nursing and Quinsigamond Community College, Worcester. Her husband is studying at the University of Connecticut School of Medicine in Farmington. . . . PETER R. PASTORE to Miss Heidi S. Klemme in Rowayton, Connecticut on November 24, 1973. Mrs. Pastore, a graduate of Garland Junior College, is presently assistant manager at the Corner House in Darien. The groom is with Metcalf & Eddy, New York City.

Born: to Mr. and Mrs. GEORGE R. HARRIS a son, Duncan Stuart, on December 1, 1973. George is with Towle Manufacturing Co. in Newburyport, Mass.

SURESH K. AMIN is a design engineer at the Entwistle Co., Hudson, Mass. . . . SALLY STOVOLD BARRY serves as a scientific programmer at MIT's Lincoln Laboratories, Lexington, Mass. . . . RICHARD B. BELMONTE works as a safety engineer trainee with the U.S. Army Materiel Command at the Red River Army Depot, Texarkana, Texas. . . . DR. HOWARD S. BILOFSKY is a senior applications scientist at Bolt, Beranek & Newman, Inc., Cambridge, Mass. . . . Honeywell Information Systems, Inc., Framingham, Mass. has employed TIMOTHY R. BROWN as a design engineer. . . . BILL CARTON, who coordinated the well-received Technicon I during Intersession last year, organized and spoke at Technicon II during this year's Intersession.

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KATHLEEN COYLE works at Hamilton Standard, Windsor Locks, Conn. . . . KATHRYN ZAWISLAK DAGOSTINO is with the Prudential Insurance Co., Los Angeles, Calif. . . . DEBORAH LaPLANTE GOODWIN works for National Commercial Bank & Trust, Albany, N.Y. . . . JOSEPH A. KALINOWSKI is an industrial engineer at Norton Co., Worcester.

ROGER LAVALLEE teaches mathematics at Cathedral High School, Springfield, Mass. . . . TIN WAI MAH serves as a computer programmer at Digital Equipment Corporation, Maynard, Mass. . . . MARYANN BAGDIS PACE has been employed as a computer programmer at Philadelphia Electric Co., Philadelphia, Pa. . . . J. DIANE PRITCHARD is a self-employed programmer-consultant in East Greenwich, R.I. . . . KENNETH C. PULS teaches chemistry at Immaculate High School, Danbury, Conn.

. . . WILLIAM A. RICHARDS works as a computer operator at Superior Electric Co., Bristol, Conn. . . . ROBERT SCHULTZ is a traveling secretary for Lambda Chi Alpha Fraternity, Indianapolis, Indiana. . . . ROBERT STARNES is a student at the University of Pennsylvania Medical School. . . . RICHARD H. TURNER serves as a sales consultant with Sales Consultants of Westboro (Mass.). . . . JOHN A. WILLIAMS, JR. works for Shell Chemical Co., Axis, Ala.

completed careers

JAMES G. GOODELL, '10, passed away at St. Clare's Hospital, Schenectady, New York last May.

He graduated as a mechanical engineer from WPI in 1910. He retired as engineer-inspector from Marsh & McLennan Insurance Agency in 1960 after 35 years of service.

AUGUST J. REINHARD, '12, of Katonah, New York, a retired project engineer from Western Union Telegraph Co., New York City, died last November.

He was born January 23, 1890 in New York City and graduated with a BS in electrical engineering from WPI. From 1912 until 1957 he was with Western Union.

Mr. Reinhard was a professional engineer in New York state.

HARRY B. LINDSAY, '13, a trustee emeritus of WPI, died January 27, 1974 in Holden, Massachusetts at the age of 84.

He was born in Hopkinton, N.Y. on December 17, 1889. In 1913 he graduated as an electrical engineer from WPI. An authority on abrasives, he retired in 1951 as secretary-treasurer of the Grinding Wheel Institute and of the Abrasive Grain Association.

During World War II, Mr. Lindsay was chairman of the Abrasive Council for War Production. Earlier, after a postgraduate year at WPI, he had served as an instructor in electrical engineering and Ordnance Optics at the U.S. Naval Academy, Annapolis, Md.

At the outbreak of World War I, he joined the Army and was in charge of the air services school for radio and control artillery fire at Ellington Field, Houston, Texas.

After the first World War, he worked as a sales engineer in the grinding wheel division at Norton Co., Worcester, and later became sales manager of the refractories and machine tool divisions. During his career he was also associated with Tuska Radio Mfg., Co., Hartford, Conn. In 1933 he became deputy administrator for the National Recovery Administration in Washington, D.C. and in 1934 he was named secretary-treasurer of the Grinding Wheel Manufacturers Association.

Mr. Lindsay, who was trustee of Worcester Mechanic Savings Bank and Home for Aged Women, was a past president of the WPI Alumni Association and the Worcester chapter of the Association. He belonged to Theta Chi, Tau Beta Pi, Sigma Xi, and Skull.

PAUL W. GLOVER, '14, died July 10, 1973 in Hanover, New Hampshire. He was 81.

A native of Woodsville, N.H., he later studied civil engineering at WPI. For many years he was treasurer of the Bath (N.H.) Fiber Co., Inc. Previously he was with Blandin & Glover.

Mr. Glover was a member of Phi Gamma Delta Fraternity and Skull.

ALFRED C. FENN, '17, died on December 3, 1973 in Clearwater, Florida.

He was born May 3, 1894 in Essex, Conn. After receiving his BSEE from WPI, he joined Riley Stoker Corporation in New York City. In 1959 he retired as a sales engineer after nearly 40 years of service. During World War II he worked as a \$1.00 a year member of the Power Division of the War Production Board in Washington, D.C.

Mr. Fenn belonged to Theta Chi and ASME.

ALFRED M. WHITTEMORE, '19, died October 25, 1973 in Concord, New Hampshire.

He was born in Needham, Mass. on June 12, 1896 and later studied civil engineering at WPI. Early in his career he was employed by the New York Central Railroad in Galion, Ohio and Strauss Engineering Corporation in Chicago.

In 1962, after 27 years of service, he retired from the New Hampshire Department of Public Works and Highways where he had been assistant bridge engineer. He was a member of the original survey party on the famed scenic Kancamagus Highway in White Mountain National Forest.

He was a member of Sigma Phi Epsilon.

ROBERT G. FERGUSON, '21, former vice president of Teleregister Corp., New York City, died November 28, 1973 in Lake Worth, Florida. He was 74.

A native of Chicopee, Mass., he graduated as an electrical engineer from WPI in 1921. During his career he was associated with New York Edison, Brooklyn Edison, and Teleregister Corp., where in 1929 he became assistant to the vice president of engineering. He later retired as vice president of the corporation.

Mr. Ferguson was a member of ATO and Skull.

RICHARD P. PENFIELD, '21, passed away suddenly on January 6 in Portland, Connecticut at the age of 73.

He was born in Portland and in 1921 graduated as an electrical engineer from WPI. For fifty years he was an employe of the Hartford Electric Light Company. He also had served as secretary to the Board of Directors of the Middlesex Memorial Hospital and as chairman of the advisory board of the United Bank and Trust Company.

Mr. Penfield was a member of Phi Sigma Kappa and a charter member and past president of the Portland Exchange Club.

ULDERIC F. HURLEY, '22, died at his home in Southboro, Massachusetts on January 3, 1974.

He was born in Marlboro, Mass. on August 12, 1901. After studying at WPI he later joined the New England Telephone Co. where he was employed for 40 years.

Mr. Hurley, who was to have been general chairman of the 1974 Southboro Heart Fund Drive, was a blood courier for the American Red Cross, past president of Southboro Senior Citizens, treasurer of the Southboro Historical Society and a member of SAE. He was past president of the William Denver Chapter of the Pioneers of America and a member of the Southboro Housing Authority.

A long-time member of the Southboro Advisory Board and secretary of the local Historic Commission, he also served as an active member of FISH. In 1971 he was selected as the Southboro Rotary Club Man of the Year.

ROBERT H. ALBERTI, '26, of Greenfield, Massachusetts, died January 2, 1974 at the age of 69.

A native of Greenfield, he later earned his BSCE at WPI. He worked for the Water Department in Springfield, Mass.; the town of Greenfield as superintendent of streets; the Massachusetts Local Control Survey; the U.S. Dept. of Commerce; and the Massachusetts Geodetic Survey. In 1969 he retired as chief inspector and quality control manager at Greenfield Tap & Die.

A member of Theta Chi and Tau Beta Pi, Mr. Alberti also belonged to ASTM, the Franklin County Industrial Management Club, the American Ordnance Association, and ASQC.

W. SHELDON CHAPIN, '27, of Falmouth, Maine passed away on August 10, 1973.

He was born on May 22, 1905 at Lee, Mass. For many years he was the editor at Gannett Publishing Co., Portland, Maine.

Mr. Chapin belonged to Alpha Tau Omega.

BUELL S. DICKINSON, '27, of Granville, Massachusetts, died March 14, 1973.

A Granville native, he was born on June 18, 1901. After studying mechanical engineering at WPI, he joined Wickwire Spencer Steel. Later he was with Walsh Holyoke Steam Baler, Holyoke Card & Paper Co., and American Abrasive Co., Westfield, Mass., where he was a plant superintendent.

He was a member of Sigma Phi Epsilon.

JAMES M. SIMMONS, '27, passed away on January 14, 1974 in Cleveland Heights, Ohio. He was 69 years old.

Born in New York City, he received his bachelor's degree from New York University in 1929 after studying civil engineering at WPI. In 1929 he joined the Erie Railroad in Cleveland (now Erie-Lackawanna R.R.), where in 1969 he retired as a designer in the Department of Structures after 40 years of service.

Mr. Simmons belonged to the Society of Engineers.

DONALD S. BLISS, '28, education specialist, died on December 1, 1973 at his home in Washington, D.C. He was 71.

A native of Washington, he graduated from WPI as an electrical engineer. In 1928 he joined the Bliss Electrical School, which had been founded by his father. He served as vice president of the school, which in 1950 was taken over by Montgomery Junior College. Later he became director of the Electronics Division at the U.S. Navy Training Publications Center in Washington. He retired in 1967.

Mr. Bliss belonged to ATO and was a former president of the Federal Schoolmen's Club and commodore of the Washington Yacht Club.

THOMAS G. BERGIN, '30, died December 26, 1973 in Elmira, New York while on a visit to his daughter, Mrs. Linda Gudas of Horseheads, N.Y. He was 65.

He was born in Swampscott, Mass. and later studied at WPI. Last June he retired as an engineer from the A.F. Holden Metallurgical Laboratories of Detroit, Michigan.

Mr. Bergin was the husband of Mrs. Doris Bergin, who was the secretary in the WPI Management-Engineering Department for many years.

WILLIAM R. HANNAH, '36, a comptroller at Massachusetts Mutual Life Insurance Co., Springfield, Mass., died December 31, 1973 in Massachusetts General Hospital, Boston, after undergoing open-heart surgery.

Mr. Hannah was born July 15, 1913 at Springfield and later became a student at WPI. In 1934 he became associated with Mass. Mutual's auditing department and was transferred to the accounting department in 1938. He was named supervisor in 1950, manager in 1953, and comptroller in 1956.

A World War II veteran, he also served on the Wilbraham (Mass.) Water Commission for 12 years. He belonged to Phi Sigma Kappa.

ANGELO V. MAURIELLO, '36, of Natick, Massachusetts passed away on November 1, 1973.

He was born on May 16, 1913 in Worcester. After studying at WPI, he joined the Massachusetts Department of Public Works. Later he served as a civil engineer in the U.S. Army Corps of Engineers in Boston.

Mr. Mauriello was a member of Phi Kappa Theta Fraternity.

JOHN FORD, JR., '42, of Piedmont, California, died December 20, 1973. He was 53.

Born in Plymouth, Mass., he earned his BSCE from WPI in 1942. During his career he was associated with Ben C. Gerwick, Inc.; Raymond International; Merritt-Chapman Scott; Pomeroy-Gerwick; and Peter Jewit Sons Co. in California where he served as project superintendent.

Mr. Ford, who was a member of Phi Sigma Kappa and ASCE, was also a former vice president of the Northern California chapter of the Alumni Association.

DONALD E. FLOHR, '48, a civil engineer who designed fire protection systems for the U.S. Navy and Post Offices, died January 1, 1974 at his home in Arlington, Virginia.

He was born in Harrisburg, Pa. on August 29, 1924 and served on an aircraft carrier in the Navy in World War II. After graduating from WPI in 1948, he joined the Factory Insurance Association. In 1952 he became a civilian fire protection engineer for the Navy and helped design safety systems in the U.S., Europe, and Japan.

The Post Office Department hired him in 1968 to organize fire safety programs for post offices nationwide. In 1972 he returned to the Naval Facilities Engineering Command headquartered in Alexandria, Va.

Mr. Flohr, a professional engineer in Massachusetts, was a member of Lambda Chi Alpha, the Society of Fire Protection Engineers, and the National Fire Protection Association. He was a past secretary of the Washington, D.C. chapter of the Alumni Association.

JOHN F. BRIERLY, '50, founder and president of Valuation Counselors, Inc., Chicago, died suddenly November 30, 1973 in Glenview, Illinois. He was 48 years old.

A Worcester native, he graduated as a civil engineer from WPI. While at the Institute, he served as a respected president of his class and of his fraternity, Phi Sigma Kappa. He belonged to Skull and as a freshman was named the most outstanding member of his class.

While serving as a quartermaster third class with the Navy in World War II aboard the destroyer escort "Tabberer", he and other crew members were cited by Admiral William Halsey for rescuing 55 survivors from two typhoon-wrecked destroyers off Luzon in 1944.

Following graduation from WPI, he became a field representative for the Factory Insurance Association. Then he joined the American Appraisal Company. Prior to founding Valuation Counselors, Inc., he served as vice president in charge of the corporate marketing and sales department of Marshall & Stevens in Chicago.

Mr. Brierly was a special associate member of the Chicago Real Estate Board, an associate member of the National Association of Accountants, and a member of the Executives' Club of Chicago. He was vice president of the Union League Boys Club Foundation of Chicago. A past president of the Chicago chapter of the Alumni Association, Mr. Brierly also was very active in admissions work for WPI in the Chicago area.

CALVIN E. BACKSTROM, '61, died December 14, 1973 in Buffalo, New York at the age of 35.

He was born in Worcester and earned his BSEE at WPI. Following graduation he joined the Blackstone Valley Electric Co. in Lincoln, R.I. In 1968 he started work as supervising distribution engineer in the Electrical Division of the Department of Public Utilities in the city of Anaheim, Calif. Prior to his death he was utilities manager for the Penn Yan (N.Y.) Municipal Board.

Mr. Backstrom was a member of AIEE, the Western Underground Committee and Pacific Utilities Electric Service Requirements Coordinating Committee. Active in Boy Scout work, he was also a former president of the Jaycees in Rhode Island and served on the national Jaycees board for three years. He was the nephew of Richard W. Rhodes, '34.

LLOYD H. BOSTWICK, SIM '61, died December 28, 1973 in Nashua, New Hampshire. He was 57.

A Worcester native, Mr. Bostwick was a former vice president of Ball Valve Co., Worcester (now Smith Valve Co.) Later he was a purchasing agent for Lytron Co. in Woburn, Mass. At his death he was general manager of the National Pollution Control System in Nashua.

He was past president of the Worcester Lodge, National Association of Purchasing Management.

ROBERT W. SUHR, '65, a senior engineer at the Westinghouse Defense and Electronics Systems Center, Baltimore, Md., died at his home in Elkridge, Maryland on December 12, 1973. He was 33 years old.

Mr. Suhr, a native of Dover, N.J., graduated from Brown University in 1963 with a BS in arts and engineering. He received his MSME from WPI. Following graduation he was employed at the Westinghouse Aerospace Division at Friendship Airport in Baltimore.

His contributions to space technology included a dry drilling technique for soil sampling used on the Apollo lunar probe, a deployable boom antenna for the Environmental Technology Satellite, and work on the television cameras for the current Skylab mission.

He was a member of the American Society of Mechanical Engineers.

WAYNE Y. MORSE, '69, died as a result of a mountain-climbing accident in Woodland Hills, California on December 23, 1973.

He was born in Worcester on July 26, 1947 and graduated as a mechanical engineer from WPI in 1969. For the past four years he had worked at Rocketdyne Division of North American Rockwell in Los Angeles.

He was a member of ASME and the Sierra Club of California and was the brother of Robert H. Morse, '64.

J. PAUL NESSLER, '71, died on October 20, 1973 in Dearborn, Michigan.

Born in Pittsfield, Mass. on December 21, 1946, he later attended Clarkson. In 1971 he received his MSME from WPI.

At the time of his death he was a production design engineer at Ford Motor Co. in Dearborn.

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