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POPCORN


# $50,000,000$ M M NKEYS  

It began with my musing upon the term wemantic scanner" I had applied to that thing on the cover last issue. seemed to me that the name had come from Raymond jones! classic asf; tale, where it was used to filter the gibberish coming from the battery of random typing printers. How, I mused, would one go about building a device to recognize words and reject random collections of letters? I presently encountered an article in Sciantific American on the application of information the $\begin{gathered}\text { y to music which provided the answer: }\end{gathered}$ (a) lload the dicell in favor of intelligible combinations and provide a feedback loop which uses information concerning the preceding letter in determining which subsequent choice tio make.

So ny Fifty-Million-Monkey Machine consists of a randomly selecting mechanism plus a device for limiting the set from which the selections are made, as well as insuring that the letters are chosen in the same relative frequency: as they normally occur in the English language:

For the necessary statistical data, I counted the letter sequences in a passage from whitehead's "Adventures of Ideas", and another passage from "Fundamentals of Telephony in figuring that the two prose styles were as near opposite poles of the language as one could reasonably get. I then computed the probabilities for each letter of the alphabet to follow each other letter in all the combinations I had observed (which was only a small percentage of the theoretically possible sequences), expressed the result. as a three place deoimal for each of the two prose passages, and averaged the results, which were fairly consistent, showing that the theory was valid. Applying the final percentages to a seale of $1-53$ I constructed the table shown on the next page. This constitutes the "memory" of my computer.

The random-selecting mechanism consists of a deck of cards including the joker. And the scanning-and-printing function is taken care of by a pencil in the hand of you. (With a coupie months labor and a couple hundred bucks I could build the whole gadget, but it hardly seems worth the trouble, and while including you (or me ) in the circuit slows up the whole operation considerably, it does make the whole device suitable for SAPS publication.)

After completing the design, I shuffled my cards fthe samedeck I used for the psi experiments awhile back -- do you think I'd do anything so mundane as play games with :em?) and put the Fifty-Mil-lion-Monkey-Machine into operation.

## GLORY-:

it began. "Mighod!" I said, "Have I-made contact with Jones' super, universe already?" But it was just beginnerst luck, for with add.: itional selections written down it read GLORY-MPELUIOF-AMSTERING etc.

| HEARTS | A B C E F G H T L MNORR STUVWX Y - HEARTS |
| :---: | :---: |
| Ace | BAA EAIAAAWAAACAACAAAAA EA ACe |
| 2 | CAAECIAAA WAACFAAEAAAAAEA 2 |
| 3 | CAAECOAACWAECFAAEAAAAAEA 3 |
| 4 | CEAEDOAACWDEDFAAEAAAAAEA 4 |
| 5 | DEAEDOEAFWDEDFAAEEAAAAEB |
| 6 | DEAEDOEAFWEEDFAAEECAAAEB |
| 7 | EEAEDOEAGWEEEFAAHECAAAEC |
| 8 | GEAELYEAGWEEEFAAHECAAAEC 8 |
| 9 | GEEELYEALWEEEFAAIECAAAEC 9 |
| 10 | IEEELYEALWEEFFAAIECAAAEC 10 |
| Jack | IEEENYEAMWEEGFEBIHCEAAIC Jack |
| Queen | IEEENYEAMWEEGFECIHCEAAI D Queen |
| King | LEEEN-EEMWEEGLECMHIEAAIEKing |
| DIAM- | DIAM ${ }^{\text {- }}$ |
| ONDS | ABCDEFGHIKLMNOPRSTUVWXX-ONDS |
| Ace | LEEEN-EEM-EEGMEDOHLEAA I EACE |
| 2 | LEHEN-EEM-EEGMEDOHLEAAIF:2 |
| 3 | LEHEN-EEN-EEGMHEOHLEAAIG 3 |
| 4 | LLHEP-EEN-EEGMHEOHLEDARG 4 |
| 5 | LIHEP-EEN-EEGNHEOHLEDARI: 5 |
| 6 | LLHEQ-EEN-IEONHEOHNEDARI ${ }^{\circ}$ |
| 7 | MLHEN-TEN-IEONHEPHNEDARI |
| 8 | MLHER-IEN-IEONHEPHNEDAR:I 8 |
| 20 | MLHIR-LEN-IESNHEPHNEEARI 9 |
| 10 | NLHIR-LEN-IESNHESHNEEA-J 10 |
| Jack | NOHIR-LEN-LISNHETHNEEA-M Jack |
| Queen | NOHIS-MEN-LITNLETINEEA-M Queen |
| King | NOHUS-MEN-LITNLETINEEA-NKing |
| CLUBS | ABCDEFGHIKLMNOPRSTUVWXY-CLUBS |
| Ace | NOHUS-MEN-LITNLGTINEET-O ACE. |
| 2 | NOHUS-REN-LITNLITIPEET-0 2 |
| 3 | NOHUT-REN-OITNLIUTPEET-0 3 |
| 4 | NOIUT-REN-OITNLKUIREET-0 4 |
| 5 | NOIUV-REN-OIURLRUIREHT-0 5 |
| 6 | NOIVX-REO-OMURLSUIREHT-O |
| 7 | NOIV--REO-OMVRLS-IREHT-P 7. |
| 8 |  |
| 9 | RUI- - REO-U:O-RLS-0.REHT-P 9 |
| 10 | RUK-m-RIO-UO-RMT-OREHT-R 10 |
| Jack | RUK---RIO-UO-TMT-OSEIT-S Jack |
| Queen | SUK-M-RIO-VO-TMT-RSSIT-S Queen |
| King | SUK-M-RIO-VO-TOU-S SEIT-SKing |
| SPADES | A C CEFGHIKLMNOPRSTUVWXX - SPADES |
|  | SUL-D-UIS-YO-TOY-SSENT-S ACE |
| 2 | TUL--UTIS-YP-UOY-WSENT-S 2 |
| 3 | TUI---UIS-YP-UO--SENT-S 3 |
| 4 | TUO-MUIS-YP-UO-T-SEOT-T ${ }_{4}$ |
| 5 | TVO-- I IS-P-UR-MESOT-T 5 |
| 6 | UVO-m-YOS-P-VR--SIOT-T 6 |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 | - VU---RS--S-WR---SIOT-T 10 |
| Jack | - V U - - - T-S-T- - S O-T - U Jack |
| Queen | - U----T--S--T---T0-T-WQueen |
| King | - U- - - T- - - U-- T 0 - T - W King |
| Joker | --U---T- - - U-- TO-T-WJoker |

vhich was more in line with my expectations. The results are usually pronouncable, but only occasionally resemble words. The fault lies in the fact that the relative frequencies of letter-sequences are different for letters at the end of a word than for those at the beginning, and thus the feedback circuit has to be a great dal more elaborate, so that, for instance, it will permit "ngis to occur at the end of a word, but not as the beginning of one.

However, the device is considerably more efficient than merely selecting letters of the alphabet at randon, as you can prove by marking them on slips of paper and trying it.

Guess it's not quite ready to produce automatic fanfiction as yet - - unless perchance it's writing the stuff in Martian!

## HOW TO USE THE TABLES

Deal a card. Write down the letter in that cardis row in the "-" column. Far example, if it's the Jack of clubs, you would set down an "S".

Deal another card. Say it's the 7 of Diamonds. The next letter you write $\infty$ wh is the one opposite "7" in the Diamond table, \& under the column lettered "S" --the previous letter you wrote. And so on, until you decide you have more important ways to waste time

If you're wondering why there's no "J", "Q" or "Z" column, the answer is that "Q" has a 100\% probability of being followed by "U" so if you write "Q" go ahead and write "U" after it, and proceed as before. "J" and "Z" have frequency percentages of less than $1 / 53$ which is the maximum limit of sensitivity of my randomizing device so they get overlooked entirely. Don't worry about it.

By the way, if you don't have a joker in your deck, use the other 52 cards; it shouldn't affect the results very seriously.

## Death of Chivalry

Most men follow Honor's guide in seeking out their goals But women, it is obvious, possess no sign of souls; And thus, in cunning artifice, and ruses without fail The female of the species far outshines the guileless male.

When a woman seems so helpless in a world harsh and cruel士t's mainly since she knows that men are childis play to fool: some gallant eager gentleman will leap to help her out: No matter how demure she seems, she knows what she's about!

Sometimes it seems the women drive us frantic just for fun, Amused by mere male struggles with the troubles they've begun; How very simple life would be without the female touch, And yet, somehow, without sem I don't think I'd like it much!

$$
\begin{aligned}
& \text { the gripes } \\
& \text { of rapp }
\end{aligned}
$$

or, thru darkest Bundle 34 with stout heart \& gyrating gyrocompass
ANDERSON, her 2ED: By golly I admire the patience it must have taken to affix those scintillating stars to 40 or more copies of your zine! Clever, indeed. + Your cartoon and other decorative artwork is superb as always. + Best item of this issue was poul's discussion of Ulysses as reflected in the beady orbs of Hollywoodis cameramen.

BALLARD, his OUTSIDERS: Tsk, Wrai, yourre showing your fannish age by giving that squirrel a copy of Slan to hold. Bet a goodly percentage of todays fen have never heard of it. + I guess one reason fen stay in fandom is that after a while they absorb so much esoteric knowledge and slang that they can't talk to non-fen without a cortico-thalamic pause before each remark to screen the fanspeak out of it. And SAPS in particular is a rather unique hobby in that yourre either active in it or you're out altogether -- it's difficult to coast on the fringes unless, like GMCarr, you can borrow the bundles. + speaking of putting two copies of a singlesheet zine in a bundle, Aggie got three copies of collector in hers last mailing. We couldn't figure out whether it was a mistake or whether it had some subtle significance we Pailed to understand. + Fetish or not, Rotsler's recent females are too topheavy for my esthetic sensibilities. Maybe he should outfit his women with uplift bras. + Speaking of egoboo, after recently meeting Ben Singer again for the first time in several years I feel $I$ should publicize the fact that he is no longer the beanie-type fan of his younger days. Still a fannish type, but no moreso than the rest of us. And so another epoch of fandom endx. + Jeeze you do beautiful mailing reviews, Wrai!

COSWAL, his KRUTZEN: Your habit of ending your zines on page 1 is disconcerting, this not being Japan. I found your travel tale very interesting in spite of (or perhaps because of) never having visited that part of the U.S. inyself. Sounds like you work harder on your vacation than during the rest of the year! + I was under the impression for a long while that the word was "Potzrebie" until someone corrected me on it. + Your mailin̄ comments were fine this time too. + Tsk did you get those travel folders from the same source you got "How to Read The Bible"?

DEVORE, his COLLECTOR: Fine, lifelike, accurate cover. What did you do, spray-paint it? I'm fascinated by the trend toward elaborate flair-type gimmicks on SAPS zines. Damned if I'd have the patience to tie all those nooses tho! + All material in the zine was eminently entertaining, \& you have performed a valuable public service by reprinting the "over the River \& Into The Trees" thing. Maybe they can introduce it as evidence at steve's deportation hearing.

## Materialism

Everybody wishes for life's little minor lacks Like TV sets and trips abioad, or maybe cadillacs;
Yes, most of them are quite convinced their worlds would soon turn suinny
If they could only encompass a fair supply of money.
For those who deem possessing wealth a cause for celebration And equally bemoan its lack in pity and frustration, I must confess I cannot with their outlook quite agree, For I'd not take a million bucks for my philosophy:

I quite agree that wealth is great (a money-splendored thing) Eut I can live without it and the gadgets it could bring, For, even lacking dollar bills, itis great to be alive... But--er--now that you mention it, could someone loan me five?

## Uisionary

A star-begotten stroller looked aloft one summer night, With twitching tendrils searching for the U.S. satellite; Anon the mundane world regained his spaceward-slewed attention; Moral: neck-high clotheslines are the devil's own invention!

## Disillusionment

Some women are a lot of fiun, but love plays nasty tricks, And many a fan has found, alas, that sex and stf donit mix, For when reading is the hobby of a pert attractive miss, It of ten means no other passion can compete with this.

Most women get along quite well with few, if any, brains, (or try to hide the ones they have; just why, no one explained) So it's well you should remember, as you think of her with joy That your femmefan may in fact prefer Astounding to a boy.

DEVORE, his CAMPAIGN PROPAGANDA: Useful as well as ornamental. Is are elected OE?

DSVIS, his GHU SAPLEMENT: I am daunted by the complexity of your cover, even tho it didn't print very well. Is it non-representational art? + I don!t think fandom is getting younger; it's merely that if you stay in it you get older and "the rest of the fen seem young by comparison. Wasn't it gem carr who made the immortal remark about the suprise of meeting fen in person being not that publishers of mature and serious fanzines turned out to be mere childref, but that so many whom she pictured as adolescents turned out to be middle-aged businessmen. + Mighod, I could see joining the Air Force, perchance, but who but a Ghuist would be so depæaved as to volunteer for the Navy? The very thought makes me seasick.

ENEY, his KEEBIRD: It's Eney's facsle, bur share?s mimeo, appara ently. + Was it Nanshare who spread the erroneous report that the floods in stroudsburg last spring had washed away Doc's dwellirig, and later had to issue a hasty correction, since it turned out to be the house of a different keller? + I dimly remember, as a child, watching the passing of Dillinger's funeral procession, tho on second thought it may have been the hearse of a different killer. * Ghad, this sort of thing seems contagious, as the coach said when he thought he saw his star athlete catch a crab, later to find it was the oars of a different sculler. + May we hope for an increase in the size of KPEBTRD now that you have returned to occidental civilization?

FIRESTONE, her NO NAME: From a Murray Leinster novelet (can this be regarded as an authoritative source?) I learned that the ancient Egyptians did use electroplating to coat metal objects. Only they used silver or gold for the base and deposited a layer of meteoritic iron on the surface, regarding the latter as a sacred metal because of its supernatural origin. + Lots of fascinating stuff in your zine this time, Eva.

ENEY, his SPY RAY OF SAPS: See what I mean by Rotsler's breast fetish? + Tsk, Rich, I suspect you had a vast supply of postcards prestamped with your address and figured it would be simpler to get rid of lem in SAPS than to paste address labels over tem. Besides, there's a law against making derogatory remarks on postcards (as distinct from the law against threatening letters). If you left Japan immediately, \& many SAPS answered this poll, life must be interesting for your unit mail clerk! + The road to the patent office is paved with good inventions. + Toprate mailing comments, every one.

GERDING, her incomplete NANDU: This is the sort of thing that dissuades me from ever trying to publish a zine thru someone else's mimeo. Tho I must admit that Alger, Devore and Young never missed a mailing on the stuff they ran off for me, even when they had to do the stencilling? + Very fine artwork, the front cover, in particular, is one of the most attractive in the bundle.

HARNESS, his SAPROLLER: Enchanting comments, and you must devote a stageering amount of ingenuity to devising the variant title lottering. As well as to solving stuff like Aggie's coin problem. + What ever became of Dianetics?

MASKED MARVEL, itis PISTOL POINT: Alas, how the flighty have maulien! With all of back SAPSdom to plagerize from, canit you do better than this? The illios were pleasing, but ugh, that text?

OFFICIALDOM, her SPECTATOR: You know, Karen, this gets better with each issue. Sed to think we will soon have a brand new OE to housebreak all over again!

PEATROWSKY, his SAPSYCHE: With a very colorful and appropriate covor, too. + Yup, that's the same Goodman Ace of "Easy Aces" fame. I believe he writes scripts for quite a few of the TV and radio comedy shows nowadays, including Red Skelton, Sid Caesar, and George whatshisname. + You bring up an interesting point when you question whether hecto ink appliked with a brush would reproduce on a ditto machine. The reason I always took it for granted that it would is that every time I bought a bottle of hec-tograph ink, it was stuff labeled "Ditto Ink" and why would it be called that if it wouldn't work on the machine? Bob. Stein, the pioneer dittoink artist, used all sorts of techniques in his work with the stuff: brush, airbrush, spatter, as well as pen-line. Try borrowing the issues of SW from Weber (who I believe has em) which feature fullpage Stein covers and interior illios. + All your mailing comments made enjoyable reading; they do seem to have some of that easygoing Ballard quality, which is a compliment. Fine ne.

I, my SPACEWARP: Much to my astonishment, I learned that several of the Michifen had quite a time puzzling out the message on the cover. Tsk, maybe it merely seemed obvious to me because I already knew the principle of the device. It would have helped if, as I'd intended, I couid have put stars in the spaces between words -- but my plans for doing so ran afoul of the fact that the grill kept catching under the points of the stars as it turned. + Having pages of ajiternating color, I, found, tremendously complicates the resthuffling of material in making up a zine.

REMUS, his TALE FROM: What I can't figure out, Fred, is why you (:untorsunk the eyes, or was it simpler than en clever and ay the way. + The sports enthusiasts could get just about all of the features you list in your charming articla by buying a motorcycle. After ail, unlike even the $M-G i s$ and their brethren, motorcycles have never imitated the decadent Detroit pactice of putting doors and windows on the original classic design of horseless carriage.

RIKE, his CLUNG: Cheklesome corar. + Toto's mate, or at least her prospective mate, was Gargantua, the nowdeceased gorilla. You mean you'v, never seen picture of Ringling Brothersp Toto? She looks like a typical east cosst femmefan. t. Whatever you use for machinegunning cattle, it had better pack a real wallop. I participated in a cow.killing once where a sledge hammer, 3 rounds from a . 22 through the brain, and having its throat cut hardly dampened the cow's ambition to dinag us around the barnyard at all. One of Alger's . 760 Civil war rolling blocks might be a suitable weapon for the job. + There's, one slight drawback to explosive bullets of the type you propose for LaG's rat hunters: a. round with a percussion-type explosive of that type would emplode from the shock of the propelling charge. Or are you feuding with Dean? + A very fine issue of CLUNQUE, gave.

STENARD, his INSURGENT: The trouble with Torture garden is hat it was written back in the LyTirs wher descriptions of that sort were the most fantastic the authon could imagine. After Dachau, Buchenwald, and the Chinese communist POW camp account, s , TG scems pretty silly. + I guess it's the GI influence that makes me notice, instantly and unfavorably, any male who needs
a haircut. Most women look better with long hair, tho there are a few who manage to look charming with their hair cut short, tho not when they yield to the Italian influence and merely let it straggle. + Interesting mailing commentary you have here, tho I shudder to think of the horrible fate you have incurred by insulting A.ggie.

WEBER, his CREEP \#6: Cover: I don't quite grasp the situation. + The con article was fascinating, and almost makes me wish I'd been able to attend. But you didn't mention anything about cops or house detectives, and since no con is complete without intervention by the forces of law and or der, this leads me to interpret your silence in the noy ossible way: that you were the victim of their interference this: year! + The 96-acre antenna Wंas no doubt a radio-telescope installation for study of intergalactic space. Theyre springing up all over, apparently, mainly because it's easier to build a 200 -foot radio pmirror" than a 200 -inch optical mirror. The catch is that itis hard to work out a method of tilting anything that big so as to get it pointed in the right direction. + Your artwork throughout this zine was wonderful, some of the best cartoons that have appeared since Ray Nelson retired.

ALSO, his CRREFP 47: Lovely cover, particularly the idea of topping the tree with a spaceship, which I didn't notice until the fifth oi sixth time I read the zine. + After reading Gemis conmert on my probability article, I'm wonderjng if shers agreeing with me on disputing me? + Tsk, everything that tarr has cited in nominating shapiro for TAFF is long extinct. Sic transit crifanac! + My solution to your exposed(?) film problem would be to cut a few inches from the strip and process it in your or somebody's darkroom. I realize that Kodachrome processing is not for amateurs to tackle, but you should get some kind of an image if the stuff has been exposed.

WANSBOROUGH, 'is SORRY SAP: Messages to ex-members aren't very effectively distributed in the bundles, are they? + Tsk, I thought England was aswarm with femmefen?

WELLS, his JINX: Another notable addition to SAPS, it looks like. At least this newcomer knows how to mimeo a readable zine. Artwark very fine.

YOUNG, his TAILGATE: An appropriately-named zine to wind up the mailing with. I presume the accent is on the first syllable? + Is it true that you married Mary just to be sure of a steady sourcd of fanfictinn for future issues of TAILGATE? + I maybe should have my head examined, but after reading this mess $\bar{I}$ voted for George as our next OE. It seemed the fannish thing to do.

Well, that winds up the last mailing reviews I expect to compose onstencil for quite a while to come. Perhaps, I might add, having them written on paper from here on will improve their qualitity.

It could herdly Jessen it.

## pßEDJCJJN



SAPS being notoriously unpreaictable, if not downright eccentric. it's no wonder most of my predictions fly wide of their goal, but the way you people sabotaged my prediction of 465 for Mlg 33 was utterly ghastly. Look at the nosedive it makes in the bundlesizo curve! Whassamatta for you?

Nevertheless my optimistic slipstick and guess-\&-bighod algebra insists that the Christmas mailing you are now holding will be not only better than Mlg 33 (I shud hove sol.) but even better than the average trend of the past 13 bundles would indicate. In fact, (and I worked the problem twice just to see if' I'd made a mistake somewhere) I predict a whopping...

## 481 pages

While the failure of the last bundle to approach predictedd size is disappointing, it's not too much so, mainly since quantity and quality in SAPS bundles are only faintly correlated, and possibly inversely so at that. I haven't the ambition at this time to devise a rating system to compare bundles qualitatively, though it is far from impossible. It has fascinating potentialities, since I could then predict two-dimensionally -- in size as well as qualit:

Maybe I'm too ambitious -- I might be more successful if I tried merely to predict the size of Outsiders, say. Come to think of it, I sometimes have a hard time predicting even the size of SW until the final stencil is cut. And even then itis influenced by non-mathematical factors such as the necessity for buying another ream of paper if I add any more pages. Upon such irrelevant decisions rests the mighty weight of egoboo.

Sic Transit Gloria Cri-
fanac!

[^0]
## BりJDJNG J゙ちE <br> HLGES MOME MADE FOB Sゆらった

 BALLISTIC PENDULUMCuess I told you that I made a ballistic pendulum，anyway for the last few weeks I＇ve been pendulating it madly，measuring the ve－ locity of $\lambda l l$ manner of Remington Rolling Blocks and other odd－ball type arms．Very interesting tnough and it debunks a lot of popular ideas．For one thing，most factory loaded ammo tests 100 to 200 feet per second slower than＂book＂velocity．Guess this works on tine same idea as speedometers that read 110 mph on 90 mph cars．On the other harid，most GI ammo terts fairly close to book value．of course，the Aimy wasn＇t trying to sell their ammo，they just want－ ed to know liow fast the bullets were going．

In case you want to test your Inc．Genius on the idea，here is the math and a sketch of how the thing works．The critical fea－ tures are：weight of bob，rate or frequency of pendulum，and the bob must be so made that all the bullet stays in it．If any pieces of the bullet bounce back or splatter off，the reading will not be accurate．


In use, $\bar{I}$ ire from a .est which is in line with the center of the bob, and about 30 ft . away. This is close enough to be sure of hitting with a pistol and far enough so that muzzle blast doesnit push the bob enough to matter. The operation is thus: the bob is brought to rest and the slider (a $1 / 4$ " wood dowel) is brought into contact with the rear. In this position, the zero mark is at the end of the guide tube. A shot is fired into the bob, through the center of the front board. The sand stops the bullet and the packed paper $k$ zeps sand from coming out the hole. The bob swings back, pushing the slider through the guide tube.I measure the distance between the zero mark on slider and end of guide tube, which gives the distañ, the bob was swung back. I take from the can of shot on job, s!it in the exact weight of bullet I fired, to keep the bob frui gaining weight from the bullets fired into it. After bringing to rest and pushing slider back to zero it is ready to go again.


I use a steel rule marked in $1 / 100$ ths of an inch for measuring slider travel and as long as it moves a reasonable distance, several inches or more, the reading error is well under 1\%.

Here is the formula inr use:

$$
w V=(w+w)(a)(P)
$$

$w=$ weight of hullet in pounds ( 7000 grains $=1$ pound)
$W=$ weight of oob in pounds
$V=$ velocity in feet per second
$a=$ distance moved in inches
$P=$ swings per minut.e divided by 114.7
As the weight of even the largest bullet is insignificant compared with the weight $o i$ the bob ( 90 lbs in mine) I disregard it and use this formula, fcr sirplicity:

$$
w T=(W)(a)(1 ;
$$

As $W$ and $P$ are constant for any one pendulum; boils down to this:

$$
w v=\left(w_{p}\right)(a)
$$

Swings per minute mears complete swings, to and fro. My pendiclum swings 17.5 times per minute and bob weighs 90 lbs. With my outfit, the average military rifle gives a deflection between 4 and 5 inches. If you wish to figure a velocity just for luck, the 600 grain bullet in my .450 rifle gave a deflection of 13.06 inches. Take it from there.

The size I made, 90 Ibs, and ebout 10 ft . long, is just about igit. $t$ inedium to very heavy calibere; as I said, the average milters rfie loads give a deflection of around 4 to 5 inches, the real heavy rifle calibers around 10 to 12 inches. A. 50 Mg round would give about 21-22 inches and that is just about the ultimate limit of what can be fired in a shoulder rifle. At the other end, big powerfill handgun loads with heavy bullets, like the -45 Colt revolver and .50 pistol etc., give deflections ranging from about $1.75^{\circ}$ to 2.75 m , which is still enough to measure with accuracy. It is too heavy to give accurate result's with medium and light "pocket ty tye pistols or , 22 rifles. For example, deflection with 22 rifles runs around 36 to 46 m .4 .38 special revolver, standard with most cops, would run around $1.25^{\circ}$. For 22 's and light pistols, a bob of around 10 to 20 Ibs would be best.

As I said, it is a lot of fun and informative to know just what results you get with various loads and powders etc, one thing it when you think over the fact that a GI bullet will only move a freely swinging $90-1 \mathrm{~b}$ weight about 4.5 inches, you can see how much chance it would have of knocking over a 1000-1b moose! so it seems those who credit "nerve-shock" or "tissue-destruction" for killing power nust be right. Whatever it is that makes a bullet effective, it sure isn't the physical blow.

I was pleased to find that on the average, my handloads aremore iniform from shot to shot than most factory loads. All loads vary some; in a $30-06$ or similar caliber, a spread of 40 or 50 fps is normal and even 100 fps isn teo bad. Another thing that showed up plainly is the effect of temperature on velocity. (Typical military smokeless powders are supposed to gain 1.7 fps per degree F as temperature goes up and lose the same amount as it drops.) A batch of $1938 \mathrm{FA} M-1$ ammo I tried averaged 78 fps higher on a $95^{\circ}$ day than on a $55^{\circ}$ day. so there is quite a difforence in performance of ammo in ihe African desert or out An the Arcuic ice cap! In WW II the Germans made a special load for use in North ffrica, to keep the pressure down to sefe limite under the desert sun. (pressure rises much faster than velocity, with a rise in temperature). As gun safety depends in peak pressure a coldition that could cause the pressure to go up it: sharp pule could exceed safe limits without much rise in' velocity

Unjvis, at was a ? of fun to build and use the pendutưns it seems:'to bs at, leas as accurate as the portáble electronic chronographs selling for $\$ 77.50$ ard it cost me around $\$ 5.00$ to bild. T. judge it is ac urate to ebout i\%, whech is good enough for practical purposts. It pronably rould be better if instead of harging on cocors, it wes on wires or rods with knife-edge bearings to. swig on.

## Smoke Uistas by Nangee

"When smoke rings whirl, And swirl, and twirl, What vistas they conjure? They fascinate And captivate With sudden subtle lure.

I know too well
Their spell is hell, And born of quiddity. Yet they entwine And catch and bind With their cupidity.

They coil around, Surround, impound, With fairy, febrile hands, And like a pawn My soul is drawn
By these hypnotic strands.

- My spirit sings, And swings and wings Into a future realm, Where silver ships Will speed my trips With fancy at the helm.

Here comets trace The face of space outlining starry lanes, Where man may gaze
In awed amaze
Through cosmic windowpanes.
The vistas shift And drift, and lift,
My heart is torn with doubt.
Tears fill my eyes
At dream's demise,
My cigarette is out.


From STARLANES \#6
Summer 1952

## jpßOC MOsjs



Not that I have a great deal of reliance to spare for my own predictions any more, but since the discredited one for MIg 34 appears in this issue, it seemed only fair to include an up-to-date extrapolation. As you can see, the inexorabie laws of statistical probability indicate that Mlg 35 should run about 420 pages. You hear that, SAPS? 420 pages! Who do you think you are to fly in the face of the inevitable?

If you think this issue of SW is overloaded with arithmetic, yourre so right. It's not intentional; merely an indication of a lack of inspiration. After all, it's much easier to whip up a page of calculations than a page of Morgan Botts; at least for me it is. I promise to swear off math until I resume publication again. What I write for other SAPSzines during the interval will be non-numerical. (Unless, of course, I run across something so fascinating that it demands to be prought to your attention. Heh.)

Tsk, need a filler here...
well, I'll try composing anstencil notpoetry for once:
My interest in figures seems unshared by very many Who have never worked equations and prefer to not work any;
So I'll add a feryent footnote, ere this zine upon
you palls:
The figures that attract me most are those of pretty gals!

## LABOA PAJNS

In the ghastly dim gray dawn The world's workers rise and yawn And contemplate with thoughts unfunny Another day of earning money.

And few an interest will take In work until the coffee break While there are those within the bunch Who simply drag along till lunch.

The haggard hours, tho endless, soon Drift into arid afternoon, At which all men perk up a bit, Anticipating time to quit.

It seems throughout the universe Work is the drinking classes curse, Which leads to the conclusion that It's great to be a plutocrat?

NECKTJE PA今BJY
A willful young bandit of Tucson was persuzad to try a new nucson By neighbors of his:
Now take waining from this, For the same thing could happen to youcson!

## EOONOMJS

To be an abstract artist may much better please the prudes, But you'll find more fame and fortune simply painting barroom And tho the need for research makes of writing a tough nudes, A novel's sales depend more on the bosom on the jacket.
If earnest poets find their fate obscurity or worse, Simply build a reputation penning pornographic versé. The moral of these maxims is: Success in our fair land Is strictly predicated on supplying a demand!
ธ05 Mロs

Over this problem
Cosmologists toil:
Is or is not space
According to Hoyle?

## po PULABJTY

Wilbur H. McGonnicle composed a tale of space, of nubile maidens kidnapped by a greenish lizard race,
of spacemen 'neath whose cynic snarls there thudded hearts of gold And silver ships and ion trails and planets dark and cold.

Now Wilbur H. McGonnicle desired to pay his rent,
And with his tale he did so (minus Forrie's $10 \%$ )
And Margulies had a cover drawn, to this wild tale connected (But very very loosely, as might well have been expected).

And many adolescents wrote enthuiastic praise
And said that reading Wilbur's prose had brightened up their days. And that is the reason why many a chronicle Now pours from the Hyper of Will H. McGonnicle.

## अ阿う LJNE

It's hardly a trifle to shoot off a rifle And get maggies drawers from the pit; The corthos inform us the bulls are enormous And every round should be a hit.

But, cur head aches and rings, we are
strangled in slings,
And our s? ? on ow will not stay in place; And the lop's in a hurry, the sights are
all blurry,
And our flinching is cause for disgrace.
The crossivind is gusty, the range is all dusty, The pitmon are sleeping or nuts; But it is lovely to see how much better things be When we get a white disc from the butts?

The cover this issue is for the benefit of a young lady type SAPS who prefers subtle intellectual type comic strips to stich silly ones as pogo. This should also demonstrate to her that I can be subtle and intellortual when required, too.

No use adding my address 50 this thing; titis about to change. In fact, by the time you are reading this I'm somewhere in the west Texas desert, commencing the study of guided missile technology.
see you on the moon...


[^0]:     A pasture of fillies + A waggin of tail + Uh trip albroads + This $================$ is an esnteric Time Magarine interlineation...

