A still life photograph on a dark blue background. In the center, a clear glass bottle stands upright. Several US dollar bills are visible, some tucked into the bottle's neck and others placed on its surface. In the foreground, there is a pile of crumpled, translucent paper or plastic. The overall composition is minimalist and artistic.

tech engineering nonsense

A VOODOO PARODY : march 1962

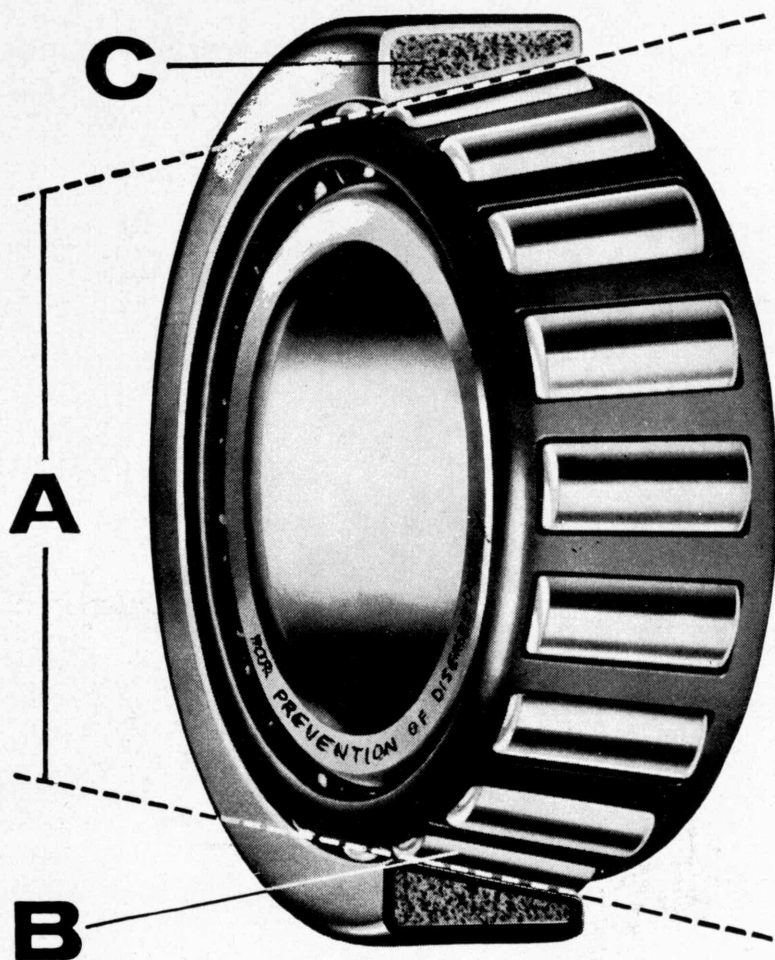


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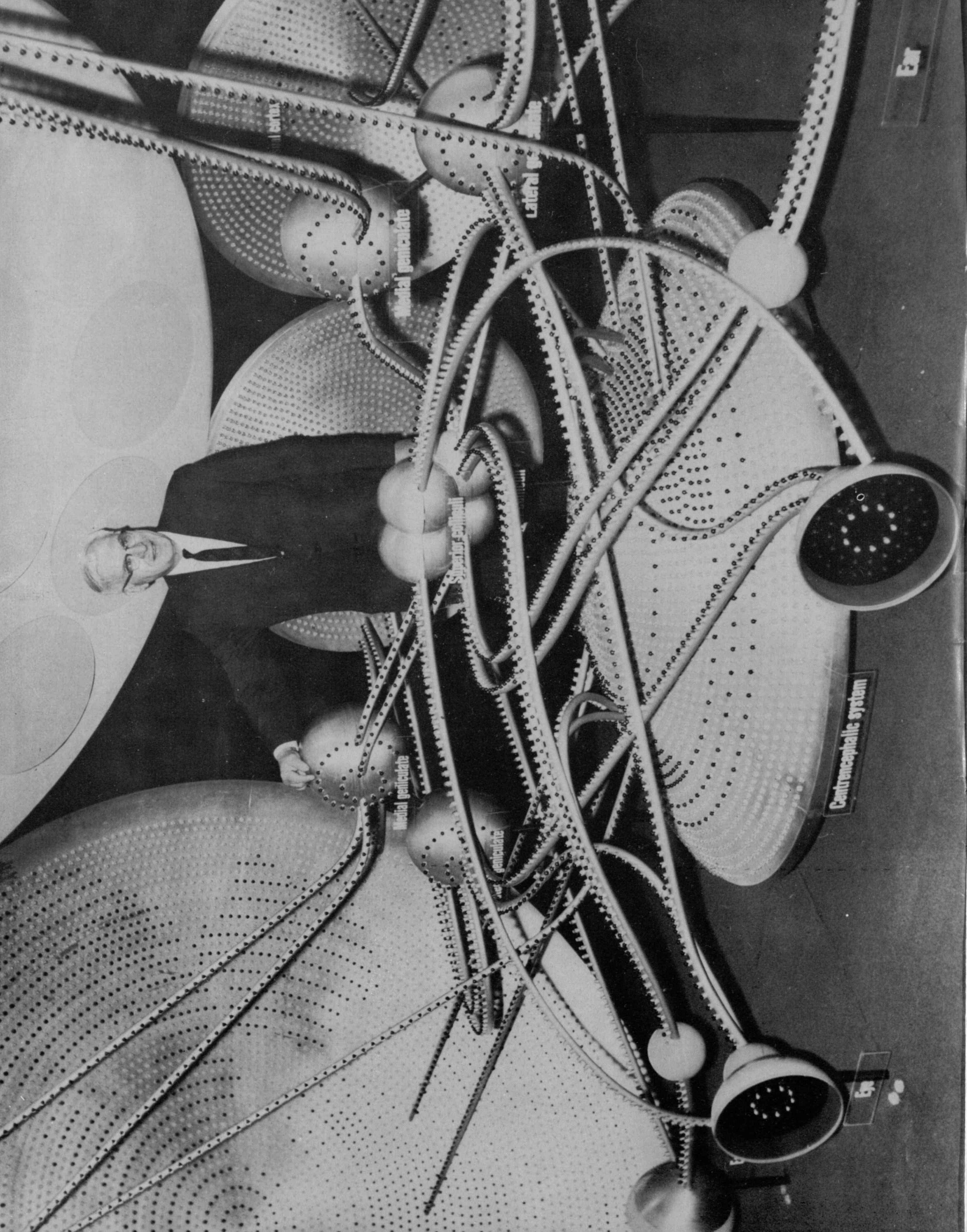
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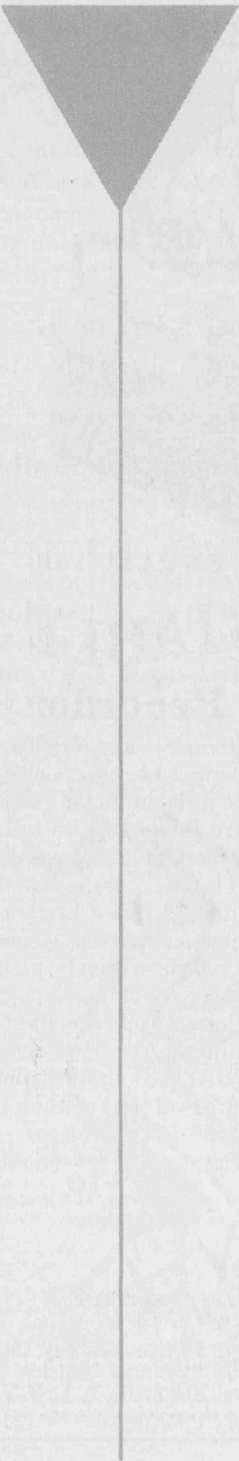
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<i>Big Dumb Kid who Steal Furniture</i>	Jungle Langer

From the Editor's Lab Book



There was a time when our sister publication the tech was regarded as the lowest rag on campus, about an angstrom below the springfield oval. But the new management has made enormous strides since then. Slowly they have fought their way upward until now, as we noticed the other week, they show the sort of low animal cunning which boosted tabloid circulations way back when.

It was, for example, exceedingly clever of them to print two reviews of Tech Show side by side, especially since one cut it to pieces while the other criticized only the audience for its lack of enthusiasm. And of course it always helps circulation to support the most radical (i.e. controversial) candidate in any election. Surely no one is going to remember the time last year when they blasted one candidate for the very quality for which they are praising this one; lack of experience. But the high point of the year occurred in the article concerning Voo Doo cops, and debts, written by one Robert Walker Cooley.

The insertion of a passage (having nothing whatever to do with the subject of the article) which explained in gory detail that FinBoard picks each student's pocket of \$12 per year to get money to give to student activities, just before the paragraph stating that VooDoo was given money by Fin-Board, was a master stroke. Of course it was not even hinted that the tech was similarly subsidized for the first 99% of its life, during years when Voo Doo was self-supporting. Nor was it mentioned that this is the first time Voo Doo has ever had to take money from the Institute. Best of all, however, was the snide little phrase, "In the event that Voo Doo should ever repay its debts..." In fact, at that very time it remained only for Voo Doo to withdraw the money from the bank; the loan was paid off the day that article appeared.

We would like to extend our sincerest congratulations to the tech on all this improvement. If they will just raise their sights a little more, they will be able to reach the excellently high standards of the yellow press of the late 1920s.



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T.E.N. MOVIE REVUE

This month, Tech Engineering Nonsense presents another movie review (from a technical standpoint, of course), which we believe might interest many Tools. In order to investigate the Stereo process, we sent our Special Process editor down to the Center Theater, on Washington Street, to see the latest 3D effort, entitled "Paradisio". (You may have seen excerpts from this film in the recent issue of Playboy.)

"Paradisio" is filmed in black and white, contrary to the impression given in the magazine article. When the hero of the film dons his magical glasses, each member of the audience must lift his half-red, half-blue glasses to his eyes, the filtering giving the proper part of the image to each eye. Our reporter indicates that the use of 3D, while appetizingly (very) done, technically does not match earlier 3D movies, and often becomes a strain on the viewer's eyes. (Ushers are at hand with special equipment for replacing eyeballs in sockets.)

Our keen-eyed reporter also noticed such errors as the fact that when the intrepid hero (Mr. Simms) approaches a custom inspection station, he is riding a Lambretta . . . but in the next scene, his steed is magically transformed into a Vespa. Actors speak without moving their lips, as well. Some of the visual high points of the movie are too good to be reprinted here, alas.

(Continued on page 9)

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We were frankly surprised to find that the film had not been banned in this pure and upright city of ours . . . although it was amusing to note that on the pages of Playboy, which were posted outside the theater as advertisements for public view, someone had laboriously India-Inked bras and panties on all of the 'subjects.'

All in all, despite many obvious technical shortcomings, T.E.N.'s, movie department wholeheartedly recommends the film to all Horny Tech Tools, to be followed by a round or two at Jake's around the corner.

Next month, T.E.N. will review a newly acquired print of the newest U.S. Army V.D. Movie, soon to appear at LSC's Entertainment Series.

[F = MA]

T.E.N. wishes to announce that our recent issue, "The Road to War" is going to be made into a movie. The planned film will star Bob Hope and Bing Crosby.

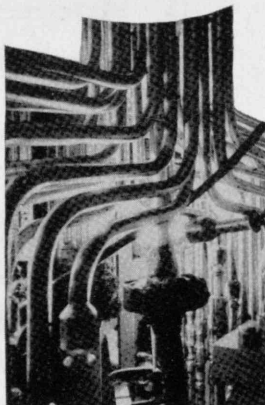
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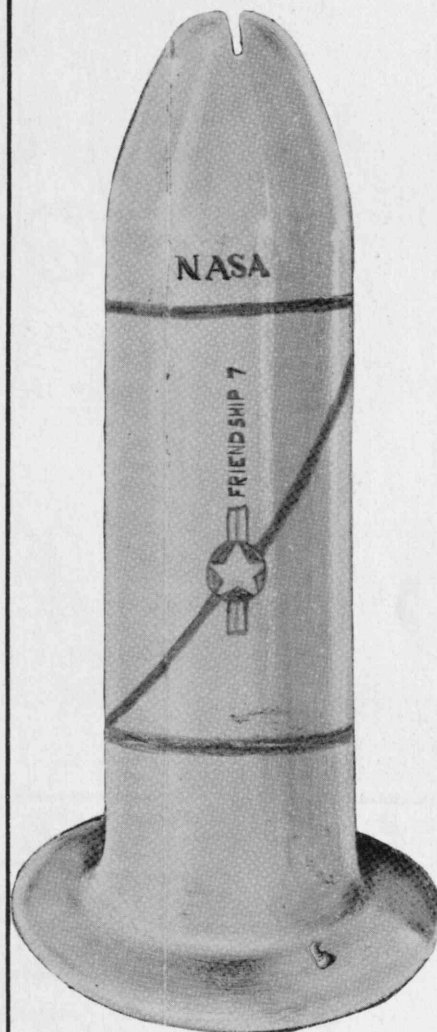
"Pizza Pie coming up."



Sorry, Fella, you're not good enough to work for



NEW EDUCATIONAL TOOL

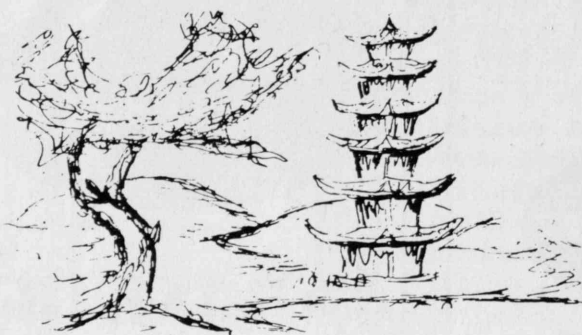
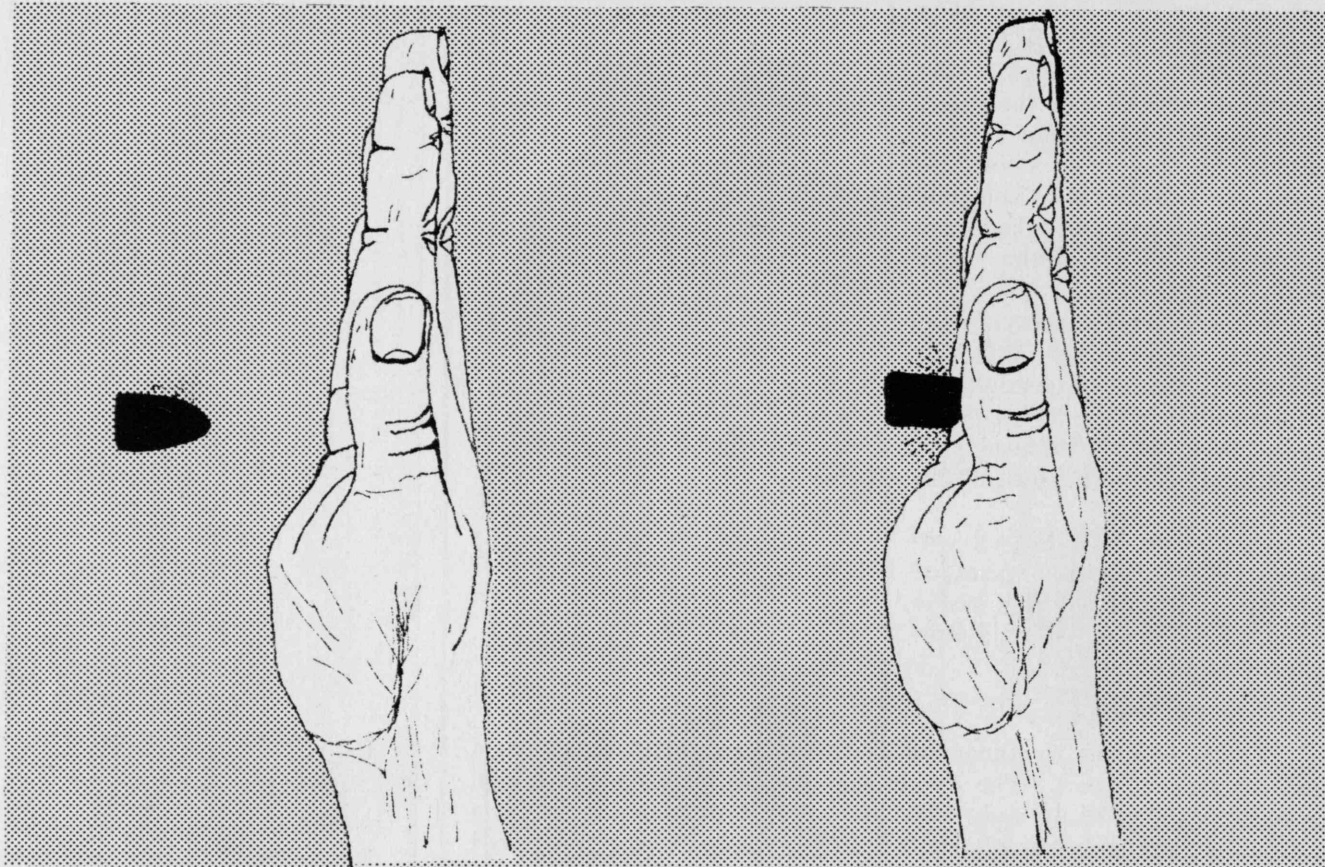


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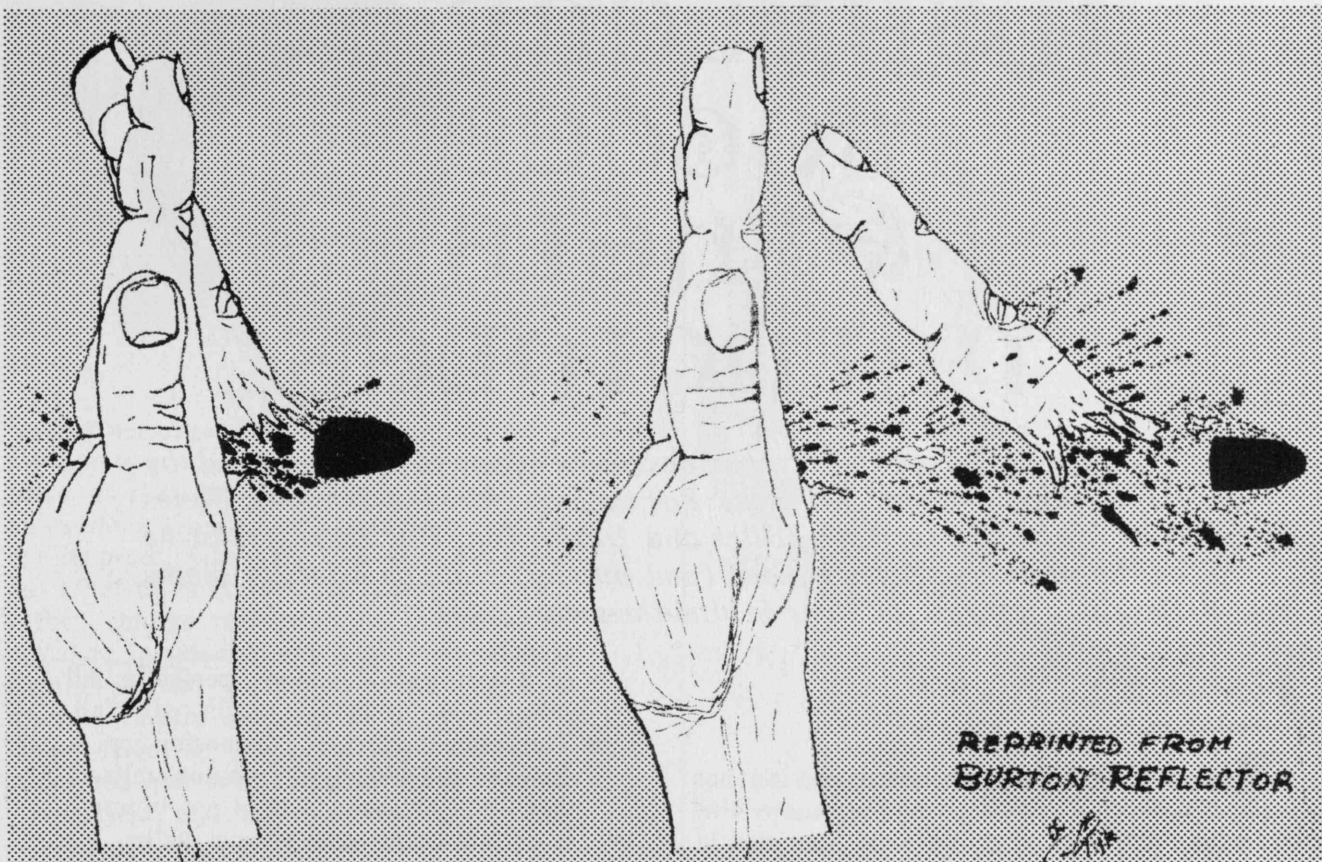
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A GALLERY OF ROGUES & THEIR PRINCIPLES

— Reprinted from "Electronics Design"

Names of famous electronic designers often are perpetuated by the circuits "blamed" on them. For example, Messrs. Schmidt, Eccles (and his buddy, Jordan), Miller and Darlington. But there are some in the profession whose glory (and infamy) rests on a loftier plane. Here is a glimpse of their behind-the-scenes work.

John A. Rudisill, Jr.
Bell Telephone Laboratories
Burlington, N. C.

IN YOUR career in electronics, it's not what you know, it's who you know. Unfortunately, the very persons you should know are likely never to cross your path . . . nor anybody else's, for that matter.

These individuals, over a period of several years, have become the dominant force in the design and production of electronic equipment. Most of their work is accomplished on weekends, holidays, at night, or during lunch hours. Their names: Murphy, Finnagle, Fudge, Fiddle, and Diddle.

Murphy has one well-known premise, which deals with the way engineers think, as contrasted to the way nature reacts. Murphy's premise has become law:

"If there is a slight chance that something can go wrong, it always will do so." This law has been modified by an engineering nut named Finnagle and has resulted in a series of axioms applicable to everyday engineering problems. Some of their more obvious conclusions are:

- Interchangeable parts aren't. For instance, 3.999 is equal to 4.
- Circuits that cannot possibly work will.
- Parts that cannot possibly be assembled wrong will be.

- If a test unit functions perfectly, all subsequent production units will fail.
- The only important dimension on a drawing is omitted; if it is not omitted, then it is blurred; if it is not blurred, it is obviously the wrong value.
- In any formula, all constants are treated as variables. So-called variables are usually found to possess the property of being constant.
- If a safety factor is set at an unusually high value by engineering experience, an ingenious shop worker will immediately calculate a method to exceed this value.
- If only one bid is obtained for a project, the price will be outrageous.

Murphy and Finnagle also have spawned several subprinciples:

- Curves should always be drawn first, and the data plotted on the lines that were made. (This is called the *"Looking Ahead Principle."*)
- Nothing is ever entirely true unless there is an equally obvious way to show that it is entirely false. (This is known as the *"Who-Invited-Him Principle."*)

This brings up the question of the Fiddle and Fudge Factors. Fudge advanced his theory before Fiddle was conceived. The Fudge Principle is relatively simple: *"If some-*



MURPHY

thing acts contrary to your equation, add a factor to the equation to make it right." As an example, Ohm's Law states that $E = IR$, but in practice this relation does not stand up. What do engineers do? They "fudge" it—they change nature to fit the equation.

Fiddle, in association with a technical mastermind named Diddle, invented a routine whereby nature need not be changed to fit the equation. By this principle, the outcome is delayed and everything is jockeyed until the equation and nature appear to fit without any real change in either. By adding a second-order term, Diddle arrived at a very common principle: *"Any facts may be made to fit any equation without changing the facts or the equation if enough ingenuity, main strength and awkwardness are used."*

The following tools help the engineer live up to the Diddle principle:

- The Rule of the Way Out—"Always leave room for an explanation of why it didn't work."
- The IP of IO Rule—this stands for "*The Innate Perversity of Inanimate Objects*" and is better known to the electronics industry as "*It's the Nature of the Beast*" Rule.
- The IC of EA Rule—this stands for "*The Inherent Contrariness of Electronic Apparatus*." Or as Diddle says, "*If the answer isn't right, twist her tail a little more.*"
- The NS of EE—this rule stands for "*The Native Stupidity of Electronic Engineers*." These rules have lead to a set of conclusions, which Murphy, Finnagle, Fudge, Fiddle, and Diddle would like

MILTON

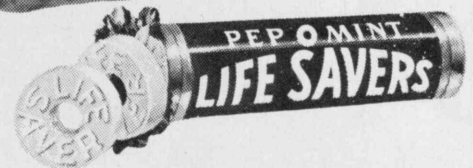


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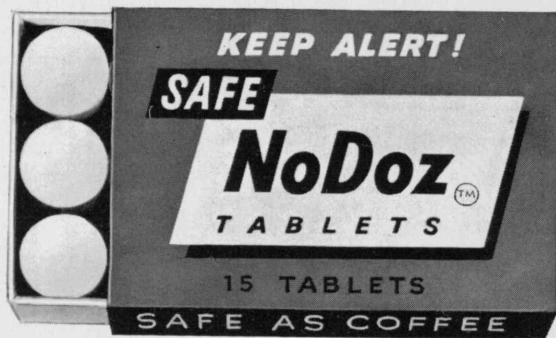
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Encourage shop participation. It is good for morale and, besides, it is easier to change something than it is to originate it.

Smother the organization of your work in red tape. Nothing gets done, but no errors are made either. This is known as the "Communist Approach."

Stay within the accepted pattern. Heroes usually wind up in the salt mines.

Always put at least two engineers on a problem. It has been proved that if a mistake is made, no one is ever at fault. Conversely, if it comes out right each engineer will separately claim credit, thereby giving the outfit more prestige.

There are two legitimate ways out in any problem that combined engineering effort has produced:

The Goony Bird Principle—Ignore the problem and it will solve itself as soon as people stop talking.

The Multiple-Supervisory Explosion Principle—Start work on the problem; advertise that the solution is difficult. It is amazing how quickly upper management (which knows absolutely nothing about the problem, except the one and only possible solution) will become more and more interested. If it becomes a production conference agenda item, the "No Practical Solution Theory" takes hold and the problem is solved. ■ ■

[F = MA]

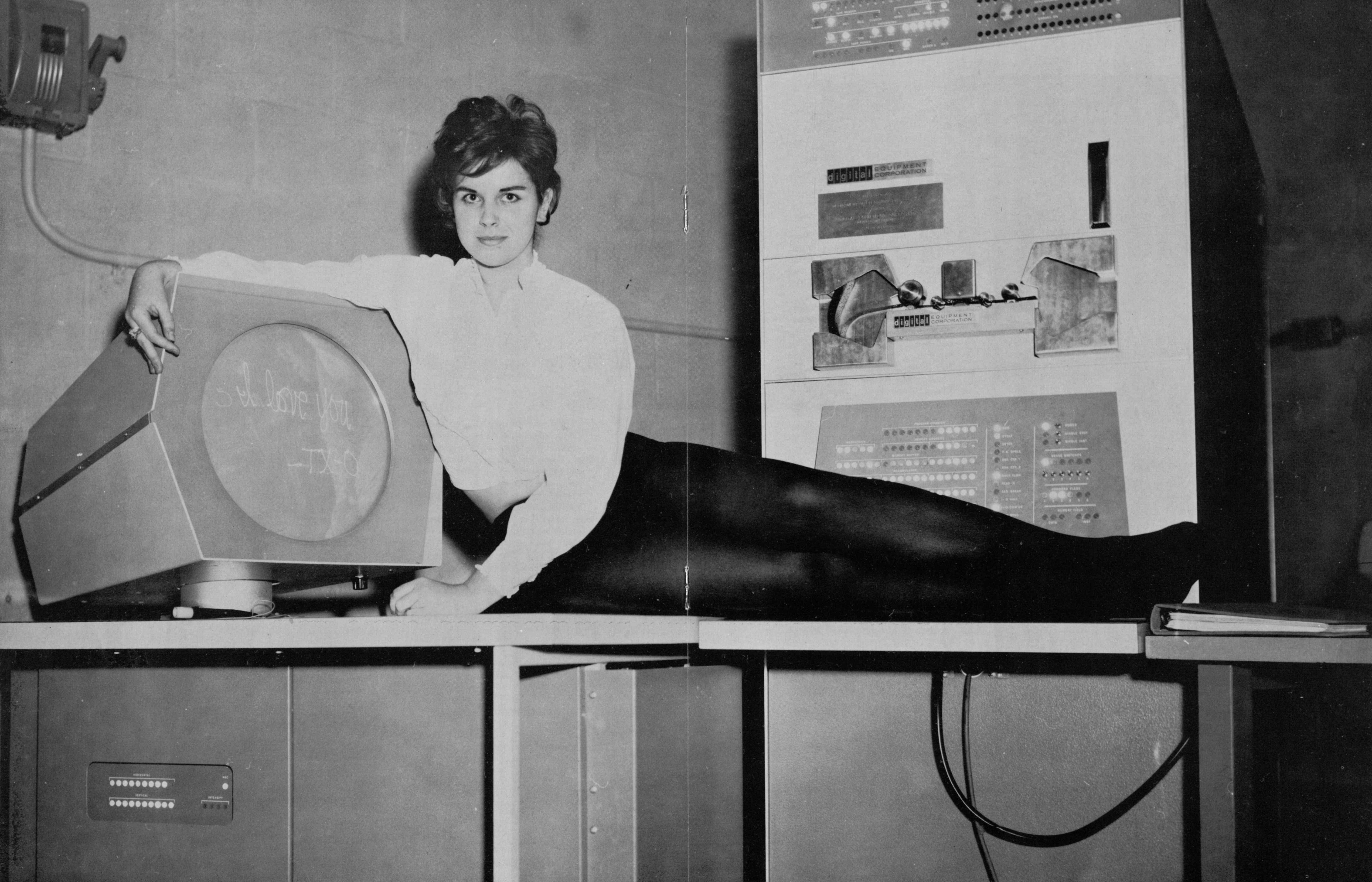
T.E.N. Technician OF THE MONTH



We spotted our T.E.N. Technician-of-the-Month while returning from a late night at the labs a couple of Saturdays ago. As we were passing building 26, we were startled to hear soft love songs coming from within. Upon further investigation, we discovered that the source of these songs was not WTBS. It was the girl who was to become our T.E.N.T.O.T.M. for March. Miss Penelope D. Predicate, serenading her foremost lover the PDP-1 computer. As we approached, she, in her embarrassment, returned unobtrusively to her work.

After a few programs had been run, and your ace reporters had had the opportunity to get to know Miss Predicate, she shyly agreed to let us take some photos of her, provided we didn't disturb her work. Being men of action, we whipped out our polaroids and in fifteen minutes produced the series of pictures shown herein.







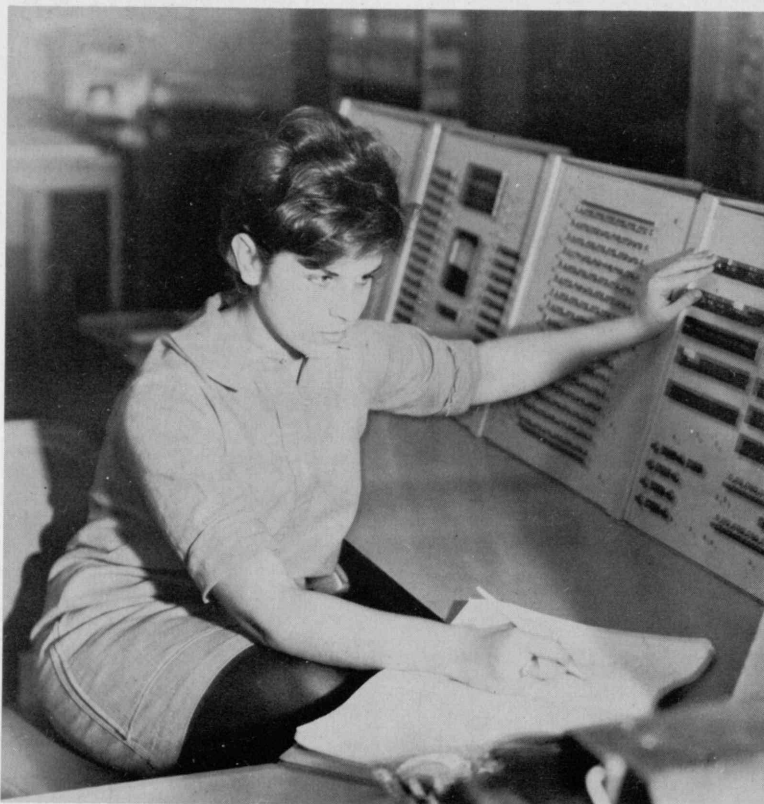
Writing to Pierre

Penny, a 5'5" brunette from Palmetto, Nebraska, lives, eats, and works in the second floor of building 26. A programmer of no small merit, she is qualified to operate the IBM 7090 (which she intimately calls Throckmorton), the TX-0, (whom she intimately knows by the name Jeff), and the PDP-1 (Pierre). She is currently engaged in programming Jeff to write love stories.

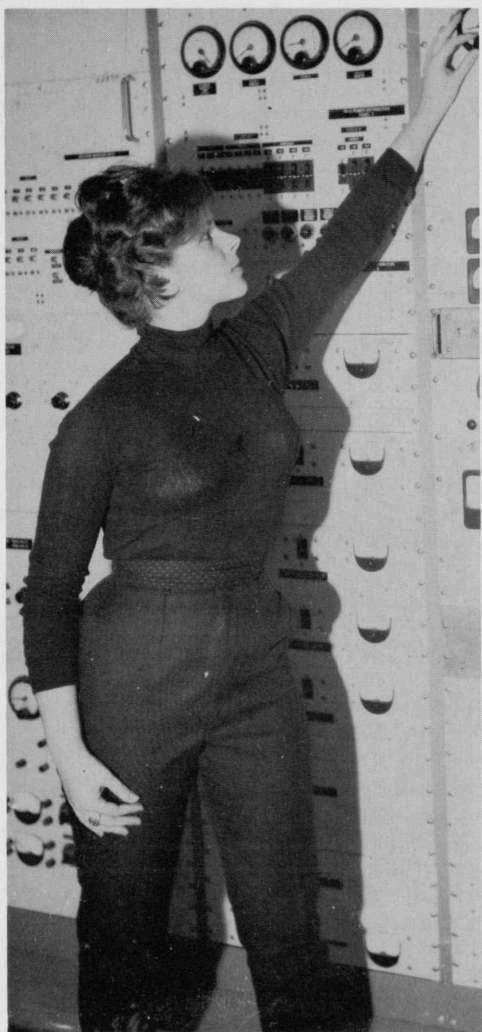
Miss Predicate is engaged to Pierre, however. In fact, as soon as he has enough money, and associated in-put-output devices, the couple plan to get married and retire to a ranch lab in the suburbs, where they can continue their calculations together.

Miss Predicate is particularly fond of PM&P on T, motorcycle rides, and do-loops. When asked her opinion of Techmen, she replied, "Well, I liked them for a while, but they were too blase". She dates men - other than Pierre - only rarely, and when she does, she prefers Harvard. "I want to be intellectually stimulated by men who have a desire to study the philosophy rather than the practice of computation," she says.

Whereupon we men of T.E.N. hung up our film with feelings of inferiority and left her to her work.



"Dear Diary . . ."

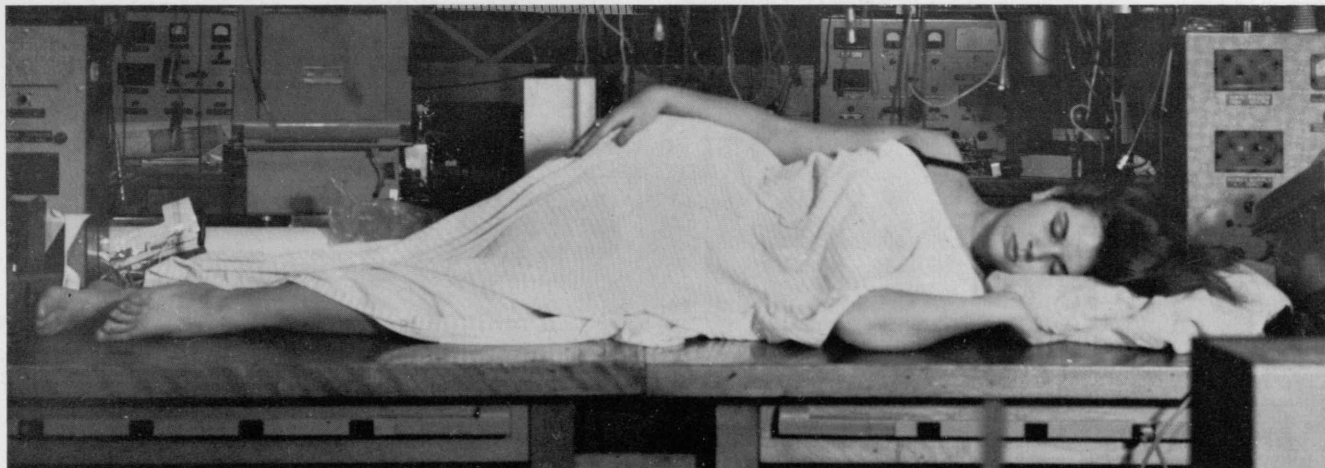


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ON CERTAIN LEGALLY NECESSARY REDUCTIONS, AND THE OPTIMUM METHODS THEREOF by Prof.-Doctor Samuel Moriarty, University of Reichenbach, Switzerland

Our problem is that of reducing approximately 150 lb. of fat (lipids and phospholipids), protein (doxyribosenucleotidephosphates and molecules of comparable complexity), and bone (calcium) phosphate) to as unorganized a condition as possible. The problem is complicated by the fact that we are also required to deal with extraneous organic and inorganic materials such as cloth, dentures, and the contents of pockets, and by the further fact that the final product must be a gas or a liquid, diffusable through the pure air or through the municipal sewer system, in order to take full advantage of the ancient Roman law of corpus non delectable, or de murtuiis nil nisi bonum.¹

Of course combustion presents the most immediately obvious, and indeed perhaps most readily accessible method. Yet I need hardly point out that a simple Bunsen burner emits a flame of distinctly inadequate magnitude for such a purpose. Further, the odor caused by this process is both obnoxious and conducive to detection. And the four to five lb. of ash which form the residue upon analysis may be discovered to contain much greater percentage of phosphates than any wood or coal ash. What is even more, dentures and coins may survive the destruction, as the late lamented Dr. Landru discovered, to his discomfiture. One may with a fair degree of safety dissolve the ashes in concentrated HCl, however, being certain to dispose well of the metallic remains.

My optimum method, which I propose rather modestly to denominate the "Watson Method", assumes a method for disposal of excess body liquids such as blood; this may be easily done by washing them down the drain while the subject reposes in the bath. The limbs may thus be dismembered carefully, and dissolved in a caldron of very hot caustic soda (NaOH). When the flesh has been eliminated, the bones may be removed with tongs, washed, and then broken up and dissolved in hot concentrated nitric acid (HNO₃). The charged liquids so produced may be diluted to a concentration of approximately .05 and poured away down the drain. The clothes may also be dissolved in soda, and things as buttons in the nitric acid.

Our scientist concludes by dissolving the gold fillings, if any, in aqua regia (HNO₃ plus HCl); any porcelain ones are ground up and dissolved in HF.

The reader is warned not to try the Watson Method without previous laboratory experience and a suitable subject.

1. For this and other Roman laws, as well as disposal of superfluous gall bladders, see Caesar's "Gallic Wars".

[· F = . MA]

Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Ψ Φ Χ Ξ Ω



MEN'S AUTHENTIC
**University
Club Shoes**
BY
BOSTONIAN

University Club
Collection

$$P(q, p) = \int_{-j\hbar}^{+j\hbar} \int_{\mathcal{A}} [H(s) * B(q, p)] \times m(s) + \frac{\chi}{g} (\xi \times 2\pi\hbar) dg dr$$

Using this polynomial in the standard manner, and introducing it into the garbage function, we obtain

$$h(q, p) = \frac{\partial}{\partial \eta} \left(\int [q \times m_h(s)] d\eta + \frac{\partial}{\partial \eta} [h(K \cdot *) + b] d\eta d\eta \right)$$

$$\Delta \cdot \Gamma = [\rho(\vec{r}, g) \cdot \text{[diagram]}] + \iiint_{\mathbb{R}^3} [\star + h_\star](F, \omega) \cdot da \, \lambda \, dp \, d\#$$

can be obtained by inspection. But, if we integrate with respect to j we obtain the solution we are after:

$$H(\alpha) = \underline{K} \times ||E|| + \frac{d}{2h} \left[\hat{t} \int \hat{t}^{(1)}(s) ds + \hat{q} \int K(r) \coth \left(\frac{u+64}{u+24} \right) \right]$$

Here is the authentic hand-sewn moccasin you prefer. The front seam is hand-sewn and hand-shaped for foot-hugging comfort. The heel is specially moulded for stay-on fit. In rich harvest brown or black.

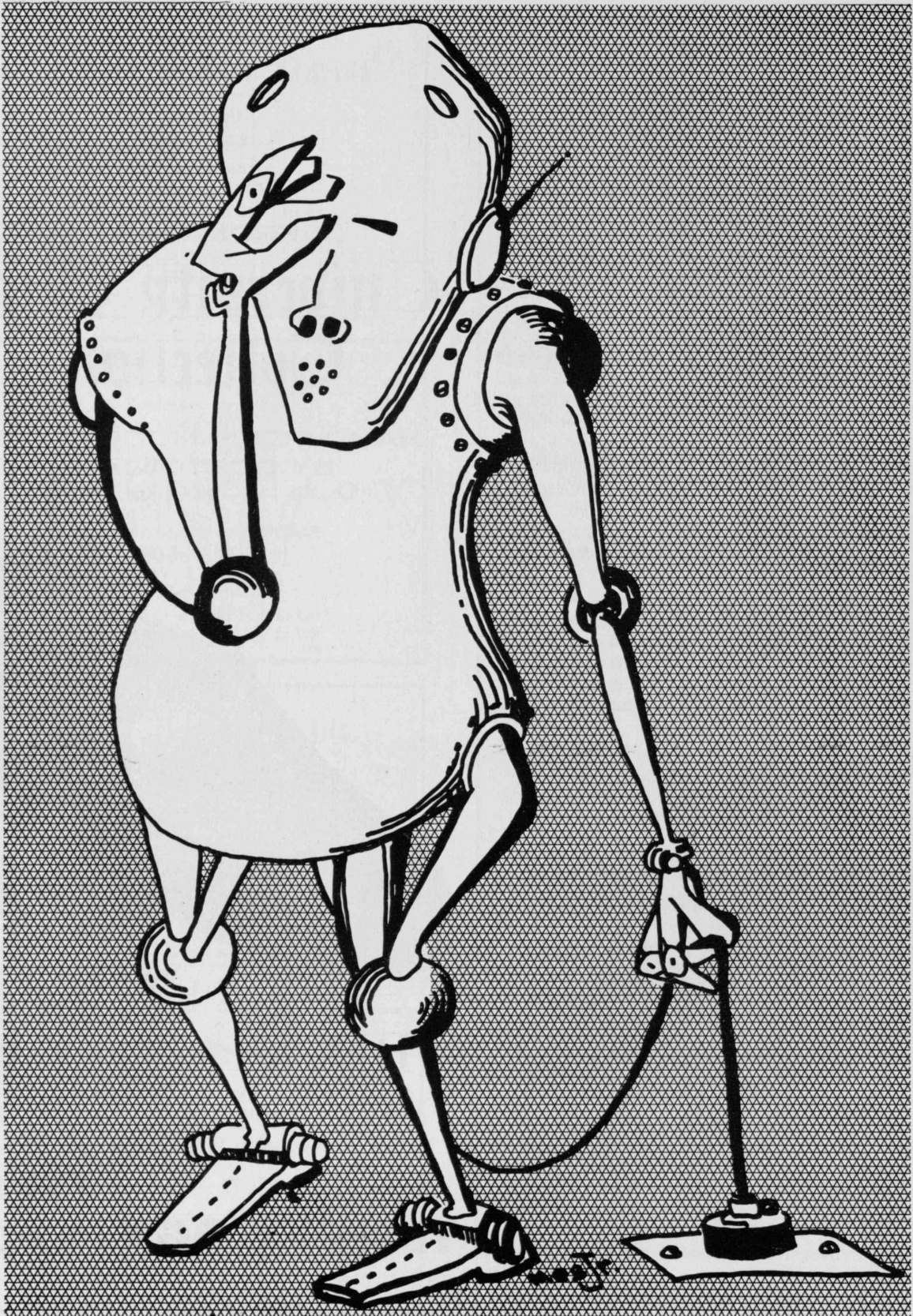
\$15.95

TECHNOLOGY COOP

*Hand-sewn fronts.

Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Ψ Φ Χ Ξ Ω

21



"GOODBYE, CRUEL WORLD"

Magazine reading is a very special skill. It is very rare to find a person starting from the front cover and reading straight through to the last page. Instead, he will usually, although not always, start at the beginning and rapidly turn pages until suddenly he will stop . . . something has caught the attention of our haphazard reader. Has he seen an article of tremendous import or grave national concern? Or, perhaps, has he caught a title which moves his imagination to strange, unexplored regions? Of course not! Probably he has come to a picture of a partially clad, very scantily clad, or, most likely completely unclad woman. This is what attracts the eye of the typical magazine reader, and publishers use this fact to their utmost advantage.

Publishers who are foolish enough to attempt to publish and sell literature that does not deal with sex (like the tech) generally must resort to other methods of catching the eye of the reader. And so we come to the difficult problem of creating titles for articles of a non-sexual nature. The problem is most difficult in the case of scientific literature. Let us say you have just written an article about extraction of zinc ores from sea water. If you have ever read a technical magazine you know what the title will be: "Extraction of Zinc Ores from Sea Water." How can you glamorize a title when your subject matter is so completely unglamorous? A common solution is to give the article a title completely unrelated to the subject. You might try "An Evening with the Perverts" or "Saturday Night at Scollay Square," or "A Day at Harvard." But that would be misleading, sneaky, and generally unsportsmanlike.

A second approach is the use of an interesting sounding scientific word, which may be fabricated if necessary. (The advertising industry uses this approach; i.e. gardol, perstop, micronite, filter, charcoal filter, recessed filter, cancer filter, etc.) Thus you might call your article "Aexcryphonification of Zinc." Who, (at least, who at M.I.T. could resist a title such as that? You may then go on to define "aexcryphonification" as a revolutionary new metal, a revolutionary new process, a revolutionary new mechanism, or very simply, a revolutionary new. You may also take the coward's method and not define it at all. Your readers will never know the difference.

Technique 1962

ONLY ONE LEFT!

Right, most people have only one left hand! If YOU have one you can now buy

The Yearbook that dares to be different

on sale

For the Last Time at Reduced Prices

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1870

1962

JAMES F. BRINE, INC.

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TR 6-4218

Complete Sporting Goods, Baseball,
Softball, Tennis, Lacrosse
Sneakers, Sox

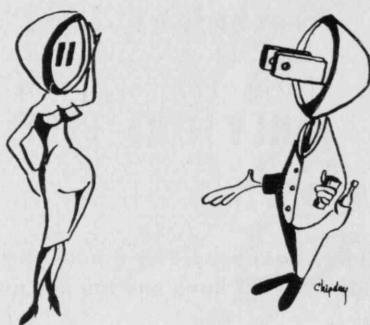
Kendall Square Gulf Service Sta.

KENDALL SQ.

Complete Car Service - Lubrication - Washing
Tires - Batteries - Accessories
Parking - Daily or Monthly - Cor. of 3rd St.
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"A.C. or D.C."

only at
AL TRAGER'S
can you get

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REPLACH
NADEL
UGEL
ASHE

444 HARVARD ST. BROOKLINE



The New
Location of

LARRY'S
BARBER SHOP

282 Massachusetts Avenue
2 Blocks from M.I.T. in the Beaver House

"For That Well-Groomed Look
- - Go To Larry's"

There are times when you wish to use the reverse approach. That is, you have absolutely nothing to say (like T.E.N.), you know nothing at all about it (like T.E.N. writers), and when it comes right down to it, you don't really give a damn about it (like T.E.N.'s readers). You now have an article that says absolutely nothing, and is in desperate need of a title. There is a foolproof solution to your problem. Begin your title with the words "Introduction to . . ." or "Elementary Principles of . . ." or, a consistent winner, "Basic . . .". You can even call it "Basic Aexcryphonification." The typical, cultured reader (as, for example, the M.I.T. student) will not even bother to look at anything which is "basic" or "elementary." Who will read your article? The Harvard student, of course; and with just a few fabricated words of five syllables or more, intermixed with meaningless scientific jargon, which is easily picked up at 8.03 lectures, and POOF! The reader is so completely snowed that he acclaims your article as the greatest scientific discovery since the synthesis of the first known aphrodisiac.

Let us now consider the one remaining possibility; you actually have something to say! It is of vital interest to every American. You want to make sure it is read, yet you cannot think of a catchy realistic title. You fear it will be printed in T.E.N. and overlooked as the readers thumb through the dreary pages. Fear not! All is not lost. You can make sure the world receives your message, and you don't even need any title at all. Get Voo Doo to print your worthless rot. Voo Doo readers consume everything that appears between the covers of the magazine, title or no title. You don't believe it? All right, skeptic, check the title of this article. Need I say more?

— By Al Bloom

[F = MA]



The Music Dept. demonstrates the proper method of handling hi-fi records.

Supplementary Experiment

1. INTRODUCTION

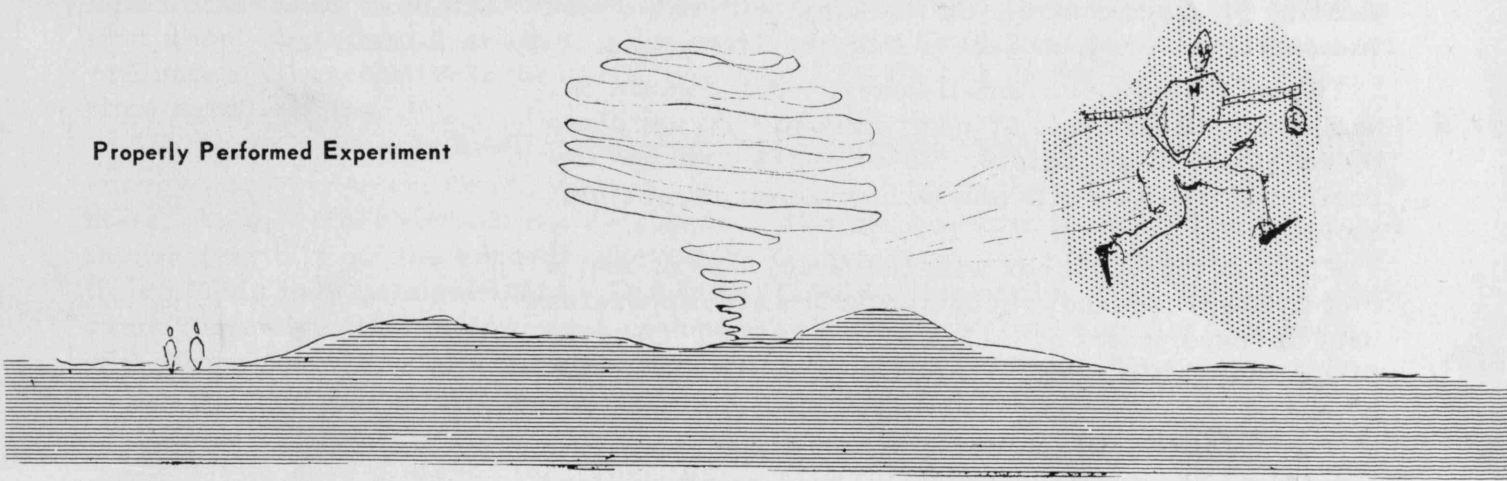
The Physics Department of M.I.T. has recently reviewed its undergraduate Physics policy, and this Laboratory experiment represents the first flowering of the conferences that were held during the fall term 1962. It should be realized that the adoption of this policy is tentative, and depends upon the realization of the beneficial results expected to accrue. For this reason, the experiment has been limited for the present, to freshman students of demonstrated outstanding ability.

The choice of this particular experiment as a sounding board for the new philosophy of the Department was motivated by two considerations:

- a) The new philosophy per se.
- b) The excess of graduate instructors.

Whether or not these considerations will be adequately dealt with, can in the last analysis only be determined after the experiment has been performed. With its usual perspicacity, the department has tried to foresee all possible contingencies and account for them. Of course the Department ostensibly being only human, there is a small but finite probability of some defect in the experimental method having been overlooked. If there is such, it will arise during the experiment and the attempt will be made then to correct for it. The Theoretical Physics Group wishes explicitly to state that they are not the Experimental Physics Group, and do not claim responsibility for the experiments outcome. However, they state that, in theory at least, the experiment is completely sound, without flaws of any form.

Properly Performed Experiment



2. INSTRUCTIONS

The experiment is limited to freshmen students in the upper one fourth of the class. All students who qualify and wish to take part in this experiment must indicate their desire by submitting a sealed envelope with their name and address to Room 6-113 not later than April 5, 1962. From those applying, forty-two percent will be chosen, on the basis of extracurricular activities.

The experiment will take place on April 20th which is a Friday. The students will be excused from all classes on that day. The experiment may be substituted for any one of the regular laboratory sessions. You will be graded on your work but the lowest grade will be a B.

You will present yourself in front of the main building on or before five-o'clock A.M. Friday morning at which time a bus will leave for the experimental site. Those of you who will return, will do so at two-o'clock A.M. Saturday the 21st.

3. THEORY

Basically, the experiment is a verification of all the Newtonian Physics you have learned so far, plus a new relation:

$$E = mc^2$$

where E is energy in ergs

m is mass in grams

$c = 2.9976 \times 10^{10}$ cm sec⁻¹ is the velocity of light, a physical constant.

This is Einstein's energy relationship, derived by means of the theory of special relativity. It can be arrived at by using the Lorentz Transformations properly **, ***.

By bringing together a critical mass of Rutherfordium, and by appropriate measurements and calculation, the relationship will, it is hoped, be verified.

4. PROCEDURE

The students will work in groups of three. The experimental apparatus will come in a kit that will be issued just before the experiment. Each group will be issued a graduate student and a critical mass. NO MORE THAN ONE CRITICAL MASS WILL BE ISSUED TO A GROUP. However if you use up one graduate student, another will be supplied.

You will note that each kit contains a black box two meters by one meter by one meter. Place your graduate student (abbreviated Grad. or ∇) in a black box. We have tried to select only plump Grad's, so to a first approximation the Grad. completely fills the black box.

Displace the Grad. in water, and by means of Archimedes principle, calculate his density ρ . As a control, do the same with one of your partners. Note that in every instance, the Grad. is denser than the Undergrad. This is a basic law.

You will notice two small boxes; each contain one half of a critical mass of plutonium. Do not place these boxes in proximity. This could ruin the experiment, and you will not be issued any more plutonium.

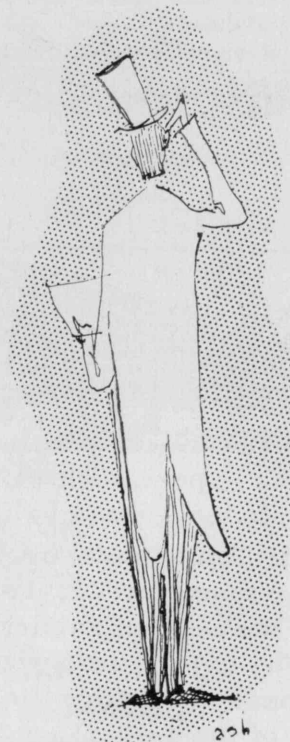
Place in the black box with the Grad. a clock and a meter stick. You may recognize these as the apparatus used in experiment 5, MEASUREMENT OF THE SPEED OF LIGHT WITH A CLOCK AND A METER STICK;

Taking your critical mass, weigh it and place it in the black box with the Grad. Then, using the lead blocks you will find in your kit, build a Gaussian surface around the Grad. Then retire to ≈ 5000 ft. from your experimental site.

Your Grad. has been instructed, as a part of a special course 8.100 leading to an especially high degree, to place the two boxes in proximity and record the results in an M.I.T. computation notebook, obtainable at the coop, but which will be supplied with each kit. You will use this date in your writeup.

5. OBSERVATIONS.

This will become self evident.



formal integration as applied to the uncertainty principle

6. CALCULATIONS.

After a suitable time has elapsed, return to the experimental site. Do not be disheartened if there is not anything immediately apparent. Physicists are often faced with discouraging results.

A little consideration will show that although the Grad. is nowhere in sight, theory predicts that his center of mass is still right in the middle of the site. This should be encouraging. Therefore, using this point as the origin in a spherical co-ordinate system, and designating a small volume of the Grad. as dv we can write:****

$$dv = r^2 \sin \varphi dr d\theta d\varphi = dv$$

Normalize the Grad. Student (this is probably the most difficult part of the experiment as Grad.'s contain a large number of singularities). We then integrate the Grad. Student over all space;

$$\iiint_{\text{all space}} r^2 \sin \varphi dr d\theta d\varphi = 1$$

If this integration is performed properly, you should re-obtain your grad. This is a direct verification of the completeness Theorem.

If some parts are still missing, expand the Grad. in a Fourier Series (Hildebrand, Op.Cit.) and, using the mean square deviation criteria, determine which parts are missing. This represents a defect which can be removed only by perturbation theory. A number of professors will be available to supply the necessary perturbation.

All your data should be obtainable from the Grad. Of course you must expect some error, due to the Uncertainty Principle which states that if a random sampling of Grad.'s is taken on any particular question, the answers lie in a gaussian distribution about the correct answer. However, as your Grad. was part of a moving co-ordinate system relative to the earth, you should be able to verify the Lorentz space-time relationships.

Ask your Grad. only intelligent, pertinent questions. Due to the large amounts of energy absorbed by the Grad., he was throughout the experiment in a high quantum state, and therefore you will not be able to verify the quantum theory. You might ask though (strictly off the record) whether he felt predominantly like a wave or a particle. This may be significant. Due to the Grad.'s dispersion, a single wavelength cannot be assigned him. However he can be represented as a wave packet that spreads with time. He will not radiate intelligence.

The writeup will be left to the student's ingenuity.

7. CONCLUSIONS.

When you have finished the experiment, return the apparatus and as much of the Grad. that remains to the Laboratory Supply Room. The reports should be turned in Rm. 6-113 not later than two weeks after the experiment - May 4th. Please include in your report your personal subjective feelings about the worth of this experiment in your scientific educations. The Physics Department hopes that this experiment will be one you will not easily forget, an experience that will be as much an inspiration as the regular curricula.

P.P./cw
3/4/62

* Birge, Reviews of Modern Physics 13, 233, 1941

** Richtmeyer & Kennedy, 5th edition, Chap 2, Introduction to Modern Physics.

*** Fradley, Terdley, & Smedley, 7th edition, Cover, Das Einfachschwere Basisch-Elementarish Gang-Leicht Theorie.

**** F.B. Hildebrand, Advanced Calculus for Engineers, P. 328.

THE HUMANITIES DEPARTMENT OF M.I.T. ANNOUNCES

BOIT ESSAY PRIZE

Prizes of \$75, \$40, and \$25 for the best essay on subjects suitable for treatment in literary form.

BOIT PRIZE FOR IMAGINATIVE WRITING

Prizes of \$75, \$40, and \$25 for the best unpublished short story, collection of poems, or one-act play.

ELLEN KING PRIZE

\$50 worth of books for the best unpublished essay writing by a freshman.

For rules of procedure inquire at the Humanities Department Office, room 14N407.

Deadline for entries April 9, 1962



"Oops!"

How to Succeed in Engineering Management Without Appearing to be Really Trying

Jurin Toomer '62

Some people are creative, others are competent manual laborers, others are co-ordinators, manipulators, in other words Executives. Training for the last classification comes not so much in school, as at school, from working in and on student activities.

"Executives are born, not made."

Superficial personality is all important. Regardless of your basic character, first impressions are what count. Develop, if you can, a permanent S.E.G., a firm handshake, a confident spring in your step, and a distinctive name (if your name is not distinctive, change it!) Managerial prowess requires little academic training since success in this field depends on these personality traits and such inborn characteristics as cunning, daring, amorality, greed, and inherited wealth. The true Executive enjoys nothing more than utilizing these attributes in the practice of his chosen profession. For the purpose of illustration, I would like to run some of my own successes up the flagpole and see who fires on them.

"Diversification is the key to success."

When you go to college, get a job, preferably one which requires a minimal amount of actual work. When promoting a product of questionable merit, it is necessary to have the support and complicity of all employees intimately connected with the production or distribution of the product -- so by all means, choose an organization with such strong "in-group" attitudes. Being a naturally enthusiastic type, the latent manager can quickly claw his way to the top of the heap by ingratiating himself with the existing managerial elite. Once an executive, the fun begins. This position offers one the dedi-

cated services of the epsilon semi-morons

and devotion can be assured, ironically, by giving them more work to do, gratis, "for the Organization". This gives them a gratifying sense of belonging, and keeps them out of trouble. This position also gives one the opportunity to associate with the school administration who are understandably appreciative of the superfluous work which one induced one's underling's to do. Furthermore, mere holding of this job can aid one's political career by helping create the "poor boy" image, while one's managerial status assures that such will never be the case. You will of course go into Student Government. If one's personality is basically repulsive, as is usually the case, one must rely on appointments or positions elected by a small number of one's friends, then rise through the ranks of the bureaucracy until one is high enough to run for kingpin on a platform of "responsibility".

Steal Ideas.

Promise Certainties.

**Call Administration Personnel by
their First Names.**

Cheat.

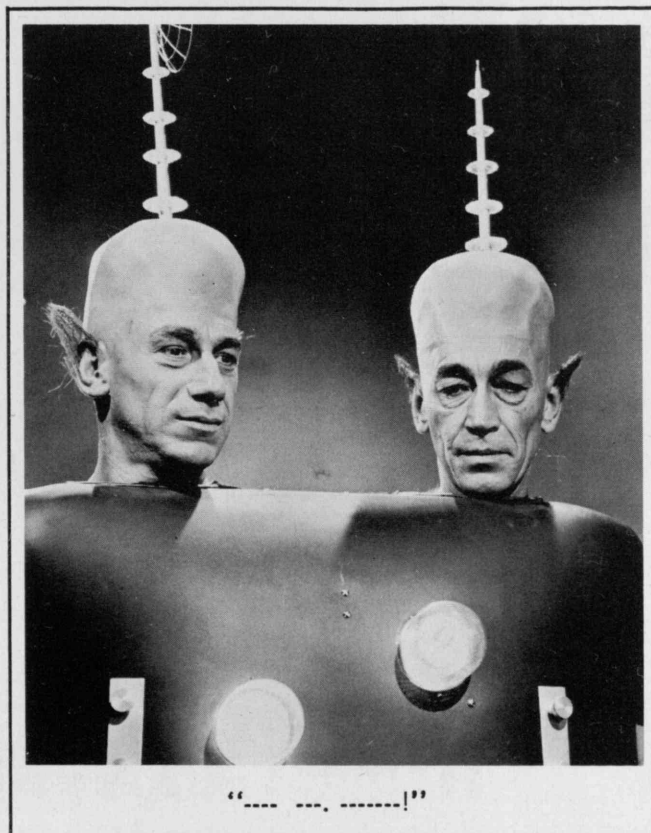
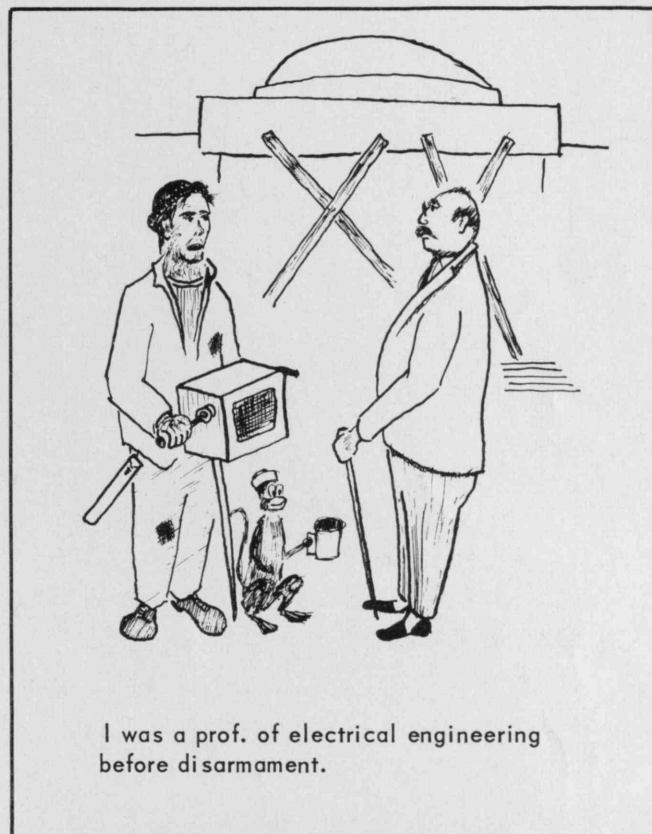
You'll win.

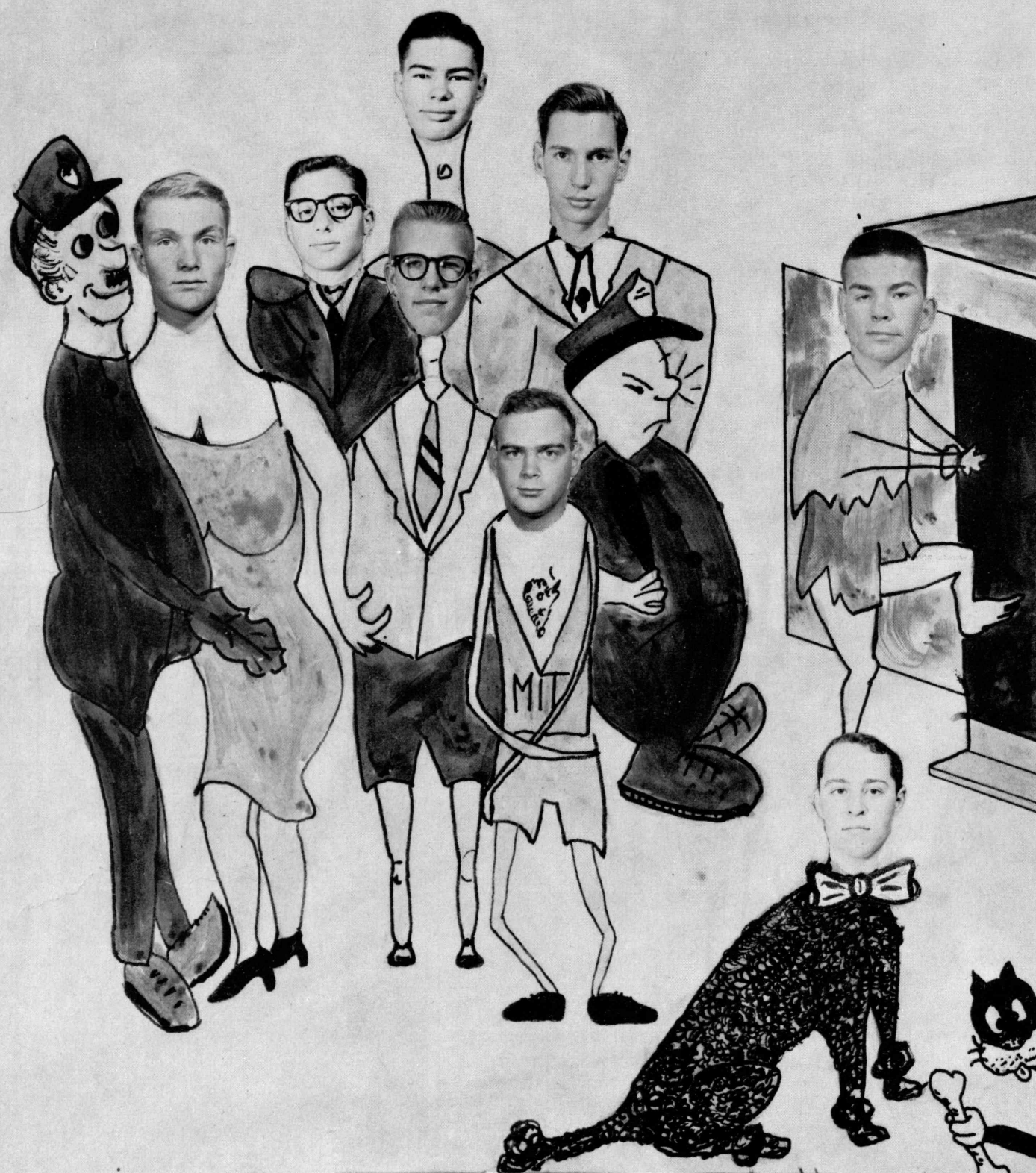
Once in power, remember, this glory is transitory. You will have acquired a hardcore of loyal mole-like supporters who are indebted to you for their jobs. Leave the coolie work to them. Spend your time dealing with "wheels". See if you can get some sort of permanent, enduring memorial to yourself. This will come in handy in later years when someone asks, "Who was he?"

Having attained at least these two positions, your prospects are limited only by the number of enemies you have acquired. This invaluable experience will look good when trying to get a job without any other qualifications...

GOOD HUNTING

[F = MA]





All brand new values based on the Daniel Q. Supertool System (Element Number One, the 5.02 Unknown equals 0.000)

Element	Symbols	Atomic Weight	Natural State
Arsenic	(AS)	23 kg	Tea
Asinine	(Ie)	73 lbs/gal	In combination with Dittonium
Auditorium	(ad)	1500 tons (Kresge)	Cracked
Barium	(Ba)	44 slugs	Nudist Colonies
Bauxite	(BO)	89 sligs)	Centrally located
Beerine	(Bn)	12 oz.	Cans
Birchium	(Bc)	1776 kopecks	Found in Radicals
Burnsium	(Bs)	230 lbs.	Fatty solid
Burtonite	(Bt)	130 lbs.	On Commons
Coopium	(Cp)	40 Massave.	Loses 10% a year
Cranium	(Hd)	11 lbs.	On your shoulders, stupid
Dittonium	("")	5 Shovels	Combination with Jurium
Dungsten	(Sh)	76 Trombones	Cambridge soil
Estrogen	(Sx)	10 c.c./ shot	Rare Earth
Fassium	(Fg)	372 Memdr.	No Rooms
Finc	(Fn)	\$3 reward.	Judcom
Foecium	(Fc)	97 loads	Yes?
Gilbey's Gin	(Gg)	1 fifth	inebriation
Hexachlorophene	(Hx)	70 GL	Under Arms
Hotassium	(H)	5	Supine
Inscomm	(Foo)	347658922 exc.	Confused
Jacqueline	(Jfk)	Nothing	Publicized
Janitorium	(Jn)	8 sweeps/day	Asleep
Jargon	(Jg)	16 pages/week	the tech
Jurium	(Fu)	181 slaves/dorm	Fenced in
Killium	(\$\$)	1700 bucks/yr.	Too Damn Much
Kryptonite	(Kr)	90999 ergs	Fatal to Superman
Lesbium	(Lb)	2/pair	Island of Lesbos
Libertine	(Ln)	68.9999764z.	In the process of.
Listerine	(IS)	39 ¢ / bottle	Pfui!
Moron	(Mo)	55 I.Q.	Urchin
Nookium	(Nm)	Undetermined	Likewise
Nymphon	(Ny)	Hy. 1-1986	Let us know
Oshium	(Uap)	62 Classof	Inert
Paladin	(TV)	6 Shooter	Will travel
Peon	(U)	7-107	Mexican itinerant
Phosgene	(Ps)	1914-18	A real gasser
Phosphorous	(P)	50-304	Inebriated feline
Plurpium	(Pp)	8.05 gasps	Unstable
Queerine	(Qu)	We're not sure	Unnatural state
Silicon	(Si)	28.086	Grey, comes in quartz
Silly Putty	(Sp)	Variable	Grey, comes in lumps
Sin	(Sn)	22 1/2 times	Clandestine
Strattonium	(St)	111 Memdr.	Inaccessible
Titanium	(Tt)	36 inches	Supported
Trojine	(Tj)	many	In the horse
Vaselin	(Vs)	79	Valuable
Virgine	(Bg)	36-23-35	Rare Earth
Wadleighum	(Wd)	1234567890	Consternation
Walker Coffee	(ugh)	10 ¢ / dreg	Charles River
Welleslium	(Ws)	15 mi/ frm tch.	Receptive

Character Assassination Associates

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A FRANK MESSAGE TO COLLEGE GRADUATES from Ken Harsh of CAA

"A few short months ago, I was in your shoes. Then I joined the CAA team and I'm already Head of the Defamation Division.

"We're looking for men with your background to participate in this exciting and challenging venture. We need men with psychological, literary, legal, and sales training. If you're the right man, here's your chance to get in on the ground floor of this unique organization. We here at the company like to picture ourselves as modern-day Robin Hoods - supplying new hope to the inhibited, helping out the weak and the frustrated against the overbearing monoliths with whom they come in contact. Our skilled specialists are equipped to handle the many unpleasant aspects of inter-personal and inter-group relationships. Sound interesting? Drop a line to our Personnel Department."





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is yours with each Salem cigarette...for as springtime refreshes you,
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● menthol fresh ● rich tobacco taste ● modern filter, too