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Electrical Engineering Honor Society
November, 1977, Vol. 74, No. 1

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The BRIDGE is published by the Eta Kappa Nu Association, an electrical engineering honor society. Eta Kappa Nu was founded at the University of Illinois, Urbana, October 29, 1894, to that those in the profession of electrical engineering who, by their attainments in college or in practice, have manifested a deep interest and marked ability in their chosen life work, may be brought into closer union so as to foster a spirit of liberal culture in the engineering colleges and to mark in an outstanding manner those who, as students in electrical engineering, have conferred honor on their Alma Mater by distinguished scholarship activities, leadership and exemplary character and to help these students progress by association with alumni who have attained prominence.

CLINTON S. HARTMANN
OUTSTANDING YOUNG ENGINEER FOR 1976

JOHN G. N. HENDERSON
Honorable Mention

Chairman, Award Organization Committee

Introduction

DONALD CHRISTIANSEN

Mr. Hartmann was awarded Honorable Mention for 1976.

Mr. Hartmann is an engineer with Texas Instruments, and was named Outstanding Engineer for his "original contributions to research and technology of acoustic surface wave devices, and for his participation in civic activities." Mr. Henderson is an engineer with RCA Laboratories, Princeton, N.J., receiving his honorable mention for "contribution to the advancement of television technology, and for his interest in civic and cultural affairs.

The Award winners were honored both for their contributions to electrical engineering and for their contributions to society at large. Mr. Hartmann was nominated by Norman G. Einspruch, Assistant Vice President, Texas Instruments Incorporated. Mr. Henderson was nominated by S. Reid Warren, Jr., Professor, Moore School of Electrical Engineering, University of Pennsylvania.

TheEta Kappa Nu Recognition is awarded to emphasize among electrical engineers that their service to mankind is manifested not only by achievements in purely technical pursuits but in a variety of other ways. Eta Kappa Nu holds that an education based upon the acquisition of technical knowledge and the development of logical methods of thinking fits the engineer to achieve substantial success in many lines of endeavor.

The Jury of Award, appointed by the National President ofEta Kappa Nu, with the approval of the National Executive Council, consists of two present or past national officers ofEta Kappa Nu and three or more prominent American educators or industrialists. This year, the jury was Joseph K. Dillard, general manager of Advanced Systems Technology, Westinghouse Electric Corp. and IEEE Junior Past President (chairman); Earl D. Eyman, professor of electrical engineering at the University of Iowa and Eta Kappa Nu president; Howard H. Sheppard, president of Relay Associates, Inc.; Larry Dwon, manager of Engineering Manpower, American Electric Power Service Corp.; Eugene L. Mizerek, general manager, Alvey/Control Flow, Inc.; and Roger I. Wilkinson, the founder of the Award and a Bell Telephone Laboratories retiree.

Nominations for the Award are solicited each year through the Eta Kappa Nu Award Organization Committee. Nominations may be made by any member or group of members, of EKPN, by any Section or Group/Society of the Institute of Electrical and Electronics Engineers, by the head of the IEEE department of any U.S. college or university or by other individuals or groups, who in the opinion of the Award Organization Committee are properly qualified to make nominations.

The nominations for the 1976 Awards should be submitted to the Chairmen of the Award Organization Committee, or to the Executive Secretary of EKN, by June 30, 1977. Any candidate who, by May 1, will have been graduated not more than ten years from the regular electrical engineering course (B.S. in EE or equivalent) of a recognized U.S. engineering school or who will not yet have reached his 35th birthday, is eligible.

Awards are made based on (1) the candidate's achievement of note in his or her chosen work, including inventions of devices or circuits, improvements in analysis, discovery of important facts or relationships, development of new methods, exceptional results in teaching, outstanding industrial management, or direction of research and development; (2) the candidate's service for community, state or nation, such as activity in philanthropic, charitable, or social enterprises, leadership in technical organizations, or engagement in civic or political affairs; (3) the candidate's cultural or esthetic development, such as good work done in the fine arts, architecture or the drama, and taken in courses or study in music, art, literature, or languages; and (4) any other noteworthy accomplishments in industrial societies and other organizations.

The Award Organization Committee members are Donald C. Christiansen, Staff Director, Institute of Electrical and Electronics Engineers (chairman); Clarence J. Baldwin, Westinghouse Electric Corp.; Herbert S. Bennet, U. S. Army Electronics Command; James D'Arcy, RCA; Larry Dwon, American Electric Power Service Corp.; Irving Engel, University of Nebraska; Anthony F. Gabriele, American Electric Power Service Corp.; Willard R. Gothic, IBM; Marvin J. Kolhoff, General Electric Co.; Everett S. Lee, General Electric Co., (ret.); Robert W. Lucky, Bell Labs; Steven A. Malard, Public Service Electric & Gas Co.; James H. Martens, University of California at Irvine; Harlan J. Perls, New Jersey Institute of Technology; Berthold Sheffield, RCA (ret.); and Roger I. Wilkinson, Bell Labs (ret.).

It is very gratifying to see Clinton Hartmann recognized by the Eta Kappa Nu award. He has demonstrated unusual abilities as an inventor and innovator, along with outstanding talent as a scientist, engineer, and manager of a large research group.

Clinton has a well-developed curiosity in a wide range of subjects. He is equally interested in the fundamental physical principles governing the behavior of a device and the details of application of that device to a new system architecture. In addition, he keeps constantly well informed on a wide range of new technologies, including optical, acoustic, magnetic, and other solid state phenomena. He is also continually improving himself in the nontechnical aspects of his work, including interpersonal relationships, management by objectives, financial forecasting and accounting techniques, and device and system marketing trends. His wide-ranging knowledge on many subjects is an important component of his outstanding performance at Texas Instruments.

A natural enthusiasm that Clinton brings to his work tends to motivate not only himself but also the people who work with him. Clinton is well liked and respected by his peers, and the excitement of pursuing new ideas is very evident in his group.

Clinton received his bachelor's degree in EE from the University of Texas at Austin in 1967. He received his S.M. degree in EE in 1968 and his Professional PE degree in 1969, both from the Massachusetts Institute of Technology in Cambridge, Massachusetts. In all his academic work he was consistently at the top of his class. Solid state theory and devices were Clinton's primary area of specialization, but his thesis work dealt with acoustic amplification in piezoelectric semiconductors and with the theory of direct piezoelectric coupling between electromagnetic waves and acoustic waves.

By Norman G. Einspruch
Assistant Vice President
Texas Instruments Incorporated
Dallas, Texas
Clinton joined Texas Instruments Advanced Technology Laboratory in 1960 and became a member of a group studying surface acoustic wave devices. In the late 1960s, the potential for using surface acoustic wave devices was evident, but several critical problems were preventing full utilization of the technology. Clinton became a key element in overcoming these problems.

His most important theoretical work came with the development of the impulse model for surface wave devices, which was the subject of the lead invited paper in the 1973 Special Issue of IEEE Transactions on Microwave Theory and Techniques and, jointly, the Transactions on Sonics and Ultrasonics. This elegant, simple theory for surface wave transducers provided the same degree of accuracy as previous equivalent circuit models. However, because of its simplicity, it is readily amenable to design synthesis and, more importantly, to distortion compensation, where previous models had failed. Other theoretical work of Clinton’s included calculation of the effects of surface wave transducers and the inclusion of reflection effects in equivalent circuit models.

Invention of new device structures and new device applications has been the most outstanding aspect of Clinton’s work and he currently holds 12 patents, including numerous fundamental ones such as U.S. Patent 3,686,515 on Unidirectional Surface Wave Transducers; U.S. Patents 3,755,768 and 3,755,769 on Selectable Surface Wave Bandpass Filters; and U.S. Patent 3,886,504 on Surface Acoustic Wave Resona-

ter Devices. The unidirectional transducer invention eliminated both device operation and alignment and measurement problems inherent in the previous bidirectional surface wave device. The selectable surface wave bandpass filter utilizes a novel technique for combining a single frequency and operate num-

mer of different bandwidths. The

surface acoustic wave resonator device invention is a major new use for surface acoustic wave devices that differs radically from the traditional surface acoustic wave resonator filter. This device class includes high Q crystal resonators, multipole resonator filters, and frequency discriminators. The importance of these devices is that they can be easily fabricated for fundamental mode operation using conventional planar process-
ing techniques to frequencies beyond 30 GHz. They are very im-
portant for filtering and frequency control in the crucial VHF and UHF bands. Other inventions include Surface Wave Delay Line Stabilized Oscillator, U.S. Patent 3,868,505; Surface Wave Frequency Discriminator, U.S. Patent 3,700,027; and Cascaded FM Cor-


Clinton also has been very pro-

lific in devising new methods, in-
ruding impulsive optimization tech-
niques for surface acoustic wave device design, compensation tech-
niques for electrical loading and matching distortion effects, and a new weighting technique for sur-
face acoustic wave transducers known as withdrawal weighting. This weighting technique allows shaping of transducer responses without the distortion effects inher-
ent in previous overlap weighting techniques.

System design and application of surface acoustic wave devices have also been major strengths. Clinton has been a key contributor to advanced systems designs for both his nation and major programs at TI. He also developed several new techniques based on transform coding and utilizing the chirp-z al-

gorithm implemented with surface acoustic wave devices. These pro-

grams are expected to continue in the future spread-spectrum communica-
tions systems.

Combined innovation in devices and system application is currently a major thrust of Clinton’s research and development. Approximately half of his group’s effort is devoted to in-
novating new systems concepts and demonstrating their feasibility; the while the remainder of the effort is focused on advancement in the art of surface acoustic wave devices. Typical of the synergism achieved in his group is a program to develop a high performance TV receiver under contract to the FCC. This program is totally within Clinton’s branch and includes advanced sur-
face acoustic wave devices as well as experimental device development.

Clinton is a major contributor to the electrical engineering profes-

sion. He currently has more than 20 publications, including two ma-

jor invited journal articles. He has presented more than 30 papers, many of them invited, at major symposia. He is a member of the program committees for the IEEE Ultrasonics Symposium and the IEEE Microwave Symposium. He is co-author of the paper that won the best paper award in the 1971 IEEE Transactions on Sonics and Ultrasonics. In the instruc-
tional field, Clinton was one of two faculty members selected nation-
wide to teach the three-day Na-
tenional Electronics Conference Sem-

inar in Surface Wave Devices. He was one of four faculty members selected to teach a course on the same subject at Purdue University in 1975. He is a fre-

quent speaker at IEEE chapter meetings, both in the Dallas area and in other cities across the United States.

Clinton’s family attends the A-
sistent’s work in Maryland. Dur-

ing the past four years, he has taught Sunday School classes ranging from nursery through high school. Clinton and his wife were part of a group with the New Jersey Parish of the Church of the Holy Cross who participated in a block- partnership program with a group in a low-income black com-

munity in Dallas. Their work was primarily concerned with providing information and moral support to the church. Clinton also served as a fair share of city, state, and federal services. As a result of this block-

partnership program, not only were major flooding and other problems solved, but the people of the community were able to deal with their own problems now and in the future.

In addition to the above activi-
ty, Clinton is active in various community affairs. He

Henderson began to haunt the Moore School with regularity. Henderson, a future faculty mem-

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tics courses, always challenging and inspiring, had consumed the largest share of col-

lege time. However, the opportu-

nity arose to join the College’s high-

school athletic efforts (varisty let-
ers in swimming and track), this time with an added condition—clim-

ning is a year-round sport at Penn (unless the river freezes), and four

years and several thousand miles with an oar allow one to claim

familiarity with a certain four-mile stretch of the Schuylkill River. Mr. Henderson ultimately earned his letter with the heavyweight varsity crew.

Mr. Henderson graduated cum laude from Penn in 1967, joined the RCA Laboratories, where he is presently employed as a Member of its Technical Staff, and moved to Princeton, New Jersey. He obtained an MSE degree from Princeton University under the Labora-
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ics. Project areas to which he has contributed include IF filter design procedures, electronic tuner con-

trol systems, and surface acoustic wave filters. He received two RCA Laboratories Achievement Awards. The first was for work on an all-electronic, all-channel television tuning system; the second was for research leading to im-

proved IF filter design. Twenty pending patent applications have been filed in his name in the area of consumer electron-

ics. He is currently working with high school students from minority groups as a part of the ‘Minorities in Engineering Program’.

The students receive supplement-
tal academic, technical, and exposure to engineering ca-

reer opportunities.

John N. and Nancy Henderson were married. Mrs. Henderson is a teacher of foreign language and is presently also

Biography of John N. Henderson

By Walter G. Gibson

John N. Henderson was born and raised in Philadelphia. He attended the public schools there, graduating first in his high school class in 1963 with a strong interest in science in general and electronics in particular. His summer vaca-

tions, then as now, were spent in Cape May, New Jersey, and, de-

spite an initial distaste for the grit-

tiness of sand and the salt water that made it stick to fingers and toes, he gradually came to love the ocean, to tolerate the sand, and to learn something of boats and sail-

ing. That learning process has the oppor-
tunity to work with some much more knowledgeable electronic hobbyists and students on a church public address system. With this

early electronics exposure, parent-

al blessing and strong encourage-

ment, and the smiling handshake of a high school guidance counselor, freshman-year courses in the University’s General Honors Program be-

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interesting Places

Part Two

The Country School

by Ellery Paine

From my seat on the girls' side I liked to watch the classes as they recited. I think I enjoyed most the class that afterwards I learned was grammar. I was puzzled by the big words which I did not understand. Later I learned them and could say "Grammar comprises orthography, etymology, syntax and prosody." Then there were words the big girls rattled off which I did understand: "this, that, these, those, former, latter, which, what, etc." When I got to that point in grammar I had already learned that list. I liked to hear the girls as they said "Noun, common noun, third person, single number and ending with Rule number etc." This at last I learned was "Parsing."

But when I actually studied the subject I found I did not like grammar. So I went through the book as rapidly as I could and when I reached the end of the book I never took it to school again.

The first new book I had for school was a beginning arithmetic. I was greatly pleased when Father brought it home from the store. I liked its look and I liked its smell. I at once set out to find the answers to the problems. I think I worked them all before I took the book to school. But then I learned that even though I had the correct answers I had not got them right way so I had to start at the beginning and go slowly through it. I liked arithmetic very much. I was in a class all by myself and I went rapidly through the whole series then in use in the Woodstock schools. Then I took to school a copy of National Arithmetic I found at home in the book closet. This book kept me busy until I left Woodstock. The book was dated 1835. It had plenty of good meat for me to work on. During the last years I was in the school I was studying such things as Allegation Medial, Allegation alternate, Evolution or how to extract any root of any number, Permutations and Combinations, Analysis by Position or how to solve problems of several variables Duodecimals, Scales of numbers or how numbers may be expressed in systems having other than the ten characters of our decimal system, etc.

I have never forgotten two of the problems I worked at the last term in Woodstock. One was to find how many inches of a 40 inch grindstone each of four men should wear away in order each might have his proper share of the stone, each having paid the same in their joint purchase of it. The other was to find how many feet of a conical stack of hay of given size each of four men in turn should take in order each get the same value if the top part of the stack was so much poorer than the third, etc., the hay having been damaged by water.

After finishing grammar I took to school an old Algebra I found in the closet. This I studied several years. In the Willimantic High School where I had algebra I did not go as far as I had gone in the Neighborhood school. I did not find the history books of interest. Neither did I find the recitations in history I listened to from my seat sounded of interest. So I never took such a book to school. Never in my life have I had History in class. A long time after I found one of my favorite subjects is History. But the books I then read were very different from the ones I saw as a boy.

I studied Geography but it did not seem good to me. Hence as in the case of Grammar I buckled to it and got to the end of the book as soon as I could. Then I took to school an old copy of Physical Geography. This dealt with the for-
In the country schools the equivalent of the Honor Society was the REWARD OF MERIT cards. The ones shown here were presented to Alma Kelley 80 to 90 years ago.
Country School

mation of the solar system and a
description of the whole surface of
the earth. This book I found most
interesting. I especially liked the
carts this showed me how
the currents of air and ocean
and their effects on navigation
and climate.

Spelling came early and I
ever finished that subject. From my
seat on the girls' side of the
classroom I could watch the spelling
recitations. It was the last of the
classes before the day ended. In
calling the class, the teacher said
"Number One" that one would go quickly
to the front and hand the book to the
teacher. If that one were a boy I
would see him leaning forward in
his seat with hands clasping the
cover of the desk so he could get a
rapid start when the word "One"
came. He would then shout the
other numbers. When all were
there the teacher would say "On
the line," Then all would toe the
same crack in the floor as did the
one at the head. Then came the
two, three, four, and five. The
teacher would tell if the word was not
spelled correctly. Some would not
and would give the word, and in
that case the pupil was expected
to spell that word and go up above
the line at the next mistake. The
lesson ended when the one at the head
went to the bottom of the line and a new
book would be entered in the teacher's
book. Then seats would be
rearranged each student's
number for the next day.

I found spelling very hard. I
studied the words each evening at
home and the school would
spell them to my Mother.

How many times did it happen
that when I went to school
I would say "I spelled it the
way it is in my book," I would
be asked to come to the front and
in such a case did the book bear
me out.

Other subjects which I never
finished were Reading and Writing.

Theodore Nagel

Written and
Oral Communication

Written and oral communication
traditionally has been approached
in terms of training the
engineer in the technical disciplines
and the communication skills
needed to express technical information
in a way that can be understood by others.

Theodore Nagel, Executive Vice President
American Electric Power

We can sometimes gloss over the
teaching of science and art. In
written communication, however,
the gaps in our thinking show
through. In my judgment, well-
disciplined writing skills and
disciplinary thinking
are essential for success in the
workplace.

What then should the role of the
university be in this regard? I
think we need to include
written communication where
the student must present his case—
how it compels us to organize our
thinking. In oral communication

We are living in a rapidly changing social world. Today society is one of change and
change. Science and technology are being
adapted to our daily lives. In some cases, it appears to be a
credibility gap between the public and the scientist.

HOW TO PREPARE FOR TomorROW'S CHALLENGES

Theobald Nagel

Executive Vice President American Electric Power

We have failed to communicate
technical problems and programs in
terterms understandable to the layman.
We refuse to put ourselves
in the position of the recipient
of communications. We have
concentrated on the
transmitter and lost sight of the
receiver. A case in point is the
discussion of the
field of nuclear power and what
now is occurring in the entire
government.

A second problem is that we
have not disciplined ourselves
to write in a well-organized
manner and in a logical sequence
when developing an issue. Is this
perhaps the same pattern
that leads to writing that
is not convoluted and
convincing? After all, to write
well and convincingly is hard work—
that it compels us to organize our
thinking. In oral communication

audience which will challenge his
presentation. Where possible, it
might be helpful for the student
to include other than those
engineering candidates. This early
exposure to questioning and
criticism is essential to the
engineering student, is, in my estimation,
the best stimulus to meeting the
objectives of education. The student
is the best way to prepare him for later
life. I can testify personally to the importance
of technical non-technical
audience through written reports and to the
difficulties of writing technical papers.

I would like to see the
adoption of a technical
non-technical audience
written reports and to the
difficulties of writing technical papers.
Dear Friends:

"It was so nice of you to ask me for a few comments on the founding of HKN... (HKN was founded on October 28, 1904.) At the original meeting one Sunday evening at what was then the Champaign County Fairground, there were only Cart, Armstrong, and Bowsee present. At the next Sunday evening meeting held under the cottonwood tree by invitation, Wheeler, Smith, Winders, Akers, and myself were present. At first it seemed unnecessary to form an organization for Electrical Engineers since there were so few at that time... but we determined that there were many questions that should be asked and settled and that an organization was needed to answer these questions. For example, the city of Champaign had 135 cycle power, and Urbana had just put in a new generator, which was 60-cycle. There were four types of lamp sockets in the Twin Cities. Carbon lamps were in use and lamps were rated in candle power instead of watts. Electricity was just coming into real use and we saw that some sort of standards were going to be necessary. Therefore, the founding of HKN took place... Thank you again for asking my help.

WILLIAM T. BURNETT (95)

Mr. and Mrs. William T. Burnett on the occasion of their 70th Wedding anniversary in 1976. Mr. Burnett was one of the ten founders of Eta Kappa Nu.

ETHICS AND PROFESSIONALISM

The good I would, I do not, but the evil which I would not, that I do. (Romans 7:19)

Introduction

The study of ethics concerns what is good and the behavioral patterns desired from a good person. The lay public, while pondering ethics, usually refers to the confused set of behavior patterns considered to be moral. This conventional morality comes from both his social group and a distorted view of the Christian ethic. Many lament the fact that men inherently want to be good, but that individual man is unable to be moral within the nation-state. Others maintain that basically people are amoral; nevertheless, the majority even of these individuals contradict their own belief by activities hopefully destined to raise the general moral climate within the public arena.

A clear distinction between science and ethics should be made. Science is concerned with facts and with the patterns the facts form. These patterns are called physical laws. Science gives us knowledge about the facts, but no method of science tells us how, or if, to use our knowledge. Science and technology tells us how to do things, not whether one ought to do them. The what one ought to do is what ethics is all about. This analysis concerns itself first with general ethics and more specifically professional ethics.

General Ethics

Ethics is the grouping of value-concepts and general principles into a code of life. The value-concepts center about what is considered intrinsically good. In the Judeo-Christian faiths, ethical imperatives relating to conduct are implicit in the Old and New Testaments. Though the theories of man and what denotes right conduct differ somewhat in the Old and New Testaments, these documents form the cornerstone of western ethics and what is therefore individually moral in western civilization.

Many consider ethics as a series of things one should do. Actually, ethics supplies guidelines so that the non-performance of certain acts prevents us from doing bad things while proper performance will enhance the common good. Those that consider ethics a system of specific rules can be considered misguided. Nevertheless, history reminds us that factions developed within religion calling for personal introspection and the categorizing of certain actions isolated from all antecedents or the present situation as ethical or not. Aristotle wisely indicated that ethics is not an exact science and such categorization is not applicable in ethics. The constant referral to a code book made obsolete by the findings of science has caused many to consider ethics as worthless. From this view, there has arisen a concept or relativistic ethics. To these individuals, codification of any kind is meaningless. Such a view is fundamentally untenable in a complex society where individual man is related to other men. Thus, the only ethical rule, morality exists, and such a situation would prevent a modern society from functioning.

Western civilization indicates its adherence to Christian ethics from the various religious rituals. Many individuals contend that this adherence is given only lip service and rarely carried out in deed. The criticism in the use of words and the non-performance of deeds may arise from the two alternate interpretations to the Old Testament (Hebrew) and another to the New Testament (Christian). Both interpretations of ethics exist in American Society, but with different emphasis. At times, the two interpretations are not harmonious and may actually be in direct conflict, creating the appearance of unethical conduct which may not be the case. These different interpretations have, in the past and present, caused a considerable amount of controversy in ethics. It is our job to examine and understand the relevance of both interpretations of ethics.
I - Total Surrender

One interpretation requires the total surrender of interest. This view places emphasis on general virtues rather than the development of a code of normative behavior. One notes the emphasis given to general virtues by many of the religious faiths from the many pupils of the western world. These include: love thy neighbor, be kind, etc. This view developed many subsidiary doctrines relating to behavior, one of the most significant being resistance to social evil. Thus, non-resistance to evil is considered by some as resulting in the best ethical good. Non-resistance to evil has never been widely practiced as it has been associated with the small minorities over short periods of time. Non-resistance in the long run, unless one is content only to lead group annihilation. The concept of total surrender accepts political tyranny and submission to social equality. Oppression, when given must be non-voluntary. This attaches an individualistic interpretation of ethics and ignores the social group as an effective means of indivi- dual behavior. Adherents are ad- mired by the leaders upholding this view to make a total sacrifice of themselves for the sake of others. The individual may go as far as to completely dis- side their opposition, but actively they may not oppose a change. An ethical system based on total surrender, although applicable to a transitory situation apparently cannot be transferred to an endur- ing society. Individuals who have died in self-emulsion for a cause, such as, Christ. Nevertheless, one cannot apply the total surrender of self-interest as a quantitative measure for action.

II - Self-fulfillment

The second interpretation centers its ethical basis around responsibility. This interpretation begins by not surrendering self-fulfillment, however, an over all interest in one’s entire life which includes linkages to o- ther individuals and groups. Under this interpretation, every individual strives to maintain his living and seek its maximum expres- sion as long as this does not in- fringe on the similar right of other individuals. The qualification in regard to others is important and forms an important foundation to the principle of self-fulfillment. Without the protection of a minimum un- selfishness which, in practice, ap- parently is not achieved.

III - Conclusion

Ethics, when given unachievable goals, appears naive and unrealistic; but considered in a practical light as personal fulfillment with it, under such conditions one could surmise that the notes the overall immense good derivable by living under such conditions. The acceptance of a normative code requires two prerequisites—on reality and secondly, intelligence in order to comprehend the reality. Various ethical systems are supported with a considerable number of doc- uments and legal penalties, and these codes fail because of a defi- ciency in intelligence. Moralisms also fail due to a lack of realism or intelligence in the preparation of its principles. High-sounding phrases do not make a workable code. Satisfaction gained by an individual in breaking social rules without much penalty causes individuals to crash lines for tickets, etc. Should everyone do this, the consequences are obvious. Further, since national agrarianism supplies a neces- sary basis for preparing codes of behavior, then this fact alone, shows that the ethical value, one is restrained from performing an activity which is self- fulfilling but infringes on the rights of another and that is not morally evil, one is restrained from self- fulfillment. One cannot simply appear to be more and in many cases, are, in fact, contra- dictory. An understanding of the existence of goal conflict and the need for intelligence to trade-off alternatives becomes central to an ethical stance. One moralizes about various things such as: thou shalt not kill, love thy neighbor, etc. This behavior reality necessitate that these be adjusted under various conditions. This scaling technique for our goals will make clear to each of us that heaven can never exist on earth for the goals to be arrived in heaven are to some extent contra- dictory. One cannot separate professional- ism from ethics nor consider pro- fessional ethics differ in any other general ethics. Understanding that true ethics is not moralisms, impos- sible here is to make the sable of acceptable but rather an intelligent appraisal of self-fulfillment with equal con- sideration for our neighbor since it is my claim that when this is done, you will be able to find an inner insight into the need and desirability of an ethical code.

Divorce morality on an individual's part from the professional ethics can only cause ultimate de- stitution and ruin, the eyes of others. This effect has necessitated the formation of-
UNIVERSITY OF PORTLAND

by Patrick P. Fasang

The Installation Ceremony of the Theta Beta Chapter of Eta Kappa Nu at the University of Portland was held at Osbecks’ Restaurant in Portland, Oregon, on March 30, 1977. Mr. Marcus D. Dodson of the Department of Water and Power, City of Los Angeles, who is the National Vice President of Eta Kappa Nu, performed the Installation Ceremony and presented the Charter of the new chapter to Dr. Robert J. Albright who is the Chairman of the Electrical Engineering Department. Fourteen student members and one professional member were initiated at the Ceremony. After the ceremony, a banquet was held for the members and guests among whom was University President Rev. Paul E. Waldschmidt. Patrick P. Fasang is the Faculty Advisor of the new chapter.

MERRY MOMENTS WITH MARCIA

Have you heard about the new medical discovery? It’s alcoholic acupuncture — you get stuck for the drinks.

A very elderly prim lady, tasting her first martini: “How odd — it tastes just like the medicine my husband has been taking for the last 30 years.”

I’ve recently heard about the fellow who decided to procrastinate, but never got around to it!

They tell me he who hesitates is not only lost, but several miles from the next exit.

Have you heard about the father who fainted when his son asked for the keys to the garage, and came out with a lawnmower?

Current status symbol: coffee nerves

I’ve heard the cheapest way to have your family tree traced is to run for public office.

Overheard: A taxi driver talking to another — “It’s not the work I enjoy. It’s the people I run into.”

The amount of sleep most average people require is about 10 minutes more.

I’ve heard of a doctor who tried to steal another doctor’s patients and he was sued for alienation of infections.

The reason why some people are up to their ears in work is because they have lain down on the job.

Experience is a hard teacher. She gives the test first, the lesson afterwards.

“You better give me a raise, Mr. Brown,” his assistant told him. “Three other companies are after me.”

“A likely story,” said Mr. Brown. “What companies?”

“Light, Water, and Gas,” came the reply.

They tell me “push” is a form of energy that will get you anywhere except through a door marked “pull”.

Anyone observant enough to guess your age correctly will annoy you in other ways, too.

I’ve heard one goes on vacation to forget things. You open your luggage and find out that you have.

A great many people are already working a four-day week; it just takes them five or six days to do it.

When you want to forget all your other troubles, wear a pair of tight shoes.

People who think it’s nobody’s business what happens to the other guy don’t realize that to everybody else in the world they are the “other guy”.

by Marcia Peterman
CHAPTER NEWS

BETA THETA CHAPTER, M.I.T. — The Beta Theta Chapter of M.I.T. celebrated its 1976 year with the induction of 47 new members on October 27. Several faculty members were in attendance.

GAMMA DELTA CHAPTER, W. Chester Poly. Inst. — The Gamma Delta Chapter has been active this year with several events. One event was a "Get-together" for all Engineering students at the faculty lounge. The occasion served to acquaint some of our new engineering students with the faculty and to promote a more relaxed and personal feeling between engineering students and faculty in general.

The chapter has also sponsored several projects (an important part of the WPI plan) and just to allow everyone to have a good time. Refreshments were served and the turnout was excellent.

Also, IKK and IEEE have put together one of many to come, EPION Project which was distributed to all EE students via their mail boxes. It informs them of projects currently in progress in the EE dept. and also advertises new ideas from students or faculty that wish to initiate new projects in these areas. The response has been successful and was enjoyed by all.

The Fall Initiation of the Gamma Delta Chapter of IKK brought 11 seniors and 9 juniors into the Society. The reception, following the ceremony, was held at the Wheat House, in Holden, Mass. A good time was had by all.

by Judy Bagley

EPSILON BETA CHAPTER, Ari. — On March 11, Epsilon Beta Chapter met for an informal dinner at the home of Dr. and Mrs. N. B. Klug. The chapter was organized in 1962 and is the first chapter on the West Coast of the United States.

EPSILON PHI chapter, Cal. — Epsilon Phi chapter, Cal., held its 1976 induction dinner on November 19. Epsilon Phi chapter is the first chapter on the West Coast of the United States. The chapter was organized in 1962 and is the third chapter to be organized in the United States.

by Greg Cooper

BETA ETA CHAPTER, North Carolina State University — Bowers at North Carolina State University. Attendance was good at most IKK meetings during the fall semester. For Open House IKK members helped set up and staff the Engineering Department and provided much direct interaction with prospective students. Donations are still being received for the bronzes IKK Bridge to be erected in front of the Electrical Engineering Department.

Our pledge class was large this semester (28 new members). They carried a wide variety of projects including high school visits, socials, and coffee parties. The socials were held on weekends and were well attended.

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