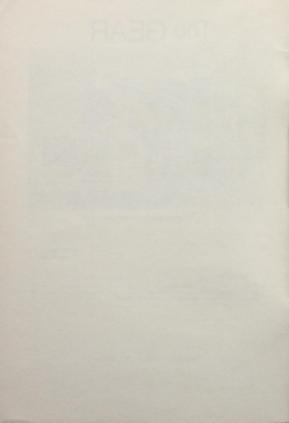
The GEAR

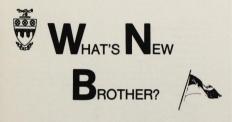


World's Largest Symbol of Engineering

See Nu Beta Chapter Report

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of Theta Tau

Theta Tau Fraternity was founded at the University of Minnesota, Minneapolis, Minnesota, on October 15, 1904, by: Erich J. Schrader, Edwin L. Vinal, William Murray Lewis, and Isaac B. Hanks.

Let us know -

- · Recommended Students
- · About You
- Another Brother
- · Any deceased Brothers
- · Any address changes
- · Anything!!!

Use the convenient postage-free card attached and drop it in the mail today. While you're at it, pledge \$15.00 to your Founder's Memorial Fund or 8T Operating Fund and challenge your old classmates who are Brothers to match it—We will provide you with their address.

The GEAR of Theta Tau

Theta Tau Fraternity was founded at the University of Minnesota, Minneapolis, Minnesota, on October 15, 1904, by: Erich J. Schrader, Edwin L. Vinal, William Murray Lewis, and Saaca B. Hanks.



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COVER

Nu Beta Chapter helps with the semiannual whitewashing of the largest symbol of engineering in the world



• The Gear is the official publication of the national Theta Tau Fraternity. Theta Tau is a professional educational engineering fraternity. It is published in the fall and spring. The magazine is devoted to matters of Fraternal interest and is sent at no cost to alumni whose addresses are on record at the Gear office. • Send change of address to 13 Sona Lane, St. Louis, Mo. 63141. • The Gear is printed by Carray Printing, Nashville, Tn. Third class postage has been paid at Nashville, Tn.

The Grand Regent Speaks

I have been looking at what we have accomplished this year as officers and committee heads. I noticed that not all are carrying their share of the load and performing the duties assigned and/or required of our position. All members would profit and our fraternity would strengthen if we could only have total participation of the elected and appointed members.



During the coming year I feel that a renewed emphasis to encourage participation should be made. We need to study past records and participation and determine what must be changed in order to properly serve our members. We all in turn will profit by such an approach and help make Theta

Tau the Professional Engineering Fraternity that provides a good share to our technical and professional needs.

We must also relook at our relationship with our Student Chapters and make sure we are doing our part in helping set an example that they want to follow. Through this work with our Chapters, we can help our Fraternity.

I am looking forward to this year and to working to help make Theta Tau stronger and membership rewarding.

Merry Christmas to you and your family and may you have a happy and successful New Year.

In H & T, STEPHEN BARTH Grand Regent

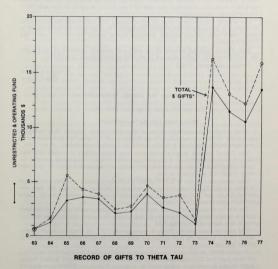
Theta Tau Contributions

In the last edition of the GEAR, I reported the 31st Biennial Convention had voted to amend the Constitution to change our name to Theta Tau Social Engineering Fraternity. The action was taken to circumvent the Department of Health, Education and Welfare's Title IX regulations which require Professional Fraternities and Societies to open their membership to persons of both sexes. The amendment changing our name contained two conditional provisions. The first directed the Executive Council to prepare a presentation for submittal to HEW requesting our exemption of Title IX requirements. The second was itself an amendment that would become law only if our exemption was denied by HEW. The second condition stated we would revert to our original name and admit women to membership should our request to HEW be denied. In July HEW denied our exemption request, therefore, Theta Tau once again work as a Professional Fraternity with membership open to both men and women. With this issue now resolved, let us once again work together to perpetuate our fraternity and insure its growth.

Annually we send solicitation letters to our alumni requesting financial support for our fraternity. These letters have triggered questions from the alumni as to where and how their contributions are used.

Contributions as they are received are placed in one of two funds, the first being the Operating Fund and the second being the Founder's Fund. The contributor may designate the fund in which contribution is to be placed or if no designation is made it is placed in the Operating Fund. FALL, 1977 VOL. LXV. NO. 2

The Operating Fund is the revenue source for the budget. A copy of the biennial budget was present in the last issue of the GEAR. Alumni contributions made up approximately 30 to 35 percent of the operating revenue with the remainder coming from initiation fees and semi-annual dues. Approximately 50% of the semi-annual dues. Approximately 50% of the contribution of the operation of the operatio



* Total gifts include the sum of unrestricted & operating fund gifts and the Founders' memorial fund gifts.

The Gear of Theta Tau

The Founder's Fund is an invested fund and since Theta Tau is a non-profit corporation, there are strict controls placed on the use of this fund by the RS. In 1970 the Executive Council adopted guide lines which were to be used to assure compliance with IRS requirements as we understand them. These resolutions that were adopted stated "that all income from the Fraternity's investments be used or set aside for scientific, educational and charitable purposes," and "that the Grand Treasurer set up a separate account for investment income which shall be used or set aside for loans for chapter houses, leadership workshops, educational materials and associated administrative costs; and other educational, scientific and charitable activities." Since that time, all investment income has been set aside for educational purposes and used for Conventions, Regional Conferences, THE GEAR and other publications.

Our invested income has a value of approximately \$100,000.00. Our balance in loans to chapters is approximately \$40,000.00. The figures I have provided are approximated as stated. For a more accurate account, interested persons should feel free to contact our Grand Treasurer.

Both of these funds are essential to the continued successful operation of our fraternity. Any contribution whether monetary or personal service, is deeply appreciated.

I remain your servant, In H & T.

STEPHEN J. BARTH Grand Regent

Solar Energy for Energy Independence

Submitted by Brother John Hoyt (Tau '48)

Making Solar After the Nuclear Model?

Solar energy is fundamentally different from other energy sources. Solar energy is democratic. It falls on everyone and can be put to use by individuals and small groups of people. Public enthusiasm is a reflection of this unusual accessibility.

The Federal research program emphasizes large central stations to produce solar electricity in some distant future. It ignores small solar devices. The program contains virtually no significant projects to develop solar energy as a source of fuels ond only modest eforts to exploit it as a source of heat.

One consequence of this R & D emphasis is to distort economic and policy assessments of solar energy. The present federal program representing an investment less than one-half of that for new coal technologies has survived because of immense popular appeal and consequent pressure from Concress.

The number of solar-heated houses built in the United States has doubled approximately every 8 months since 1973. Solar energy has become the hottest property and the most sought-after action in the energy field.

The solar program was born only 5 years ago. In 1972 the National Science Foundation (NSF) became the lead agency for solar energy research which was funded at \$2 million per year.

In early 1975, all the solar research programs were shifted from the NSF which has not been organized for commercial technology development to the newly formed Energy Research and Development Administration. In its first 2 years, the ERDA solar program was greatly under-staffed and overworked—at one time 60 percent of the mail for the entire agency concerned solar energy.

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The program under ERDA moved into a mode of design, construction, and testing of various types of solar power pilot plants on an aggressive timetable. ERDA delegated a large role to its national laboratories and to various NASA laboratories.

Today, government solar research is a \$290 million effort spread among four subprograms for electric applications, one for fuels, two for heating and cooling, and related direct applications. In the fiscal year 1978, the program recommended by the Carter Administration will grow only modestly to \$320 million.

The largest allotment of ERDA tunds and staff resources has been for solar electric technologies. The concept which the utility's essarch arm—the Electric Power Research Institute—sees as the most likely candidate for exent electricity generation is the power tower, a system with a boiler on a high tower for the staff of the most first of the staff of the most of the staff of the

Solar home and hot water heating is nearly competitive in some areas of the country already. The ERDA program has paid little attention before now to the benefits of passive solar heating—the capture of solar heat that can be achieved from a well sealed south-facing window.

As the Carter Administration prepares to shift energy research to yet another agency—the Department of Energy—solar energy is still in search of a proper institutional home.

Few solar options are competitive today, many existing institutional arrangements, from building codes to utility rate structures to federal tax policies, discriminate against unconventional energy sources. The growth of distributed solar systems, for which equipment can be mass-produced, can be far more rapid than the growth of centralized power plants.

It is arguably time to reconsider solar priorities and ask whether the distribution of research resources among nuclear, fossil, and solar options reflects a rational policy.

Bring the Pieces Together

Solar thermal systems can pump water for irrigation, produce steam for industrial processes, generate electricity in small and medium-sized installations, and also supply heat for residential use. Systems that operate at temperatures between 100° and 400°C are suitable for each of these purposes.

One of the largest potential markets is in food, textile, and chemical industries where large amounts of intermediate-temperature heat are consumed. Thirty percent of all industrial process heat is used at temperatures below 300C. All the prices needed for intermediate temperature systems exist now.

The operating efficiencies of solar systems are particularly important because they determine how much solar collector area is needed for a given purpose, and collectors make up more than 50 percent of costs in a typical solar installation.

In the early 1970's the surprising truism of solar energy was that residential systems were ready for use. The largely unappreciated truism of the late 1970's is that the key components of industrial and commercial systems are now ready for wider use.

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Rediscovering Biomass Fuels

Wood and dry crop wastes have an energy content of 14 to 18 million Btu per ton, comparable to that of Western coals.

Biomass is already the largest source of solar energy in use in the United States. In recent years nearly half a million modern woodburning stoves have been sold—an installed energy capacity that far outstrips all other direct and indirect solar energy devices. The wood producing industry now derives 40 percent of its total energy needs, or about 1 out 10¹⁵ But from burning bark and mill wastes.

A gasifier is capable of converting nearly any kind of dry agricultural or wood wastes to low-Btu gas with an efficiency of 80 to 85 percent. The gas can be burned in a boiler in place for iol or natural eas.

With the gasifiers based on bids already received, the company expects the gas to cost about \$1 per million Btu, less than half the cost of the natural gas it now burns.

A Battelle Memorial Institute estimates are that biomass ethanol from a full-scale plant could sell for \$1 to \$1.25 per gallon, compared to about \$1.15 per gallon for ethanol from ethylene.

Large commercial facilities to produce ethanol for blending with gasoline are under consideration in Nebraska, where there is an excess of spoiled or poor-quality corn, and in Hawaii, where fuel prices are high and sugarcane is abundant.

Forest wastes in the U.S. are nearly as large as those from agriculture. This report concludes that as much as 4.5 quads of energy per year could be produced on just 10 percent of now-idle forest and pasture land with wood grown in close-spaced, short-rotation tree farms using poplars, eucalyptus, or other high-yield species.

Large and Small Systems Competing

Wind power has often been thought more idiosyncratic than most. Finally, like most other sources of energy that ultimately derive from the sun, wind bore the onus of being a fluctuating energy source.

Both small and large wind machines have the potential for marked cost reductions, and even without the advantages of mass-production they offer one of the cheapest means of producing solar electricity available today. The problem of energy storage for wind power can be handled simply in many parts of the country because hydroelectric dams and underground gas formations suitable for compressed air storage are abundant in many windy areas. By the year 2000 wind could contribute 1 to 2 percent of the country's total energy needs.

Both large and small wind systems have the potential to be competitive with conventional electric systems. A twofold cost reduction would make them attractive in many places. And such a reduction is quite feasible for a product that now has only 10 to 20 percent of its costs in materials. Once competitive, the primary limitation to wind energy use would be the rate of growth of the industry.

> Allen L. Hammond and William D. Metz Reprinted from Science Edited by Dr. John Hoyt and S. A. Williams

FALL. 1977

Charles Luckman, Awarded the Distinguished Fraternity Award at the Greek Letter Bicentennial Convention

Charles Luckman was born in Kansas City, Mo., in 1909. He graduated with highest honors from high school, and was selected as the State's outstanding high school graduate. He entered the School of Architecture at the University of Illinois and graduated Magna Cum Laude in 1931. He was initiated into Kanpa Chapter of Theta Tau.

Because in 1931 our nation was in a serious depression with no architectural activity, Brother Luckman took a job in the advertising department of the Pepsodent Company. At the age of 33, after working his way from the bottom, he became President of the company. At the age of 37, he became president of all American Companies of Lever

In 1950, Brother Luckman returned to architecture. He moved to Los Angeles and formed Charles Luckman Associates. He eventually became a member of the Board of Directors of other companies such as the Ogden Development Corp., Teleprompter Corp., Flying Tiger Line, Inc., and Luckman Management Corporation.

The Charles Luckman Association has been responsible for the Architectural design for such projects as the Madison Square Garden Center in New York; the U.S. World's Fair Pavilion, New York; the Prudential Center, Boston; the Manned Space Center, Houston; the Los Angeles International Airport; the Los Angeles World Zoo; and the University of California at Santa Barbara.

In 1963, Brother Luckman was selected to the College of Fellows of the American Institute of Architects, the highest honor that can be given to an architect. In 1967, Governor Reagan appointed Brother Luckman to the Education Commission of the 50 states. In 1969 Brother Luckman was appointed to the Pennsylvania Avenue Commission by President Nixon. He was one of the two architects in the country so honored.

His long business and public service career has earned Brother Luckman a long list of honors and awards. Brother Luckman holds an honorary Doctor of Fine Arts degree from the California College of Arts and Crafts and an honorary Doctor of Laws degree from the University of Miami. 1947. Forbes Magazine named him one of the fifty foremost industrialists in the country.

Brother Luckman presently resides in Bel Air and his office is at 9220 Sunset Boulevard, LA, CA, 90069



Charles Luckman



NORTHERN REGIONAL CONFERENCE (Oct. 1-2)

The diverse activities of Omicron Chapter for the past semester have been highlighted by the Northern Regional Conference, which was our honor to host on the weekend of October 1st & 2nd. It took some tedious work to plan and organize all the activities, but we feel it was worth it.

The festivities started with a pub crawl on Friday night, followed by the more formal procedures of a convention on Saturday. Saturday's activities included a talk by J. W. Howe (former editor of the Gear) on one of our founders, Erich J. Schrader. This was succeeded by individual workshops on a variety of pertinent matters including women membership, inter-chapter visits, and finance. We then proceeded informally through a formal invitation for suggestions on improvement or for clarification of ambiguous procedures. The day ended with the festivities of a pig foast to provide for the qualified socializing, quelled hunger, and quenched thirst. A Sunday lunch finalized this year's convention after which it was time to return home to the book of

In H and T,
DAN FATTIG
Corresponding Secretary

EASTERN REGIONAL CONFERENCE REPORT

On November 11-12, Tau Chapter hosted the Eastern Regional Conference in Syracuse, New York. The attendance was limited to the delegates of Rho (North Carolina State University at Raleigh), and Tau Chapters. Brothers Burke, Conrad, Harding, Rodriguez and Scherer were the attending delegates from Rho Chapter. The brothers, pledges and some alumni of Tau were present at most of the events. In addition to the delegates, Eastern Regional Director Richard D. Ruth (Phi '70) attended.

After registration and a buffet dinner, both chapters gave brief presentations on their activities of the past two years. The night's events were concluded with a small get acquainted beer party at the Tau Chapter House. Activities resumed early Saturday morning with a presentation on effective Chapter management by Brother Richard D. Ruh, and they moved to presentation she by both Chapters. During the afternoon the visiting Brothers were given a tour of the Syracuse University Computing Center and of some other academic buildings. Conference was closed Saturday night with an informal dinner and presentation of awards. Rho Chapter won both the "most man miles" and best mere and presentation awards. The location of the next Eastern Regional Conference is yet to be announced.

Overall the conference was run smoothly and I feel it was good experience and a good chance to see how other chapters are run. My only regret is the absence of the other Chapters in our region.

In H and T Danilo A. Colonia Y! Host Conference Chairman

1977 Southern Regional Conference Houston, Texas

December 27-29

The Southern Regional Conference was highlighted this year with an atmosphere of brotherhood and enthusiasm. More than twenty-five Taus travelled an average of more than six hundred miles to be present for this conference held at the Albert Pick Hotel in downtown Houston.

Of course there was the usual agenda for a regional conference - workshops, discussion groups, and problem solving. But in addition, there was a good time had by all. Before getting down to business, the delegates were treated to a tour of Johnson Manned Space Flight Center. Though the weather was somewhat dreary, spirits were high and the tour informative and enjoyable.

Speakers at this years conference included Brother Gene Klodginski, an alumnus of Eta Beta Chapter employed by Southwestern Bell Telephone. His topic was "Southwestern Bell Today," On the second day Dr. Donald Muster spoke to the conference on "Product Liability" and its growing importance in Engineering.

Those attending the conference included several alumni. Though many were from the Houston area, one alumnus, Dale Jones, Lambda Beta '76, travelled from Lexington, Ky, to be present. National officers in attendance were the Grand Marshal, Harvill Eaton, and Southern Regional Director, Fort Gwinn,

Awards presented included "Best Presentation" which went to Eta Beta Chapter for Robert Owens presentation on "Brotherhood." The "Man Miles" award went to Lambda Beta Chapter. Lambda Beta had ten delegates travelling eight hundred fifty miles for eight thousand five hundred man miles. Also presented at the conference was Lambda Beta's third place newsletter award for the annual newsletter competition.

The Southern Regional Conference, as always, was a great learning experience. Joe Reyes, Robert Owens and all of the Host Chapter deserve a great deal of credit for this great success. Hopefully, this conference will mark the beginning of a great new year for the Southern Region and Theta Tau.

In H&T Fort Gwinn

Southern Regional Director



Alumni and student members attended the Southern Regional Conference at Houston, Texas.

The Gear of Theta Tau

THE ENGINEERING PROFESSION!!

EDITOR'S NOTE: Mr. H. H. Stroud, Jr., TVA's Assistant General Manager, was invited to the annual meeting of the TVA Engineering Association this year. Mr. Stroud shared with the TVAEA's Officers some of the following concerns he has for the public's attitude toward the engineering-scientific professions. Article taken from Volts and Jolts published by the TVAEA.

I want to talk about our engineering profession, the technology we helped create, and how that technology will be pressed as we help solve the Nation's energy problems. When I refer to engineers and engineering, I include all the technical kinds of people in the Tractary role in his energy plan. We don't know yet precisely what this role will be. We do know our contribution will involve TvA engineering dedication and know-how. Never has there been such a need for the disciplined approach of the engineer to lead us through the quicksand of self-doubt and the ever-changing winds of public opinion to the firm ground of technological progress.

Being an engineer these days is a little bit like the football coach who has a long record of winning then suddenly finds himself an object of scorn by students and alumni because his contribution to the university isn't relevant. Engineering is a time-honored profession and with good cause. In recent decades we have been part of the most dramatic technological advancement in the world's history. With these strides, engineers were acclaimed as high priests of this technology. Now we face dissident voices who blame us for all kinds of bad things — pollution of the environment, misplaced priorities, and all the undesirable side effects of an advanced technology.

Columnist Jim Kilpatrick wrote an article describing the times as the "Age of No." Nothing he said escapes the scrutiny of legions of critics who manage to find something bad in everything.

Engineers today are being held accountable for many of society's ills; but ironically, we are also expected to provide easy answers to all the formidable technical problems our country faces. W. F. Rockwell, Chairman of Rockwell said in a recent speech that this set of circumstances is both a blessing and a curse. The blessing is the public's apparent belief that our problems can be solved without too much difficulty — they seem to have strong faith in our ability. For years our citizens have accepted the most in-credible scientific and engineering advancements as though they were day-to-day occurrence: — a sort of ho-hum. "what have voo done for me lately?" attitude.

If TVA were to show at the next Board meeting a little black box measuring about 9 inches by 6 by 3 and weighing about one pound and announce that inside is something that could solve all our problems and direct the path of our Nation, how many people would be amazed?

Some self-styled crusaders would, no doubt, demand an environmental impact statement. Consumer advocates would want detailed reports on its chemical content, price, safety, and durability. OSHA would require that it be padded to prevent injury if someone bumped into it. Lawyers would argue over patent infringements. Advertising people would plan a campaign to market it. The bureaucracy would want to regulate it. Ralph Nader might want to put seat belts on it. But the noint is that very few nonle would be anazed by it!

This lackadaisical attitude toward technological progress carries over in the public's view of energy. They expect miracles because for years they have been fed a steady diet of low-cost and plentiful energy. We engineers have done such a bang-up job creating the "good life" we now are expected to produce an endless supply of clean, inexpensive fuel from thin air — a trick as difficult as turning lead into gold.

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And here is the curse Rockwell was talking about. We must get on with the job of trying to forge a secure energy future when a majority of the public desent's have the slightest
notion of the sweat, toil, trial and error that will be needed to meet that goal. Some seem to
think that Thomas Edison awoke one morning from a good night's rest and said, "Today I
will invent the electric lamp." Or that the Wright brothers took a leisurely stroll down to
their bicycle shop one afternoon and decided on the way to invent the airplane!

For example, when energy people talk about future energy supplies they generally refer to coal and nuclear as the *only* alternatives for the short term. That is, until new energy sources get on the line. Now, we don't say *if* we get these energy resources to work. It's *when* we get them.

How many times have you heard that solar, or MHD, or total power or fusion is the energy salvation just around the corner? You and I know that these technologies, while having various degrees of potential, just don't have a chance of supplying large amounts of energy until many years into the future. Obviously, we have a communications job to do as well as many engineering problems to solve. We engineers know full well the great difference between a pilot plant and commercial operation. And it's high time others began to learn to lear to

Still there is much that can be done right now. We do have a marvelous technology and the best minds in the world. If we get down to it immediately, we may surprise ourselves at what can be accomplished. I mentioned earlier that TVA has sent to the President some suggestions on how we might help in this accomplishment.

When we talk about a national energy plan, we must keep reminding ourselves that the problem is a growing shortage of oil and natural gas. Each year we use more of these resources then the year before, and each year we depend on imports to take up the slack in that demand. Until recently the country had no plan to work with. We have been going in all directions or none at all. Our goal is to stop this nonsense and get on with meaningful efforts. For TVA there is another guiding principle. The programs we carry out must be in the interest of the region's consumers. And this includes cost. After all, it's the ratepayer who ultimately must pay the bill!

The quickest and best way to conserve electric energy and help the already harried low-income consumer is by insulation. The program TVA and the distributors have begun will be beneficial to more than a half million homes with electric heating. By furnishing interest-free loans to these families, we can provide savings on electric bills that will pay back the cost of installing attic insulation in a very short time. We believe that more than \$20 million can be saved each year by consumers when this effort is completed.

Energy saved by this program could amount to about one billion kilowatt hours annually. There are other benefits, too. Such a program can shave from our peak demand as much as 500 megawatts. Obviously, this saves money in fuel and in added capital costs. These savings will be passed along to all the electric ratepayers of the region.

Energy conservation at TVA is going far beyond just attic insulation. One good example is the super saver home now being developed across the region by private contractors, TVA, and the power distributors. About one year ago we set up a demonstration at one of the first super saver homes in Alabama. We monitored the electric use for heating and cooling, The results are very encouraging. Heating and cooling costs for the entire year were only \$102. Without proper insulation during the coldest periods last winter, the electric bill for this home could have been hisher than \$102 for one month!

Electric rate design is another proposed method of saving energy that has been touted widely. TVA is taking a close look at alternate rate structures. Again, we are looking at

The Gear of Theta Tau

them from the standpoint of their compatibility with our service area. There are some problems. One suggestion has been to revise rates in a way that would penalize consumers who use the most electricity, as a further incentive to conservation. But in our region about 40 percent of the homes use electricity for heating. That produces the highest levels of home use and the largest electric bills. Any rate structure that arbitrarily punishes those families would mean added hardships for those consumers who face problems paying already increased heating costs.

I would like to emphasize a point I made earlier: Our goal is to reduce the use of natural gas and oil. It seems to me that if through rate design we arbitrarily jack up the price of coal-generated electricity, the end result is to drive the consumer to use natural gas and oil. Remember that is what ye are shortest of. To do this in the name of energy conservation seems to me to be the ultimate absurdity.

Coal is our most abundant resource. We have more reserve energy in coal than OPEC has in oil. Any energy plan that succeeds must expand the use of coal. Talk centers around doubling coal production by 1985 and adopting measures that will produce a shift from gas and oil to coal in industrial production and to generate electricity. This will take a very concerted effort because in recent years coal production has risen only slightly or actually declined on a year-to-year basis.

Right now TVA uses about 40 million tons of coal per year, and the power system will continue to use coal in large amounts for many years. So TVA is a natural to consider new programs in coal use. I don't have to tell you that when you burn coal there is an adverse impact on the environment. In recent years the problem has had many sides. We have got to increase our use of coal, but burn it in a way to meet strict environmental standards. Plus we must make sure that added benefits to public health are consistent with the added costs of generation. Again the consumer picks up the tab! This goes to the heart of the lead to gold wizardy I mentioned earlier.

I am not going to repeat TVA is wrestling with the EPA over air quality. Rather, I want to discuss a new and promising method that could help solve this problem. TVA is planning a 200 megawatt fluidized bed combustion plant. If successful, this plant could burn coal of almost any quality and still meet stringent sulfur dioxide and nitrogen oxide standards. It has tremendous potential benefits for the Nation, but especially for our system which sits atop enormous high-sulfur coal deposits. If all goes well, we expect this plant to be in operation sometime in the early 1980's.

To burn coal to produce electricity you have got to mine it. There are only two ways: surface and deep. Each has its own set of problems. At TVA we have coal reserves which give us opportunities to test better surface mine reclamation. We know we can get the coal and preserve the land because we have been doing it for years. But much more research in this critical area must be done.

Coal also can be a source of gas, which is a necessary ingredient in the manufacture of ammonia. Ammonia is essential in producing nitrogen fertilizers which are the very heart of food production. At TVA's National Fertilizer Development Center design is underway for a prototype system to convert present ammonia plants from natural gas as a feedstock.

Another step we are taking is TVA's continued development of nuclear energy. In my view nuclear is essential if we are to have a chance of energy sufficiency. Most of our new generation in recent years has been nuclear. Some of you may be intimately involved in the design and construction of these plants. Why is nuclear important? Today the Browns Ferry Nuclear Plant, with fuel costs of about 1.5 mills per kilowatt-hour, is saving electric consumers about \$500,000 per day over the cost of power generated by the coal plants.

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This is just a sampling of the energy programs that have promise in the Tennessee Valley. There are many more, of course, including some demonstrations in solar energy. All are ripe with opportunities for energineers.

But while engineers work on these problems, there is much else we can do. We can speak out with correct information about our profession and make sure the public does peak out with correct information about our profession and make sure the public with not expect miracles overnight. We must demonstrate to the public that engineering is a science and that to achieve results is likely to be a long painstaking process. We can support our technology at every juncture. For it is our technology that is the solution, not the problem.

Most critics are very long on pointing out the problems but very short on realistic ways to solve them. Governments can make available millions for research, but the lawmakers and the bureaucrats cannot give us the answers. Court cases and advertising campaigns aren't going to supply the energy needed for a growing population and a healthy economy.

No, the answer really lies in that little black box I mentioned earlier. It is the total answer to our energy dilemma. In fact, the answer to every challenge we face. In that box is the human brain. Its marvels are boundless and timeless. What we have got to do is put that marvel to work for the benefit of all generations — ours and those to come.

H. N. STROUD, JR.

WHY JOIN A FRATERNITY? A NON-FRATERNITY MAN ANSWERS

The following excerpt is from a speech by David Nail, Assistant Dean of Students and faculty sponsor of Texas Tech University's IFC, to prospective rushees.

I wonder why I am here. Well, I suppose it is because I have been requested to tell you something about the fraternity system, or, moreover, why you should become a part of it. I find my assignment rather curious, for I am not what is loosely labeled a "fraternity man". I was not in a fraternity ...

You gentlemen do not have to belong to a fraternity to have a successful college career. Being in a fraternity does not automatically allow you to make the best grades or meet the best women. Membership will not manufacture for you a plastic image of what I used to know as the BM.O.C. — the Big Man On Campus, Nor will a fraternity make of you a man by magically raising you from bungling puberty to social grace. In some cases it will not even increase your tolerance for ethyl alcohol.

What then can you expect? Why join? What will pledging a fraternity do for you? Well, like most other worthwhile endeavors it will do for you only what you put into it. But I promise if you contribute something positive, say something like friendship, you will reap a great deal more: brotherhood.

You see, gentlemen, I am a slow learner. And I have only recently realized that. I missed the opportunity to contribute a positive friendship by being in a fraternity. Also I missed the brotherhood.

In part, I guess it was the times. Being an undergraduate in the mid-sixties was to be surrounded by a philosophy of 'd-oyour-own-thing-ism', something I understand now to be the most conforming 'is' I have ever encountered. The Greeks were then thought the conformists; being one was not to do your own thing. Yet doing my own thing was, in and of itself, father hollow.

The Gear of Theta Tau

As I say, I missed the stabilizing element, indeed the somewhat humanizing element of brotherhood. I made a mistake now impossible to correct. I sincerely hope you will not repeat that mistake, at least for the same reason; arrogance.

Thus, gentlemen, you find yourselves at a point where you must make a decision. And if you decide to pledge, to whom shall you pledge yourself? Only you can decide that. But remember that the concept of rush, held not only by this IFC but by most others across the country, is rather like a two-way street. It allows both the individual chapter and the individual student a chance to evaluate and choose. Look around. Consider more than a few options. Fraternities, like college students in general, possess a great many common elements; each also has a distinct personality. Fraternities are people with individuals of varying interests, viewpoints, and experiences.

But do not take your choice lightly. In these days of snowballing events, of "Future Shock", the decision you will make in the next several weeks is one of the few rather permanent ones left to make at all. Base that decision on the important things, not the minor differences in size of lodge or numbers of trophies. Decide on ideals, chartate to ask onescitons.

Finally, pledging is a learning period. You will learn about your fraternity and its traditions, your pledge brothers and those in the active chapter. You will spend time working with your fraternity and in serving others on the campus and in the community. You will be expected to contribute not only energy and effort, but also money.

All this will not be easy. Pledging is not expected to be easy. Attaining things of value seldom are. But there will be no hazing. Mental and physical duress are games played by mindless infants, and serve no purpose. True, hazing was part of the old fraternity image, but it has no place in the twentieth century.

Brotherhood does. That, gentlemen, in one word, is what fraternity is all about. I trust you will consider the opportunity before you.

ITEMS OF INTEREST???

- The Metropolitan Association of Urban Designers and Environmental Planners, Inc. are calling for papers on these subject areas: 1 The Role of Government. 2) Education, 3) Safety, 4) Enforcement, 5) Equipment Design, 6) Planning and Design, 7) Citizen Participation, 8) User Demand, 9) Legislation, and 10) Marketing, Abstracts of your paper (250 words or less) should be submitted to Mr. Louis Rubenstein, Conference Secretary, MAUDED, P.O. Box 722, Church Street Station, New York, NY, 10008. These papers will be presented at the First National MOPED Conference, Anaheim, California in February, 1978.
- ❸ This year's winners of the Photo Contest is Sigma Chapter at Ohio State University.
 ฬ The Newsletter Contest winners for 1977 are first place, Sigma Chapter at Ohio State University; second place, Delta Beta Chapter at the University of Louisville; and third place, Lambda Beta Chapter at Tennessee Tech University.

- Brother David L. Fleshood. Pi '69, has been promoted to principal materials analyst in the materials management department at the company headquarters of Carolina Power & Light Company in Raleigh, North Carolina
- Brother Jeff W. Lusk, Sigma '74, has been promoted to Manager of Operations for the Alaska Division of North American Van Lines located in Seattle, Washington effective May 10, 1977.
- Brother Max J. Kopp has been elected as one of the seven new District vice presidents for the Instrument Society of America. Brother Kopp, Upsilon '67, director of Marketing, Validyne Engineering, Northridge, California, has been a member of the Isa since 1967. Brother Kopp began his professional career as an instrumentation engineer with Douglas Aircraft in 1957. In 1968, he joined Validyne Engineering.
- Brother Fort Gwinn has been appointed as Southern Regional Director to replace Donald Duncan who resigned in October. Brother Gwinn graduated from Tennessee Technological University with a B.S. in Engineering Science in 1974. He was a member of Lambda Beta Chapter. Fort is presently employed by AERO in Tullahoma, Tennessee.

ALUMNI NEWS

Listed here are brief news items on all Alumni who have reported since the last issue of "The Gear of Theta Tau.'

ALPHA

- R. A. Gerlicher, '28, is retired from the synthetic rubber industry and now doing consulting work in and now doing consulting work in dides at 1133 Steele Blvd, Baton Rouge, LA. 70808, '23, is greated by B. F. Himmelman, '23 Germany and the season of the parameter of the More to the More to the State of the Sta

- 61103.

 Leon Mears, '29, now resides in Jakarta, Indonesia and can be reached at P.O. Box 2030 there.

 J. C. O'Brien, '12, had major surgery in May of 1976 and is now from California Division of Mires and Geology in 1959 and resides at 333 Lawson Place, Glendale, CA 91202.

 J. T. Peterson, '63, now lives in Boulder, CO at 4413 Pail Way.

BETA

- W. L. Barke, '50, now resides in Stanford, CA and can be reached at P.O. Box 2486.
 A. J. Ceglarek, '30, is retired and in the standard of the
- R. E. Stephani, '58, now resides at 232 Louis Ct., Livermore, CA 94550.

- S. T. Walz, '33, retired Dec. 31, 1976 from a Vice President's job with Square D Company's Southeastern Region in Atlanta, GA. J. G. Wark, Jr. now lives in Pueblo, CO at 16 Rutgers.

GAMMA

- W. W. Little is living in Silver City, NM and can be reached at P.O. Box 2306. 28, is now living in Laguna Hills. CA and can be in Laguna Hills. CA and can be con-can be con-tacted at P.O. Box 1033, Oracle, AZ 8523. 11, is retired and H. E. Munn, 17, is retired and
- AZ 85623.

 H. E. Munn, '17, is retired and residing in Santa Cruz, CA.

 J. H. Wilson II, '48, is Vice President of Wilson Exploration Company in Fort Worth, TX. He also received his Masters in Business Administration in 1976.

DELTA

- W. P. VonBehren, '25, is retired and residing at 830 Burr Street, Fairfield, CT 06430.
 H. J. Kirkstadt, '32, is retired from Republic Steel Corporation and serving as Membership Chair-man for the Western Reserve His-torical Society. He resides at 657 S. Belvoir Blvd. #7, Cleveland,
 - OH 44121.
 R. A. McDowell, '21, lives at 830 Old Orchard Rd., Cincinnati,

 - M. L. Nuetzel, '69, now resides at 20854 Oak Trail Court, Strongs-ville, OH 44136.

- G. R. Rubly, '28, is retired and living in Malvern, AR.
 A. G. Thailing, '28, is retired and living in West Palm Beach, FL.
 - FPSII ON
 - D. E. Creek now resides at 1246 Sharon Park Drive, Menlo Park, CA 94025.
 J. B. Elizondo, '48, lives at 32863 Upper Bear Creek Road, Ever-

 - green, CO 80439.

 Alfred Livingston, Jr., '22, is living at 5222 Chalet, Panorama City, Lacey, WA 98503.

 Dr. M. W. Reynolds now lives at 11780 Swadley Drive, Lakewood, CO 8021 CO 80215.

ZETA

- Colonel G. T. Beauchamp, '53, is nearing completion of a tour in Taiwan scheduled to end during the summer of 1977.'99, is working as a First Officer for Traw World Airlines out of Los Angeles, California. He resides at 1616 Saint Andrews Drive, Poway, CA 20064. LTC N. B. Gates, '55, is now
- Andrews Drive, Poway, CA 92064. LTC N. B. Gates, '55, is now Chairman of the Department of Military Science at the University
- Military Science at the University of Kansas.

 Harold Massie, '64, lives at 183 Reedway SE, Portland, OR 97202.

 C. E. Spahr, '34, is Chairman and Chief Executive of the Standard Oil Company of Ohio.

 D. H. Stollenberg, '61, now lives at 1831 Bolton Dr., Downers Grove, IL 60515.

ETA

R. W. Rogers, '26, resides at 449 Nayatt Road, Barrington, RI

THETA

W. W. Hladky, '40, lives at 9 Eric Court, Jericho, NY 11753.
 D. J. Pope, '23, is retired and living at 36 Hamilton Road, Scars-dale, NY 10583.
 J. H. Thomas, '52, is now working for the Shell Oil Co, Engineering Design in Houston, TX.

IOTA

D. B. Lambert, '68, is Sales Man-ager for the Middle East for the Fisher Controls Co. of Marshall-

Fisher Controls Co. of Marshall-town, IA.

W. R. Springer, '34, retired in 1976 after 30 years with Armoo Steel Corp. and is now living in Denver, CO.

A. L. Tetley, '39, is living at 516 Park Terrace, Birmingham, AL 35226.

KAPPA

Cliff Happenny, 25, lives at 2908
S. Cliff Happenny, 25, lives at 2908
S. F. 5308
S. F. A. P.

LAMBDA

Captain R. R. Clemons, '67, is now serving with the North At-lantic Treaty Organization in Ger-

many.

Douglas Harrison, '69, lives at 8767 Hidden Oak Dr., Salt Lake City, UT 84121.

James Perry, '63, now lives at 5958 Greenwood Dr., Murray, UT 84107.

The Gear of Theta Tau M. W. Turpin, '61, lives at 2577
 Canterbury Lane, Sait Lake City,
 UT 84121.

MII

G. S. Brown, '66, now resides at 307 Echo Circle, Ft. Walton Bch., Ft. 32548, R. M. Campbell, '87, lives at 106, R. M. Campbell, '87, lives at 106, D. R. Shaw, '63, is Director of Systems Development for the University of Alabama Hospitals in Birminebum, AL. Merrit, 'Wallace, '48, now resides it Checkee Hills, Drive, Bartlesville, '0K 74003.

NII

 W. F. Applegate, '36, is living at 103 Augustine Road, Wilmington, DE 19803. DE 19803.

Colonel M. A. Kinley, '32, is retired from the Army and from the State of Haweii. He resides at 85 Lawaii Street, Honolulu, Hawaii 96825.

XI

C. K. Bentley, '48, lives at 5333
 E. Thomas Rd — #117, Phoenix, AZ 85008.
 Robert St. Clair, '49, lives at 18450 Midland Place, Brookfield,

WI 53005.

R. S. Burdick, '62, lives at 802
S. Ridge Rd., Green Bay, WI

S. Ridge Rd., Green Bay, WI 54304.

R. L. Jenks, '71, is Personnel Supervisor for Wisconsin Tele-phone in Madison, WI.

R. H. Nelson, '65, now lives at 71 Oakdale Blvd., Pleasant Ridge, MI 48069.

OMICRON

W. W. Ihde, '76, is a Project Engineer with Brice Engineering, Inc. in Boone. IA.
J. F. Oeth, '69, lives at 3122 Ash-ford Lane, Madison, WI 53713.
E. C. Siagle, '25, now lives at 2221 North Albert Street — #104, St. Paul, MN 55113.

PI

P. W. Fitzpatrick, '36, retired from the Chessic System on February 1, 1976 and is living in Richmond,

A. E. Collins, '63, is a Senior Engineer in Research and Develop-ment for the Dupont Co. in Mem-phis, TN. Ken Horton, '71, now lives at

phis, TN. Ken Horton, '71, now lives at 1832-B Hilton St., Raleigh, NC

James Kessler, '72, lives at 721 Parkview Dr., Phoenixville, PA

19460.

M. B. Linville, '67, is a Systems Analyst for Piedmont Airlines in Winston-Salem, NC.

C. G. Rice, '71, is now employed with National Semi-Conductor Corporation in Coral Gables, FL.

J. M. Rohinson, '74, is working as a Highway Traffic Engineer with the Milistry Traffic Manegement Command Transportation Engineer-ing Agency of the U.S. Army at Ft. Eustis, VA. . I M Pohinson

SIGMA

C. R. Hanes, '24, is a self-employed Consulting Engineer in Lima, OH.
 H. Z. Schofield, '29, lives at 1034 Kenchester Dr., Columbus, OH 43220.
 J. J. Whitsett, '42, lives at 2A West Chapman St., Alexandria, VA 22301.

D. H. Barnes, Jr., '38, is Senior Vice President of Orange and Rockland Utilities, Inc. in Spring

Rockland Utilities, Inc. in Spring Valley, NY,

D. N. Bridgwater, '40, now lives and the service of the Park, FL 3403.

R. M. Decker, '49, is presently on loan to Benedict College in Columbia, SC from IBM Corporation Program for Colleges attended by minorities and disadvantaged.

Vt. L. Carbonaro, '30, is Senior Vice President of Operations for Connections.

Schick Incorporated in Connecticut.

R. R. Morse, '43, lives at 9 South St., Trumansburg, NY 14886.

L. J. Palat, '71, is presently in the U.S. Air Force and living at 521 N. Brown Ave., Tucson, AZ

85710. LIPSII ON

G. W. Campbell, '63, lives at 2711 Reeder, Fort Smith, AR 72901.

2713. Reeder, Fort Smith, AR.
F. Fajerr Helies, 42, now lives
at 16102 El Camino Real 2110.
C. F. Mayfield, 17, 64, now lives
at 1435 Oakhow Rd., Arcada, CA
R. D. McGallum, 49, is now barfor the control of the control of the control
for th

PHI

P. W. Bartholomew, '30, is Executive Secretary of the Paper Technology Foundation, Inc. at Western Michigan University.
M. R. Chandler, '33, is retired and living in Leesburg, FL.
J. R. Frederick, '74, lives at 418½ N. Gaylord Ave., Ludington, MI 49431.

R. E. Mast now lives at 1575 Concord Circle, Zionsville, IN
40677.

W. C. Thiele now lives at 21
South Auten, Somerville, NJ 08876.

CHI

- C. E. Houston, '37, is retired and living in Davis, CA at 1012 Miller J. R. Kerr, '40, is a self-temployed Consulting Engineer in Beverly Hills CA. Mill. (22, is District Sales Manager for Systems Engineering Labs in Irving, CA.
 Albert Warner, Jr., '53, lives at 216, North Donner, Tucson, AZ 216, North Donner, Tucson, AZ
- North Donner, Tucson, AZ 85715.
 Kane Whistler, '67, is working in Industrial Sales for William H. Hutchison & Sons in Wilmington.

PSI

- W. I. Enderlin, '60, lives at 635 South Wilson St., Kennewick, WA 99336.

- 9933b.

 9933b.

 R. W. Lawson, '37, now lives at #M-Carlton Aptr., 63 Hill St., Morristom, N. 07980 lives at 398.

 Brae Glen Crescent, Calgary, Alberta, Canada T2W1B6.

 Jeffrey Russell, '71, lives at 48.

 Zambridge St., Winnipeg, Manitoba, Canada R3M3G3.

 D. H. Stowe, '65, is employed by D. H. Stowe, '65, is employed by St. Winnipeg, Sandi Stowe, '65, is employed by ICO in Dhahran, Saudi ARAMCO Arabia.

OMEGA

. E. M. Newberg, '65, is Production Manager for International Minerals and Chemicals in Libertyville, IL.

GAMMA BETA

 G. K. Cornelius, '60, is a Program Analyst for the U.S. Navy in gram Analyst for the Port Hueneme, CA.

DELTA BETA

- J. R. Allgeier, '74, lives at 905 McKinley Ave., Louisville, KY
- 40217 • N. M. 160 A
- 40217.

 N. M. Morgenstern, '74, lives at 160 Arlington Ave., Clifton, NJ 07011.

 E. L. Ogden, Jr., '62, lives at 3227 Murray Hill Pike, Louisville, KY 40222.
- D. E. Stein, '75, lives at #233-rood Villege Dr., 753 Carrollwood Gretna LA 7\$\$53.

EPSILON BETA

- - G. T. Haskin, '64, lives at 5758 Cadieux, Detroit, MI 48224.
 R. N. Pense, '52, lives at N5 Kissam Rd., Peekskill, NY 10566.
 Norman Smith, '51, now lives at 20288 Stabelin, Detroit, MI 48219.

ETA BETA

- T. W. Fonville, '64, lives at 103
 Estelle Dr., Vicksburg, MS 39180.
 F. B. Himbury, '66, now lives at
 4907 Charade, Houston, TX 77066.
 K. H. Wilson, '70, is employed as
 a Project Engineer on PetroChemical Refrigeration Systems for
 Cimco LTD in Toronto, Ontario,
 Canada.

THETA BETA

Tom Breiwick, '69, is a Marine Engineer for L. R. Glosten & Associates in Seattle WA.

IOTA BETA

R. F. Brelin lives at #2-4744 Mohr St., NW, Canton, OH 44708.

KAPPA BETA

- W. R. Blackledge, '70, now lives at 4265 Hyancinth Ave., Baton
- W. R. Blackledge, '70, now lives at 4265 Hyancinth Ave., Baton Rouge, LA 70808.
 D. R. Coghlan, '75, is an Indus-trial Engineer for Garan, Inc. in
- trial Engineer for Garan, Inc. in Starkville, MS.

 J. A. Ewing, '74, now lives at Box 9, Brookhill Rd., Somerville, AL 35670.

 C. R. Williams, '76, lives at 304 Mocking Bird Road SE, Huntsville, AL 35803.

LAMBDA BETA

- G. A. Clark, '73, now lives at 333 25th Ave. NE, Birmingham, AL 35215.

MU BETA

- John Halajko, '72, lives at 12522 Shannon Hills Dr., Houston, TX 77099.
- R. L. Harding, '74, now lives at 1209 Cadillac Dr. E., Kokomo, IN 46901.
- S. W. Holland, '75, now lives at 47066 Utica Estates Dr., Utica, MI 48087. M1 48087.
 R. L. Nicolai lives at 37 Boxwood Circle, Bryans Road, MD 20616.

CHAPTER NEWS

Delta Chapter (C) 11892 Carlton Road Cleveland, Ohio 44106

CLEVELAND OHIO

Greetings from Delta chapter! Summarizing the events of the last year or two, Delta was kicked out of its room on campus a couple of years ago to make way for a television studio (used for taping classes, homework set solutions, etc.). We were promised a new room, but Title IX came into the picture. It was determined that Theta Tau could remain on campus while the female membership question was being resolved; but that, for the protection of the University, Delta chapter could neither be funded, nor receive other substantial assistance from the University. In short, we could not get a new room. or Delta, as for many other chapters. Title IX became an all-consuming fire. Everything ground to a halt. As our future existence was in doubt, and as for a long time meetings were taken up with Title IX matters, professional development activities ceased; so there was no rush to speak of. (Delta rushes through professional development activities.)

The National Conference, unfortunately, solved no problems for us. Please remember, we are a totally professional chapter with essentially no social component except that intrinsic in the fraternal bonds of this organization. However, the real problem was that as a social fraternity, we would get no support from the University (The University does not want any more social fraternities on campus, our Institute alone has twelve!). So, if HEW had ruled that Theta Tau is a social fraternity, Delta chapter would have folded here at Case Insti-

tute of Technology. The chapter began to formulate plans to set up another organization in the event of that contingency. In the meantime, the relative lull between the National Convention and the Summer of 1977 allowed

us to turn to other problems and activities. Back in 1971, or thereabouts, the chapter decided to buy a Hwang calculator for the chapter room, at a cost of about \$800. The loan from National was repaid with dues, still leaving us in debt to National, By Staing, 1977, the chapter still owed the National a couple of hundred dollars. Under the leadership of the new regent. Jon Grav, the chapter sent out over one-hundred-fifty letters to Delta Alumni asking for financial assistance. Mind you, these envelopes had to be addressed by hand: no small task for six people at this school. Thanks to the response of some of our alumni, a major part of the debt was eradicated

(It presently stands at about eighty dollars). Also, that Spring, Delta chapter sponsored a very successful tour of the NASA-Lewis research center here in Cleveland. About 30

people attended. Through this tour, we picked

up two pledges. We also started an associate membership program for females, and for men who were ineligible for membership in Theta Tau because of membership in a social fraternity.

At the end of that spring, two more members graduated, and our active membership fell to three.

Of course, you all know what happened over the Summer. With HEW's ruling, Delta chapter got back on the move. We sponsored a very interesting, although unfortunately, poorly attended, talk on Materials in Sports by Professor Ebert of our school. On October 15, we initiated three pledges, including the first (maybe) female member. The initiates are David Ratti, Tim Wottle, and Laurie Jane Weiss. After the initiation, we made a trip to Sigma chapter for a brief but pleasant overnight visit.

This November, we are sponsoring a talk by Dr. Ostrach (of our Mech E. department) about the Space Shuttle and his role in the

program.

This month (Nov. '77) we should also be getting a room, which we will probably share with Tau Beta Pi (a general engineering honorary).

By the time you read this, if all goes well, Delta chapter will have hosted the Central Regional Conference. There should be more on this in either this or the next issue of the Gear.

This just about brings you up to date on the chapter, but we would like to take this opportunity to recognize a man who for many years has been the mainstay of Delta Chapter -Dr. Thomas Kicher, our advisor and an honorary member of this chapter. His more recent contributions to the chapter are even more noteworthy given the fact that his new position as Assistant Dean of Science and Engineering really does not leave him time for us; but he manages to make time anyway. He asked, about five years ago, that we try to find a new advisor as he was, even then, short on time. We are looking for a new advisor, but even now, Dr. Kicher has not slackened his concern for the chapter. Let us be thankful for men such as this!

Before closing, we want to inform the fraternity as a whole that Delta chapter has always been, should always have been known as, is, and shall remain, that chapter of Theta Tau Fraternity on the campus of Case Institute of Technology of Case Western Reserve University. When it is too inconvenient to use both names, preserve the name of the Institute, Never refer to us as simply being at Case Western Reserve University. So in all fraternity records, in all chapter records, in your minds, in your hearts, and in your conversation, Delta is to be known as being at Case Institute of Technology. Scribes please note.

As I close this letter, I would like to add my, what amounts to, parting words, as I am a senior. Gentlemen, and ladies, this organization is worthwhile. I hope that when we look back. we can say that we have benefited ourselves and those around us by our association with Theta Tau: and that the high ideals to which we aspire as Theta Tau's will have turned out to be more than just words in a ritual.

Thank you for your attention.

God bless every one of you.

In H and T, RICHARD L. BONOMO Scribe, Delta '78



Members of Delta and Sigma pose together during a visit of Delta Chapter with Sigma Chapter in Columbus, Ohio.

Zeta Cnapter (S) P.O. Box 3529 Lawrence, Kansas 66044 KANSAS

Dear Brother.

Zeta Chapter got off to a slow start in the fall of 1977 due to the lateness of the beginning of school and obligations of several of the chapter members to other activities. Fortunately we have been able to pick up momentum and are becoming more involved as

school progresses.

Virtually all members have been involved in either football, bowling, professional societies, or social functions. Our football team almost had a winning season in posting a 3-3 record. The bowling team has been doing well while facing some stiff competition in their league. Again this year we built a homecoming float with the Sigma Kappa sorority in an attempt to repeat last year's first place performance. Unfortunately, we were judged in the wrong category and did not place.

We are still without a house as of this fall. Plans for a new house ran into difficulties and had to be abandoned last year. However new plans are being formulated and hopefully will not run into any difficulties.

At the present time we have seven pledges and fifteen actives. We are planning for a strong rush this spring in an attempt to overcome the losses of those actives who are graduating. With luck, we will be able to meet these goals and keep Theta Tau a strong active organization.

In H & T Kevin Stevens Corresponding Secretary

IOWA CITY

*Omicron Chapter (C) 10WA
Theta Tau Box, Engineering Bldg.
Iowa City, Iowa 52242

On November 12 some of us are going to visit X: Chapter for the Wisconsin-lowa foot-ball game, and despite the fact that the Badgers will note again be devoured by the Hawkeyes, we hope to have a good time with our brothers in Wisconsin. Along the same light, we are currently attempting to organize interchapter professional development programs whereby we could share the empirical education of a plant tour and the associated good times with some of the other chapters. Of current consideration is the Helleman Brewery in La Crosse, Wisconsin, and IBM in Rochester, Minnesota.

Within our chapter, fund raining projects (other than due collections) have been quite successful this fall. Some members 'hired out' to do odd jobs for the commenters 'hired out' to do odd jobs for the commenters 'hired out' to do odd jobs for the commenters hired out' to do odd jobs for the commenters with a commenter of the commenters of the fall conference, and the need for new members is compounded by the loss of a large percentage of actives due to graduation. Things are looking better now, and with persistance we will remain on our feet and continue being a very active chapter, optomistic of what the future holds.

In H. & T.
Dan Fattig
Corresponding Secretary

Rho Chapter (E)
Box 5282, State College Station
Raleigh, North Carolina 27607



With the acceptance of women membership, we made again have University recognition and have gotten back our chapter room. Rho Chapter is off and running with this year's activities. The major functions undertaken by the fraternity this year include pledging, our moneymaking project and the weekend retreats.

In keeping with changing times, Rho Chapter is implementing the National Fraternity's decision to admit women. This semester, there are ten pledges, four of which are women. In spite of this change, the pledge program has remained essentially the same. In general, the brotherhood has accepted the idea of women pledges as an asset to the Chapter, and are looking forward to their contributions.

In the past, Rho Chapter has always had problems coming up with good money-making projects. In the last couple of years, we have been selling the Rusk EIT Manuals to the engineering students at NCSU. This has turned out to be a good source of revenue, as well as

a service to the students.

In keeping with tradition, the brothers of Rho Chapter have had their weekend retreats. This fall, we went to Myrtle Beach, S.C. and stayed at the Contessa Motor In no for some fun in the sun. In the spring, we have been going to the Top of the Beech Inn not some fun to the Top of the Beech Inn near Bonce, N.C. for some scenery and relaxation. On these occasions, the traditional football game between the brothers and pledges is played in which the brothers always, emerge victorious

In H & T GARY R. Fox Corresponding Secretary



The "Free Expression Tunnel" on NCSU campus where the Fall 1977 Pledge Class paid tribute to Founders Day.

*Sigma Chapter (C) 1946 Indianola Avenue Columbus, Ohio 43201 COLUMBUS

Dear Brothers

Last spring quarter, the actives of Sigma Chapter and the Alumin decided to get a home improvements loan of \$6000 to do some work on our chapter house. During the summer the loan came through and early in fall quarter we began work on a roof for the back part of the house which was added in 1962. Prior to this the roof was flat with tar and rock. We put a roof on it with a twelve degree slope and insulated the whole of the underreath.

We also panelled and insulated all the exterior walls. The house really looks good now and is also very much warmer in the colder months. This will save a good amount of

money on fuel for heating.

In the public area of the house we had new carpet laid down and all new furniture was bought. This, along with the painting and refinishing of some of the woodwork that we did, made the house look a lot better than it has in a while.

When Theta Tau decided to go social, the men of Sigma Chapter decided to join the Interfrateraity Council here on campus. This allowed us to participate in several Greek events sponsored by IFC and gave us several other advantages also, so when the National Fraternity went back to Professional status, we elected to remain as a member of IFC.

This fall quarter has been, as always, a busy quarter. This year the IPC held formal rush for fraternities much the same as it did always in the past for the sororities. The turnout of rushess and the number of pledges to fratesten some the same that the sorories when the same that the same that

This past week (Oct. 24-29) was homecoming week and the fraternities and sororities get together and build floats each year. This year we built our float with Sigma Delta Tau, a sorority which hadn't built a float in several years. We had to teach them what to do on building the float, but it turned out well and we won a trophy for 'Best Use of Themet.'
This isn't the 'Best Overall' which we had won for several consecutive years but it is a trophy and Theta Tau remains as the top builder of floats at Ohio State.

As you may know, the Central Regional Conference is being held at Delta Chapter this biennium, and Sigma Chapter hopes to send approximately 10-12 men up to Cleveland. It will be a good experience for those of us who are less than two years old to the fraternity and have not had the chance to attend one of

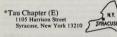
these conferences.

Along with the social life for us there is, of course, the academic life. This past spring quarter, Theta Tau placed third in accumulated grade point average among the other frater-

nities in the IFC. There are forty fraternities in IFC at the present time.

All toll it wasn't a bad quarter, even if it isn't over vet.

In H & T,
PHILLIP G. VANDER KRAATS
Asst. Corres. Sect'y.
Assistant Corresponding Secretary
Sigma Chapter



Tau Chapter is on the move.

In spring 1977 the chapter received the 1976-1977 Scholastic Award for Fraternities from the office of Student Affairs and Syra-

cuse University.

Engineering Week was a success. We had six speakers, one of whom was Mr. William Peil (Tau) of G.E. The last day of the week was celebrated by a basketball party. Tau Chapter destroyed the Engineering faculty 22-20.

Fall Rush at Tau Chapter is going very well. So far we have nine brotherhood and eight little sister pledges.

Our yearly Christmas party for under priviledged children should be a smash this year

iledged children should be a smash this as always.

Brother Ken Brown (Tau '41) and his wife gave the house furniture, silverware and dishes. Brother Randy Alstadt (Tau '76) gave \$40

for party purposes. Thanks Brothers!

The Tau Factorial, our newsletter, will be

The Tau Factorial, our newsletter, will be distributed in the spring to all Tau alumni and chapters.

Good luck to the other chapters.

In H & T WILLIAM KNIGHT JR. Corresponding Secretary



Upsilon started this fall in good shape this time. Although membership is still extremely low, we lost only a few men over the summer and had a pledge class waiting to be initiated. Our housing corporation had an alumni drive which apparently did a lot of good for them.

On the bad side, our cook could not return to work and we were unable to locate a replacement, and "Uncle Billy" Stelzner, our liv-

ing chapter founder, was not to be found.

We have initiated six men and brought the
membership up to twently-two. We have also
just found a new cook. We are currently involved in rush. We have several fine prospects
but none definite at this time.

In H & T,
PAUL L. STRANG
Scribe
Corr. Sect'y.
Corresponding Secretary

Upsilon founder, William Boyd Stelzner, Sr. died, October 8, 1977, less than a month before his 937d birthday. Brother Stelzner received his B.E.E. ('07) and E.E. ('11) degrees at the University of Arkansas and his M.S. ('18) at Ohio State. He joined the Engineering faculty in 1902.

He, along with W. R. Spencer, started in 1918, the Engineers' Club, founded the Arkan-sas Engineer in 1912, and helped start the Tau Beta Pi chapter on campus. He also started Engineers' Day in 1911 which has grown into Engine Week.

Lili

He was head of the Electrical Engineering Department from 1936 until 1951. During his time as Head of the Department, Brother Stelzner amassed a library of engineering books for the FF Department. He was saddened later when one of his successors needing space, threw out all his books.

March 31, 1921, Professor Stelzner's Engineers' Club petitioned Theta Tau. Seven years later, on April 7, 1928, Upsilon was chartered and Stelzner and Spencer became faculty advisors. Both served in that capacity until 1948

and both retired in 1951.

During his last years. Uncle Billy (as his students and the Fraternity knew him) only came in contact with the chapter when the pledges would see him to have their gears signed prior to initiation.

Brother Stelzner's collection of engineering books and yearhooks have been donated to Brothers Jerry Freedle, David Hawkins, Al

the chapter to start a library.

Summerford, Mike Johnson, and Paul Strang, and one Tau Beta Pi served as poll bearers. Brothers Loren Heiple, Bryan Webb, John Higgins, and John Hawkins, Jr. were in attendance. In H & T.

PAUL L. STRANG Scribe Corr. Sect'v. Corresponding Secretary



Brother William Boyd Stelzner, Upsilon Chapter founder.

RAPID CITY *Omega Chapter (W) 107 Kansas City Street

Rapid City, South Dakota 57701

Greetings from Omega Chapter! We are all back in Rapid City to endure another year of college life. We hope it will be as interesting as those that have already gone by.

Although this is our second year in the new chapter house, we are still breaking it in to fraternity life. As we came back this Fall to start school at South Dakota School of Mines & Technology, we were greeted by a large green lawn in front of the chapter house. This lawn had been planted last Spring by the actives and had been cared for by those attending Summer school. The lawn added a pleasing appearance to the house.

Those returning this Fall were also met by our annual coming back parties. These parties along with our regular social functions of Smokers. Halloween Party, Open House, and other get togethers helped the actives to meet new freshmen and get our rush program started. Already this Fall, we have four pledges who are ready to join us in brotherhood. When rush is finished for the year, we hope to have enough new pledges to add to our present thirty-five members. Although we would like a large number of pledges, we are not going to give up quality just for quantity.

This year we plan to enhance our professional development by having an Alumni, Doug Aldrich, speak to us on interviewing and job hunting. Hopefully, this will give the graduating seniors some help in getting acquainted to entering industry.

Another highlight of our year, is the intramural sport scene. This year we finished high in the football league by having only one loss and one tie. We are now preparing for the basketball season, where we hope to successfully defend our league championship this year. These sports give us a much needed break from the rigors of college life.

Finally, I would like to comment on our continued community service by sponsoring blood drives. We have already had one blood drive and we hope to have two more before

the end of the school year.

We at Omega Chapter would like to wish everyone success in their professional development.

In H and T. JAMES RANKIN Corresponding Secretary



*Delta Beta Chapter (C)

2034 Confederate Place Louisville, Kentucky 40208

Dear Brother

I'm sure that most of you are aware of the corner into which H.E.W. and its Title IX has backed our Delta Beta chapter of Theta Tau.

The Spring, 1977, issue of "The Gear" explained very well the dilemma confronting us. Since that time our National has expressed its intent to be "a professional engineering" fraternity which means that:

(1) We must admit women to Theta Tau because we are the only professional organization they can join, and stay where we are new year.

where we are now—or

(2) Move off campus and lose our house

into which we have just moved—or

(3) Dishand—or

(4) Switch to a national social fraternity.

The University has been most understanding and cooperative all through our problem, but they are caught between a rock and a hard place. They would face loss of Federal funds if they did nothing to bring us into compliance; and legal counsel has advised us that "black balling" women before initiating them into active membership would not hold up since it would be sexual discrimination, pure and simple.

The present actives have expressed a desire to keep women out completely, which means switching to a national social fraternity, while still restricting our membership to engineering students only. Input from Alumni on this entire matter has been almost non-existent. So now's the time to give us your thoughts either written or verbally at the meeting scheduled for the "new" house, 2034 Confederate Place, Monday, Nowember 14, 1977, a 6:30 p.m.

One prestigious national social fraternity has already made a presentation of what they have to offer us and what they expect of us if we go with them (very impressively done, too). And several other nationals have expressed their intentions of contacting us very soon.

Brothers, this is a "sticky wicket" and I'd like some advice and comment from you to help us as Theta Taus reach a course of action which will help perpetuate our feelings of brotherhood in a common bond.

Come out to the November 14 meeting or write to the house and tell us how you feel, or even suggest other alternatives.

In H & T, George Ellerkamp President, Alumni



Dear Brothers,

Things have been slow here the last year, but are picking up. We initiated two new members, myself included, last spring. We hope to initiate our three new pledges before the New Year. Also, after coming close to losing our house because of fuel bils, we are now in the black again! All in all, things are looking up for all of us here at Eta Beta.

Although we hope to have women pledges soon, we, too regret the Government's decision forcing us to admit women as members. eliminating the possibility of our remaining a men's organization, just as there exists women's organizaitons (NOW is coming to mind at this point). But, we also realize that we cannot live in the past, and that there are many benefits that come with the disadvantages of women membership. However, to minimize the disadvantages, we intend to be sure that our traditions, attitudes, and demeanor do not change significantly, as a result. We do see a possible conflict with the university over student housing regulations if a female member chooses to live in the Chapter House. But when that time comes, we'll deal with it as best as possible.

As we see it, our Chapter, and the Fraternity as a whole, is moving into a vigorous and demanding, new and bright future.

In H & T, KEVIN R. WAGNER Corresponding Secretary

Eta Beta Chapter (S)

Cullen College of Engineering, Box 7 University of Houston 3801 Cullen Boulevard Houston Texas 77004 OUSTO

Dear Brothers:

Among the many activities and events Eta Beta Chapter was involved in this semester. much effort was concentrated on rush. With several Brothers graduating this Fall and in the Spring, we were faced with the problem of replacing some valuable actives. As a result, we had several rush parties and a Casino party in order to get better acquainted with the prospective members. We now have five pledges who should become valuable assets to the fraternity.

Another activity which proved to be a big success was our Theta Tau Follies which are held each semester. The Follies consist of events designed to be both challenging and fun for the girls from the sororities on campus. We enjoyed a large turnout which resulted in a fun-filled day. There was also greater participation by our Brothers and Pledges in organizing the events.

Recently, Eta Beta held the Founders Day Banquet. We were pleased to see a good number of Alumni attending as well as all the active members and dates. It was an interesting night with Dr. Jerry Rodgers as guest speaker. Our next social event is the Halloween party. We expect another fun-filled night as we all get together in Halloween costumes.

The Brothers of Eta Beta have also been active in intramural sports. We have just finished with football and tennis and are preparing to enter the basketball and bowling events.

We at Eta Beta Chapter are also busy making arrangements for the Southern Regional Conference to be held at the end of the fall semester in Houston. We are planning to make the conference as convenient and enjoyable as possible for all our Brothers who are planning

The chapter as a whole has benefited much by participation in the many activities during the semester. We as a fraternity have been able to become a strong and close one.

> In H and T. JOHN M. CRUZ Corresponding Secretary



Eta Beta Chapter participates in their Theta

Tau Follies. *Kappa Beta Chapter (S) P.O. Box 2983 Mississippi State, MS 39762 (200 Hillside, Starkville, MS 39759)

It surely feels good to be back on campus. After a year of not being able to participate in any campus activities as Theta Tau, Kappa Beta is now feeling a relief of pressure that

might have held us under until we suffocated. An organization which functions solely for itself and its members is not very inducive to the kind of professional development that Theta Tau encourages. Now that we have once again, the entire College of Engineering with which to share our purpose; our activities are more meaningful to our student members.

The members of Kappa Beta strive to exercise leadership in the College of Engineering and on the campus. Our members hold offices in the College of Engineering, student government, and most prominent honorary and technical engineering societies. We are proud of the respect we derive from the College of Engineering and hope that we can maintain our position as leaders on our campus.

In H and T. KENT FORTENBERRY Corresponding Secretary

*Lambda Beta Chapter (S) 513 N. Walnut Avenue

Cookeville, Tennessee 38501



FALL, 1977

Dear Brothers

Fall activities at Lambda Beta Chapter have been anything but slow. Remembering how to go to classes and study keeps us all busy enough. However, Fraternity activities have gone well.

gole wen. Erist of all, we began with a good fall rub and now have some fine pledges. We hope and the state of the state o

Tech's Homecoming provided more recreation for Lambda Beta. Not only did we place third in the all-campus games; but we also won first place for our exterior decorations. Los tools of hard work paid off. And, speaking of hard work, Theta Tau's worked the homecoming concessions and pulled off one of the biggest money making projects every

To update you even further, the Little Sister pledges threw a big Halloween party for the Brothers and everyone had a great time. Even the clean-up was fun.

The Brothers of Lambda Beta wish the very best to all other chapters and hope that all the Regional Conventions are full of enthusiasm and Brotherhood. We are also looking forward to seeing the Brothers of Southern Region in Houston. Keep your Brotherhood strong!

In H & T,

DANIEL DYER

Corresponding Secretary $\Lambda \beta$



Annually, Lambda Beta Chapter has an all day Alumni Party in the Spring. The party each year is held at Hidden Hollow in Cookeville, Tennessee. Pictured above are the Alumni who returned to the 1977 party.

*Mu Beta Chapter (C) 1210 McClellan Flint, Michigan 48504



Brothers of Theta Tau,

The fall of 1977 certainly brings to one chapter a situation which has, for the past few years, been of no concern, that being the fact that we now have a full house. Eighteen people are living at Mu Beta Chapter this fall. The addition of Bros. Kent Hamilton, Doug Weneck, William Ortwig, Dave Shaeffer, Ted Coffield, Juergen Spendel, Wayne Chadwick & Dave Dean as newly initiated members during the summer brings the Mu Beta membership total to 12. Even in A section things are looking up! Of course, the end of next B section (Feb. 10, 1978) will see the vacancy of seven graduating members, 4 of which are in official positions. But these positions will be filled. And as a matter of procedure have already been filled. Taking these positions after Feb. 10 then are the following: Ted Coffield, Vice Regent: Kent Hamilton, Treasurer: Dave Shaeffer, Secretary: and Bill Orture, Scribe, Yours truly will fill the position of Regent and of that I am honored.

October 12 was a special day for our chapter. It marked our Founder's Day celobration and gave each and every one of us a chance to get acquainted with every one in the house, not to mention our advisors Prof. Bay & Rahke and their wives, and our special guest President William B. Cottingham and his wife. A delicious roats beef and chicken dinner was served, followed by a special presentation by President Cottingham on Solar Heating. It was indeed an enjoyable evening and a great way to celebrate the founding of our fraterity.

Just want to mention the cleanup day in which brothers helped out another of our brothers by doing yard repair and cleanup due to the fact that Brother Chadwick's father is unable to do so. This symbolizes the meaning of the word fraternity. It's really what being a brother is all about.

On the sports scene this fall Theta Tau was impressive. The volley ball team came home with a championship crown in the G.M.T.E. recreational league. Even though they were down 14-7 and match point in the championship game, they pulled themselves together and eeked out an exciting 15-14 victory!

Just as exciting was the finals of the GM.T.E. tennis tournament. The Doubles team of Joe Katona and yours truly overcame some inconsistent play and 4 match points to pall out an exciting 4-6; 7-6; 7-5 victory, It not be second consecutive year that those twostone, representing Theta Tau, had captured the doubles crown. Brother kattona is also the recognized singles champion at G.M.I. with yours truly ranked seaton.

Winter is coming and a new year will soon be upon us. For those of us who will remain at Mu Beta chapter after next section, the school year has just begun. For those seniors who will soon be graduating, the year is almost over. But for all of us, ahead are many challenges and adventures awaiting us. As our fraternity continues to grow, to become stronger both financially and in membership, we are beginning to initiate programs which benefit the fraternity such that with a conscious effort from each of us, Mu Beta chapter can look forward to a promising future. I wish to recognize my predecessors for their outstanding accomplishments during their time here. They have succeeded in reviving the fraternity and giving it a chance to grow. I hope, with God's blessing, that I may do as well. It is with satisfaction that I now close, wishing all brothers of Theta Tau good luck for the future.

In H & T, Douglas A. Weneck Incumbent Regent

Nu Beta Chapter (N)

c/o Dr. Harold Jebens Ottensman Hall Univ. of WI-Platteville Platteville, Wisconsin 53813

Platteville WIS.

Dear Brother

As of the time this letter was written, Nu Beta Chapter basn't started pole us that we will be be the companies of the companies of the companies. But all indications the companies were seenester. Even without rushing activities the top the companies of the com

The Nu Beta Chapter was also involved with the semi-annual whitewashing of the famous "M" at Platteville. After the work was done we sponored a "Tech Tea Party" for all the

workers at the "M". (see cover)

This year also our Chapter was responsible for the lighting of the "M" on Homecoming week. This involved the set up of lighting cans, actual lighting, take down of cans and clean up; in addition to the party at the top of the "M" during lighting.

These and other activities have kept us busy this semester. They have helped our public relations on campus and in the community and helped strengthen the bond of fellowship between our members.

> In H & T, CHRISTOPHER L. EBERT Corresponding Secretary

Additions To Membership

Listed here by roll number are the names, class year and hometown of newly initiated members to Theta Tau since the last issue of "The Gear of Theta Tau".

ALPHA CH	APTER	BETA CHAPTER	1112	Mark R. Sickert, '78, St.
849 Robert E. Omas MN	, '77, Anoka, 1	103 Clement R. Hackworthy, '77,	1113	Timothy P. Sullivan '77
850 John A. Barbat		Wawatosa, WI		Muskegon, MI
MN		104 Waldo J. Frankenstein, '78, Bellevue, MI	1114	Lee A. Stankewicl, '80, Crysta Falls, MI
Bear Lake, MN	1, '79, White 1	105 Daniel D. Budny, '77, Iron	1115	Matthew J. Wilkin, '77 Reed
52 Frederick M G	ormann '77	Mtn., MI 06 David I Bell "77 Port Huron		City, MI
		06 David J. Bell, "77, Port Huron,	1116	John C. Berg, '78, Detroit, MI
153 Charles D. Krai	mer, '79 Tulsa. 1	07 David J. Bjork, '77, Alpha, MI	1117	James A. Stephanoff, '78, Detroit, MI
OK 54 Jay H Payne '		08 Arthur J. Marinello '77	1118	Carmine F. Vara, Jr., '77,
54 Jay H. Payne, '		Crystal Falls, MI	*****	Gwinn, MI
55 Merrill S. Ande	rson, '77,	09 Eric V. Sesselmann, '78, Muskegon, MI	1119	William R. Fretz II, '77, Farmington, MI
Duluth, MN	1	10 Larry G. Lewandoski '78	1120	Dean B. Sandri, '79, Amasa.
Michael R. Eul, MN		Muskegon, MI	1120	MI
	1	11 Douglas D. Broom, '77, Flint,	1121	Bill A. Van Vreede, '77,
		MI 28		Appleton, WI

FALL, 1977

1124

779

Mark D. Colombino, *78, 1122 Amasa, MI Kirby D. Juntila, '78, Ispheming, MI Brian T. Melchiori, '79, Caspian, MI

ZETA CHAPTER John D. Watson, '80, Kansas City, MO Harold T. Leonard, '78, Over-land Park, KS 776

land Park, KS Kevin L. Stevens, '80, Kinsley, Robert G. Onstott, '78, Wichita, KS John W. Lowry, '80, Prairie Village, KS

MU CHAPTER

Michael J. Swindle, '79, nticnael J. Swindle, '79, Tuscaloosa, AL Jack J. Parks, Jr., '78, Florence, AL Steven L. Stinson, '80, Enter-prise, AL 1067 1060

1070 Jeffrey P. Strickland, '79. Birmingham, AL Michael A. Wolfe, '80, Tuscaloosa, AL John R. McClellan, '79. 1071

1072 rmingham, AL

XI CHAPTER

Carl L. Berg, '80, Rochester, James R. Herdeman, '79, New Berlin WI 420 James R. Herdeman, '79, New Berlin, WI Michael R. Kluth, '78, Madison, WI Grant R. Dekker, '79, Madison, WI Robert S. Gillies, '79, Madison, 421 422 423 WI William E. Held, '79, Wauwatosa, WI Dennis J. Hilgendorf, '79, Madison, WI James A. McGough, '78, Kenosha, WI David Munz, '77, Milwaukee, 424 425 426

Todd F. Nielsen, '77, Neenah. 428 Roger K. Noack, '77, Apple-ton, WI 420

OMICRON CHAPTER

867 Randall J. Scheetz, '79, Iowa City, IA
Thomas K. Terrebonne, '77,
Des Moines, IA
Steven R. Townsend, '77,
Davenport, IA

RHO CHAPTER

884 Brent J. Bumgarner, '79, Pfafftown, NC, '77, Wade K. Carlton, Jr., '77, Warsaw, NC Michael John Paul Scherer, '81, Salisbury, NC Michael P. Burke, '79, Winston-Salem, NC James A. Evans, Jr., '78, Mt. Gilead, NC William R. Youngblood, '79, Concord, NC Brent J. Bumgarner, '79, 885 887 888

SIGMA CHAPTER

695 Jon B. Kelm, '81, Lisbon, OH

TAIL CHAPTER

753

Danilo A. Colonia, '79, Bronx. Jeffrey J. Lalanne, '80,

David B. Ennis, '80, Syosset, 756 Richard L. S Oswego, NY . Sorensen, '79,

PHI CHAPTER

Joseph E. Bigora, '79, Knox, Charles G. Covey, '79, Newcastle, IN Phillip A. Goodfellow, '79, Berea, OH 524

525 Thomas P. Gootee, '79, Jasper, IN Mark T. Leonard, '79, Brattle-boro, VT Thomas C. McFarland, '79, Vincennes, IN 526

Vincennes, IN James B. Neale, '79, Creve Coeur, MO David T. Peters '79, Dayton, 529 529

Thomas H. Samples, *79, 530 Bethel Park, PA Mark A. Schultz, '79, Welling-ton, MO

James V. Stephanek, '79, Middleburg Heights, OH Ronald D. Sutton, '79, Mishawaka, IN Randall B. Williams, '79, Park Forest, IL

CHI CHAPTER

Mark R. Reinhold, '79, Tucson, llan B. Spiegel, '80, Tucson, 838

910 Albert Vasquez, '79, Tucson,

Thomas H. Meyer, '80, Albuquerque, NM James L. Winn, '78, Tucson, AZ Charles C. Hill, '78, Sells, AZ

PSI CHAPTER

842

Robert E. Boston, '78. Butte. Michael J. Cheney, '77, Lima, 591

Arnold E. Knight, '77, Fair-field, MT Jerry R. Schuyler, '77, Roberts, MT

583 584 Jeffrey L. Bryant, '78, Pensa-cola, FL Steven D. Cosby, '78, Great 585

586 aniel J. Haman, '77, Billings, Butte, MT Leonard G. Janson, Jr., '77, Butte, MT 587

588 Walter E. Smith, '78, Butte, 589 MT Eric W. Skaalure, '77, Big Sandy, MT Frank V. Goglio, '78, Green 590 591

Reed A. Kaldor, '78, Butte. OMEGA CHAPTER

David D. Bushong, '80, Tulare, Shawn A. Engel '80, Pierre,

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874 Randal A. Kocourek, '78, Martin, SD Randall A. Lee, '80, Valley

Randall A. Lee, '80, Valley Springs, SD Kenneth S. Meyer, '80, New Underwood, SD James W. Parker, '80, Lemmon, SD Steven G. Rathbun, '80, Pitroburgh PA

828 Steven G. Katnoun, eo,
Pittsburgh, PA
Wichael T. Rissky, '80,
Witchell, SD
Julius M. Strid, '80, Hettinger,

Donald C. Wrede, '78, Rapi !

DELTA BETA CHAPTER

Robert K. Bass, '81, Louis-ville, KY

Lawrence M. Heil, '80, Louis-ville, KY James E. Schork, '81, Louis-

James E. Schork, '81, Louis-ville, KY.
Peter T. Whelan, '79, Louis-ville, KY.
Louis H. Warren, '79, Louis-ville, KY.
Mickey R. Wilhelm, Louisville, KY (Honorary)
Robert G. Casper, '79, Louis-ville, KY.
David P. McGinnis, '81, Louis-ville, KY. 520

EPSILON BETA CHAPTER

Clifford M. Broughton, '79, Lincoln Park, MI Kevin R. Wagner, '79, East Detroit, MI

ETA BETA CHAPTER

James C. Kirchman, '78, Pasadena, TX Joe Reyes, '78, Houston, TX Jacke E. Weber, '78, Houston, 226

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Jeffrey L. Barnes, '80, Fort Worth, TX Worth, IX Timothy D. Becker, '79, South Bend, IN Barry S. Burrell, '78, Houston, 230

231 van R. Lington, '78, Garland,

233 onnie R. Price, '79, Lufkin,

James E. Barnhill, '80, League City, TX 234

Randle E. Bullard, '81, Temple Jimmie J. Gerich, '79, Houston,

Guy M. Grow, '81, Houston,

IOTA BETA CHAPTER

185 Christopher P. Kaniut, '80, Thomas E. Zeimet, '79, South-field, MI

KAPPA BETA CHAPTER

266 Lewis G. Echols, '79, Braxton,

MS Bobby G. Nolen, '78, Jackson MS William O. Thomas, Jr., '79, Crystal Springs, MS Mark E. Tipton, '78, Houston,

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Bill T. Williamson II, '79, Florence, AL

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LAMBDA BETA CHAPTER

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- Steven R. Anderson, '79, Jasper, TN John A. Boyer, Jr., '77, Bluff City, TN Mark C. Cecil, '79, Chatta-nooga, TN James R. Ford, '79, Cedar Hill, 165 166
- 167
- 169 Robert E. Stafford, '79, Hixson, TN James C. Sullivan, Jr., '78
- James C. Sullivan, Jr., '78, Hermitage, TN George M. Theodore, '79, Ooltewah, TN Robert E. Turner, Jr., '79, Jasper, TN Robert B. Hale, '77, Kingston,
- TN Michael A. Jarrett, '80, Chatta-nooga, TN David N. Robinson, '80, Louis-ville, KY William R. Stone, '78, King-ston, TN 174
- 176 W. Beaty, '77, Nash-
- ville, TN Richard W. Jernigan, '79, Jackson, TN James M. Overton, '80, Ira,
- James C. Anderson, '80, Nashville, TN Ross P. Cherry, '81, Jackson, 180
- chard D. Douglas, '82, Erin. Daniel C. Dyer '80 Nashville
- Zerith W. Jennings, '80, Clinton, TN

Paul S. Kidd, '81, Nashville. George T. Ballew, '81, Clinton. 62

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Larry A. Hedrich, '78, Chilton,

Appleton, WI John D. Stark, '77, Middleton.

Du Lac, WI James H. Kramer, '77, Mont-

James H. Kramer, 77, Madison, VI John R. Karsten, '78, Madison,

David W. Jones, '79, Brook-field WI

Robert J. Gerth, '79, Green-dale, WI

Robert C. Christianson, '77, Green Bay, WI Richard J. Baker, '79, Ells-worth, WI

Andrew S. McConnell, '79, Andrew S. WI Darlington, WI Russell K. Marcks, '80, WI

dale, WI Christopher L. Ebert, '78, Platteville, WI Brian E. Dorn, '79, Sheboygan,

alter N. Smith. '78. Hoffman Estates, IL Thomas C. Krause, '79, Fond

Steven J. Rozanske '79 Milwaukee, WI Michael R. Schindhelm, '76, Appleton WI

- 186 Richard S. Henry, '80, Ooltewah, TN Mark A. Overbay, '79, Kings-port, TN 187

NU BETA CHAPTER

- Wade A. Winchip, '79, Ana-
- mosa, IA Richard H. Weber, '79, Prairie Du Chien, WI David J. Walker, '79,
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- Lancaster, WI Lyman W. Tschanz, '79, Franklin, WI Steven A. Schmidtknecht, '80.
- a Crosse, WI cott W. Pennington, '79, Mt.
- Horeb, WI Lauren W. Laabs, '77, Eureka, WI 43
- Ryan R. Berg, '78, Prescott,
- onald J. Brown, '78, Baraboo, 46 aul J.P. Dreis, '78, Spooner,
- Alan V. Gerth. '78. Greendale WI Douglas L. 45
- Rick, '77, Hales 40 Jeffrey P. Seitz. '78. Sturtewant
- Terry N. Tew, '77, Lancaster,
- Russen R. WI
 Seymour, WI
 Keith E. Haas, '79, Racine, WI
 David J. Grauvogl, '79,
 Wisconsin Rapids, WI
 James R. Fowler, '79,
 LaCrosse, WI James R. Fowier, 19, LaCrosse, WI Dean E. Bedford, '79, Janes-ville, WI Thomas M. Baumgartner, '79, Menomonee Falls, WI 71 72 Charles A. Burggraf, *77, Lancaster, WI

In Memoriam

Listed here are the names, class year, and date of death by chapter for those brothers which have been reported since the last issue of "The Gear of Theta Tau."

ALPHA CHAPTER

Ralph W. Hill, '31, 11/27/76 John J. Kennedy, '08, 11/9/76 John F. Noble, 3/30/76 Jack S. Sneve, '11, 9/3/71

BETA CHAPTER Charles J. Rashleigh, '14, 9/72

GAMMA CHAPTER William F. Falligan, '39, 5/8/76

Frank J. Laverty, '25, 3/30/77 Daniel J. Lyons, '30, 11/75 DELTA CHAPTER

Harold C. McArt, '26, 12/72 Elwin B. Volmar, '30, /73

EPSILON CHAPTER Elmer F. Davis, '10, 7/20/74

Dr. John C. Hazzard, '28 David R. Nelson, '35, 9/8/75 George S. Seager, '30, 3/23/77 George R. Simpkins, '48, 10/30/76 Gordon H. White, '25, 12/20/76

ZETA CHAPTER

Donald M. Black, '28, 11/10/76 William F. Brown, '21, 10/27/76 Theodore H. Moser, '43, 1/11/77

ETA CHAPTER

Edward H. Barry, '16, 12/30/76 Orton P. Camp, '15, 8/12/76 George E. Faithfull, '26, 10/25/70 Henry L. Leeb, '15, 4/76 Frank H. Russell, '22, 10/20/69

THETA CHAPTER LeRoy E. Euvrard, '38, 6/21/76 Gordon C. Mac Vean, '25, 10/4/76

Harold K. Work, '25, 6/5/76 IOTA CHAPTER

Jerry E. Catron, '61, 12/21/76 James D. F. Evans, '38, 12/4/76 Charles L. Friedmann, '51, 2/4/76

Alfred P. Heiser, '30, 9/9/76 Dr. Vance H. Webster, '23

KAPPA CHAPTER Kenneth W. Carr, '18, 1/23/77 Harry H. Chapman, '19, 8/17/76

John M. Trissal, '25, 10/31/75 Richard N. Woods, '24 LAMBDA CHAPTER

Thomas G. Martin, '24 30

MU CHAPTER

George H. Nason, '25, 7/11/76 Robert G. Norrell, '56, 9/28/75 NU CHAPTER

Robert M. Dodds, '44, 9/5/76 Walter A. Ebert, '48, 4/18/76 Henry C. Westin, '33, 7/3/76

OMICRON CHAPTER Ramon T. Jessen, '31, 10/7/76 James P. McClintock, '35, 8/26/76 Rex A. Miller, '28

PI CHAPTER Allan Q. Ladd, '33, 8/7/76

PHI CHAPTER Kenneth W. Dix, '31, 12/25/76

Edward E. Mills, '26, 9/11/75 William F. Zweig, '38, 3/12/76 CHI CHAPTER

Robert E. S. Heineman, '26, 9/11/76 PSI CHAPTER

H. E. Lake. '40 Thomas S. Mead, '77, 3/12/77 OMEGA CHAPTER

Richard K. Fuerstenau, '54, 5/7/75 William E. McLaughlin, '50, 5/30/76 Warren D. Withee, '44, 4/76

GAMMA BETA CHAPTER Robert W. Cashman, '50, 6/25/76

THE WAY IT WAS!

25 Years Ago

- · Brother Peter Minderman, Sigma '53 was named Outstanding Delegate at the 19th Biennial Convention. He helped Sigma Chapter win the Erich J. Schrader Award for '51 and '52
- The Nineteenth (Norman B. Ames) Biennial Convention was hosted by Phi Chapter at West Lafavette, Indiana.
 - · Zeta Chapter celebrated its fortieth anniversary in May.
- The Twin City Alumni Association and the national office were preparing plans for the Theta Tau 50th anniversary year in 1954.

20 Years Ago

- · Beta Chapter completed the Erich J. Schrader Award Plaque.
- · Founder Elwin L. Vinal retires at age 70.

15 Years Ago

- The Twenty-Fourth (Paul L. Mercer) Biennial Convention was hosted by Delta Beta Chapter in Louisville, Kentucky.
 - Theta Beta Chapter was installed on March 2.
- Michael D. Martin, Alpha, was elected "Outstanding Delegate" at the Twenty-Fourth Biennial Convention.

10 Years Ago

- Zeta Chapter was building a new \$265,000 house.
- Mu and Kappa Chapters were designated co-hosts for the Twenty-Seventh Biennial Convention to be held at Tuscaloosa, Alabama.
 - · Lambda Beta Chapter was installed.
- General Curtis E. LeMay, Sigma, 29, was a vice presidential candidate on the American Independent Party ticket.

5 Years Ago

- · Lambda Beta Chapter hosted the Twenty-Ninth (Charles W. Britzius) Biennial Convention at Nashville, Tennessee and also captured the Schrader Award for the secand time
 - · A colony was certified at the University of Wisconsin at Platteville on May 6.

CHAPTER ADDRESSES

*Chapter House.

**Each chapter's Region is denoted under its name, thus: C, Central; E, Eastern; N, Northern; S, Southern; and W, Western.

*Alpha:	515 Tenth Avenue, S.E. Minneapolis, MN 55414	*Phi:	P.O. Box 3146 (416 N.
	Millineapolis, MIN 33414	N	Chauncey) West Lafayette, IN 47906
*Beta:	Box 77, Route #1	*Chi:	1614 East Speedway Boulevard
N	Houghton, MI 49931	W	Tucson, AZ 85719
Gamma:	Box 13, Colorado School of	Psi:	Student Union Building
W	Mines	w	Montana Col. of Mineral Science & Technology
	Golden, CO 80401		Butte, MT 59701
Delta:	11900 Carlton Road	*Omega:	107 Kansas City Street
С	c/o Fribley Commons 2315 Murray Hill Rd.	W	Rapid City, SD 57701
	Cleveland, OH 44106	Gamma Beta:	School of Engineering &
Zeta:	P.O. Box 3529	E E	Applied Science The George Washington
S	Lawrence, KS 66044	-	University
			725-23rd Street, NW
			Washington, D.C. 20052
Mu:	P.O. Box 664		
3	University, Alabama 35486 (#10 Bryce Lawn	*Delta	2034 Confederate Place
	Tuscaloosa, AL 35401)	Beta: C	Louisville, KY 40208
		*Epsilon	478 West Alexandrine
*Xi:	1633 Monroe Street	Beta:	Detroit, MI 48201
N	Madison, WI 53711	C	
		Eta Beta:	Cullen Col. of Eng., Box 7
*Omicron:	The Town Production	S	University of Houston 3801 Cullen Boulevard
C C	Theta Tau Box, Engineering Bldg.		Houston, TX 77004
	Iowa City. IA 55242		11177004
		*Iota	4026 West McNichols Road
Rho:	D 5000 G . G H G .	Beta:	Detroit, MI 48221
E E	Box 5282, State College Station Raleigh, NC 26607	C *Kappa	P.O. Box 2983
	Raieign, NC 20007	Beta:	Mississippi State, MS 39762
		S	Mississippi State, MS 57702
*Sigma:	1946 Indianola Avenue	*Lambda	513 North Walnut Avenue
c	Columbus, OH 43201	Beta:	Cookeville, TN 38501
-		*Mu Beta:	1210 McClellan
*Tau: E	1105 Harrison Street Syracuse, NY 13210	С	Flint, MI 48501
		Nu Beta:	c/o Dr. Harold Jebens
*Upsilon:	1322 West Cleveland	N	Ottensman Hall
S S	Fayetteville, AR 72701		Univ. of WI-Platteville
THE REAL PROPERTY.			Platteville, WI 53818
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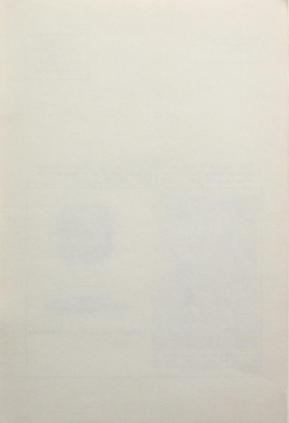
THETA TAU Central Office 13 Sona Lane St. Louis, Missouri 63141

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*Alpha:				
*Beta: N	Dear Bob Pope: Below you will find m	y name and o	orrect address:	
Gamma:	Name		Chapter	Class
W	Street			
			_State	Zip
Delta: C	☐ This is a new address! Comments:			
Zeta: S	I will send a check for \$_		immediately for c	our Founder
Mu:	Fund or Operating Fun	d.		
	Tuscaloosa, AL 35401)	Beta:	Louisville, KY 4	10208
*Xi:	1633 Monroe Street	*Epsilon Beta: C	478 West Alexas Detroit, MI 482	
N	Madison, WI 53711	Eta Beta:	Cullen Col. of E University of He	ouston
*Omicron:	Theta Tau Box, Engineering Bldg.		3801 Cullen Bor Houston, TX 77	
	Iowa City, IA 55242	*Iota Beta:	4026 West McN Detroit, MI 482	
Rho: E	Box 5282, State College Station Raleigh, NC 26607	*Kappa Beta:	P.O. Box 2983 Mississippi State	e, MS 39762
*Sigma: C	1946 Indianola Avenue Columbus, OH 43201	*Lambda Beta: S	513 North Walr Cookeville, TN	
*Tau:	1105 Harrison Street Syracuse, NY 13210	*Mu Beta: C	1210 McClellan Flint, MI 48501	
*Upsilon:	1322 West Cleveland Fayetteville, AR 72701	Nu Beta: N	c/o Dr. Harold Ottensman Hall Univ. of WI-Pla Platteville, WI	atteville
		32		



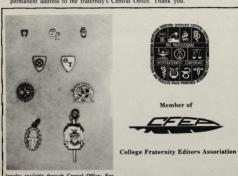
THETA TAU FRATERNITY
13 Sona Lane
St. Louis, Missouri 63141

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To Parents of Theta Tau:

Your son's Gear of Theta Tau is sent to his home after graduation. We hope you enjoy looking through it. If he no longer lives at home, please send his nermanent address to the fraternity's Central Office. Thank you.



Jewelry available through Central Office: For information and prices contact: Theta Tau Central Office, 13 Sona Lane, St. Louis, Mo. 63141.