



FABRICATIONS I VArieus degraes of innocence have been circuleted concerning the activities of Jack Speer and Chan Davis during the early monning of Labor Day. Ron Christensen's version results simply from that ignorance which can hamper an earnest fan journilist almost as much as lack of imagination; while the account given by Tucker and Moskowitz, dealing with advances made by Spear, Davis, and Degler upon a lone virginal Philadelphian, suffers far less from lack of imagination than from fiallure of ethics. The only wry to still these and other current drums seems to be to give a complete and unexpurgatod (well, not very) hist. ory of the actual happenings.

We start from w wea-hour boozing session in whoever-it-wis's room (Hade ley, I think). Small knots of twenty-odd stefnists each are gathered in various parts of the room, and discussions, are raging on such toplen as, "Is Science Catching Jp with Science-Fiction?" "Is God" a Twonty-sixth-erder or a Twenty-seventh-order Abstractionz", and, "What Is the Proper Last Line for "There Was a Young Man from Pawtucket'?". T he principals in our dranda are wearying of this highly-organized semantic activity; Davis has had a good deal to drink, while staying up past midnight always hias gono to Srcur's hoad.
"Ah:" says Speer, intorrupting the second varse of "Foggy Foggy Dom".
"An?" echo Kon Christanson and Al Lopez. Hizis begins the verse over again.
"Ah," continues speer, "I have just remembered the fireworks I bought

- In Oklahoma last year, which aro now sitting in Quintossence foomoons hip pocket. Don't you think--"
"Ah:" reply Christensen and Lopez with enthusiasm. Davis"commenta only, "Ah now I a bachelor, I live with my son, "but several, shaddups later he abardons his song, yed even his glass, to follow the others.

And severaj Roman candies later than that-- arrives the law, behold 1t: Tha lave or at laist two of its Philly incarnations. draws up in
squad car of Romin-cande red and makes several trite but sincere commants an the undesirakility of fireworks within tho city limits. The argumants put forwand, though for thomostw part implicit, are conviricing. Our little band collacts its remining granides and retires to tho PennSheraton Hotel onco more, and Davis begins to yodel, "I live with my son and We work at the weaver's trad. 3 ."

However, the morning's advarturas'ure not yet at an end. Next on the program is an expedition to the hotel's upper fire escapes, there to continue antisocial activities. it such a flagriant misdemeanor as this, Christensen and Lopez soor rebel. But Speer and Davis, woe to thom, can't break away from the roverberation of the Fire Cracker, from the Sky Rocket's mellow swoosh. They stind oagerly at the fire oscapes' rails,stiring fascinated at the explosions they're producing, and intorsperse the noiso of black powder with such comments as "Hot diegety..." and "Whee". Whenevar consciance or fear of apprehension overtakes them, they postpone the moril iasue by going to a different fire escape in some other part of the billding.

Woe, as I said, to tham. As thers loaving their nth fire escape for their $(n+1) s t$, they sue coming up the stilirs a regular old plathora of cops.
There is a point at which courage becomes foolhardiness, and the two consider thist point to havo boen raached now. Abandoning all facesaving attempts (but not their fireworks) they streak for the back stairs. These take them one stomy farther down before they hear below them footsteps bearing the rins of the patrolman. No saip here; they switch to in outside staircase discovered in their fira-escapo explorations. Thus down to the second floor. Shall they re-enter the hotel and scatter to thoir rooms? No, for the corridors are swarming with blue uniforms which presumsbly do not belong to seamen first class.
Speer starts to lowar the fire-scape laddor to tho ground; but Davis, displaying his well-known resourcefulness in emergoncy, restrains him. "That's too slow. Watch!" ha admonishes, a trifle smugly.

Dexterously he tears the fusos from all the remaining ammanition and brelds thom into a firm rope. "Ihere!" he, says, and also, "Heh-heh!" The mpe is tied to a rail and thrown over, and Speer and Davis shinny down. Speer than touchas a mateh to the rope's end, sending a most inspiring burst of flame into tho facas of the cops who are just now come ing into sight above.
The fime thus giined gives tho fugitives a valuable hoadstart. Taking off at a pace somewhere between dogtrot and hotfoot, they beat it to 39th Street. Thero Spear, turning to tho left, sees a squad car by the curb. Davis, turning to the right, sees a squad car by tho curb. Speer, turning to the right, meets lavis turning to tho left, and the resulting colifsion and triple-take uses up most of the criminals' initial headstart.

But, ah me: I'm not writing for Astounding now. I must be brief. Te be brief, then, the city of Philadelphia turns out to have fewer conventent hiding places and more inconvenient back fences than should hapren to any chise scene. Tho fugitives find thamselves all too soon in h hopelass position. Buildings sit cheok to choek on borh sides of
them; ahead is a dead end, whilo behind thom thoy hear a squad car itich will soor be rounding the corner and bearing down on them. They are fixbling in their hollow heels for their cyanide capsules when--
"Come this way: Hurry!" They whirle Across the street a weird, unearthly light streams from an open doorway, and there, beckoning te them stands a golden-haired goddess with beaten gold breastplates. (I sidid masr't writing for astounding, didn't I?

Spear turns to Davis. "Is that one?"
"Naw," scoffs Davis, a gleam in his eyc as ha drags Speer tomard the door. They dart inside; the goddess slips the rolt kehird them; they stind awhile in the hallway panting. (I haven't startod to expurg ate yet.)
(Now I have.)
Well then, the godidess's name is Nekeeta or Niquita or something, and she would like very much to hear "Tho Fnggy Foggy Dew", which sho thinks would deepen $h$ e $r$ understanding of this planet. Davis figures that if the cops still haven't got to the goddess's house, after all the time that $0 x-$ purgation took, the haat should be off. He begins the song.

He has reached the last verse: "And the every every time that I look into his eyes he reminds me-- " when there comes a frightful elangar at the front door. "Opon up! Where's tho guys with the firecrackers?" says an ungrimmatical and
 rather unoivil voice, and since it filis to harmonize with Davis (what sondd? the three head for the celdar.
"Quick, Chan!" urges Speor with shysterical cunning. "There's just one wiy to escape: by means of your nuciecatomic cytogeochemical extralegal hyperyputa as ptulathozer."
"Gad!" responds Davis in grait agitation. "You say by means of my nucleoatomic cytogeochomical extra-- " But alas! Spears stratiagem has been the downfall of the party instard of its salwition. The time taken for Davis to pronounce the thing's name is more than ho has to spare. Bofore he is through, the Long, frm appears; and in spite of the loss of soveril fingors to the goddess's gismotrays. Long frm wins out overm- woops!
Some time later, the desk sergeant is intoning in a voice made quito alarmingly formidable ty the echoing police station wills and $t e$ stripes on his sleeve, "Whist have you got to say for yourselves?"

Goddess: "Ser Geant: Is this a propor recoption for your civilization to give to the missary of a distant-- "
Davis: "Ferhaps you don't know who I am. Yesterday I gave a talk to the Fifth World Scienco--
Speer: "According to All precedent in equity and common law-- and I need only cite the case of -

## Sergeant:

Goddess, Speer, and Diavis:
Patrolman: "What aro the chirgos, Sarge?"
Sergeant: "Well, this Iniquito, or whatover your name is, we'vo got you for accessory after tho fact, harkoring criminals at large, resisting arrest, failure to comply with the fire laws, and practising without a Iicense. We'll hold you on
Speer goggles and smiles apologetically at. the goddess. "Um, hrumf, uh -- I used the last check in my checkbook just this ofternoon." Davis duplicates Speer's grimacos and ahems, and says weakly, "I don?t seem to bo ablo to rocull my broker's phone number."

The goddess, having moro faith in my honesty than many of my raders are likely to have after $2 l l$ this, says she quite understands.
Patrolman: "How ahout thes other two jerks?"
Sergeant: "Disturbing tho peace."
Davis: "Yeah, she is rather disturbing."
Sergeant: "Quict, you. Can you put up five dollars bail?"
$S$ and D: "Five dollurs ouch?"
Sergeant: "No, five dollars apiece."
Well, let's just skip the puns that pere made on that. Suffice it to say that $S$ and $D$ made, their poaco (!) with the 2lst District Station for tho paltry sum of ten rocks, leaving Niquita to languish in a cellblock until they could get hold of their respective checkbook and hamer and anable hor to languish under more amusing circumetances.
"What would have been our penalty in a sneialist state?" pomiona SDoax us the two adventurers straggle up Chestrust, Street towan houra.

Didvis replies only, "And the many many times that. I held her in my armas just to shicld her from tho foggy . Foggy. Dew." Aut his being is filled with a vistr ind pleasurable sense of completinal.
So on to kigger and Eatter scionce-fiction fandom: Speer and Davis look forward with high anticipation to sampling Woronto's jails in '48. And in the meantime, if any of you guys want to kick in to our Big Goddess Fund (goal: $\$ 25,000$ ), so that wo can make ' 48 the First Morldg Convention, just send your diamords and negotiable securities to--

Seedy


## GLICE IN EINSTEINLAND

When Albort Einstein pubilsted his famous papor, "On a Uniform Field Theory"; just ningteon yeurs ago, its most immediate and astonishing result was tho vast amount of interest it aroused in the public mind. We republish here ons of the ty -products of the Einstein furore, a skit published in the columa entitled "Ey-Products" which apporred in the New York Times of 1929.$]$
"'As for this new discovery of Einstein's,' said the Hatter, 'suppose we postpone our discussion of it to yosterday?"
"'Ior't be absurd,' sald nilice. 'You can only postpone things to the future.'
"The Hatter's smilo was not unkindly.
"'Not if you werg an elactron traveling backward through infinity with the speed of iight, you mouldn't,' he said. 'You'd pretty soon see yesterday, and then tho day before yestarday, and then your last birthday, and pretty soon you'd bs one day ald, and so forth.'.
"'I think she must have had a red face,' said the Dormouse, speaking with an oxcoptional fiold of gravity.
"Alice came very near losing her temper.
"'I wish you wouldn't try to be impudent and vulgar, ' she said. 'I am not an electron, and I trust. I have better manners than to go moving buckward anywhere liko a crab.'
"The hattor had by this time grown really fond of slice, and would not have hor break up tho party for anything.
"'Very well,' he said, 'I shall explain the matter to you right now; but you understand, of course, that I shall frequantly have to express mysolf ir tho tourth dimension.'
"'And what is that?' said Alice.
"'You astonish me,' said the Hatter.
"'Ion't you remabar your grammar? First dimanaion, I am; socond dimension, Thou art; third dimension. He, sho, it $1 . s$; fourth dimension, Wobody always anywhere hardly ejar shall have was. If I wore the Prussian Acadomy of Science I couldn't make it any plainer.'
"'I think you 2re talling nonsense,' said Alice. 'Those weren't dimensions in grammar you vare ruciting, those were porsons. First person, Second parson, Third purson, and that' all. \#hoever heard of Fourth parson?'
"The Dormouse looked up timidly.
"'In the subway;' he said, 'I hava frequently seen as many as four persons at one time.
"But hice morely sniffed and turned hor back.
"'Very well,' said the Hatter, 'call them persons. And what weuld be the past tenso of the second person singular, Thou? ${ }^{i}$
"'Persons and things don't have tenses,' said Allce, curtly.
"'You think so, hey?' said the Hatter, wiping the salad bowl carefully and putting it on his haad lika a skull-cap. 'Well, you'd protty soon find out how many future and past tanses Thou havest if you wore moving through infinity with the spead of lightning. Why, Alice, out in Betelgeuse--how old are you?
"'I shall be eleven next May,' sho said stiffly.
"Mell, out in Betelgeusc, which is ondy 200,000 light-years away, do you know how old you aro, right now? You aro minus 199,989 years old, and you couldn't ba expectad to undsrstand what happens to Thou when it passeth through a gravitational fiold of force and hits a pile of olectro-dynamite." ${ }^{1}$

AND MHILE TE'RE ON THE SUEJECT We'll give you this verse, by h. I. Phillips, which apparently Wis mritten at tho time Dr. Einstein s admission to the United St.ites was baing protustad by some patriotic body (just Which I mercifully forget) on the grounds that the promulgator of relativity was a dangerously subversive charactor.
" octor with tho Bushy hadd, Toll us that You're not a Red.
"Tell us that you Do not eat Capitulists

On the stroet.
"Say, oh please, it
Isn't trua You devour their Kiddios, too.
"Speak, oh speak, and Say you're notsky Just a bent space Type of Trotsky!

## THE SPANISF FANTASY MAGAZINE

## Por <br> "Bosque" J Ackarman y Elena Vasquez

At least 49 numbers of Narraciones Tarrorfficas (Torror Tales) have been published in Buanos rirus, Lrg ntina, translating fiction by Henry Kuttner, Kay Cummings, Weabury Quinn, Edmond Hamilton and many other familiar imerican names. 96 pages for 50 centavos, and apparently a monthly. Standam siz Nit': smooth edges. Each cover bears the warning: No debe leerse de noche. I have a hunch what that means but forgot to ask my collahontor. Pardon me while I go fone Tigrina --it's choaper thin longdistancing the bruja in Frisco...
firms that the slogian read. "Don't Reud at Nite!"
The earliest number
I have is the l6th, featurin Oscar Cook's La Resurrecoion de Glister on the cover. For this an artist named Boc Quet (or Bocquet?) has done a representative meirdraing of askull-faced explorer whose eyes bulge as an owl hoots behind hin. On the inside this lead story is the only one to rate an illustration, a small cut of an owl. Rest of the contents include Gans T. Hiald's El Bosque dal Diable (The Devil's Forest), Incionso Infornal by Saabury Quinn (called "Incensa of Abomination", as I recall, in Waird Talus where it originally appeared graced with a Brundage cover), La Venta de Los Gatos by GABaoquer (possibly an original), Guardido by Moarle Prout, El Aviso by Gena Lyle III, and, another namo I do not rocall; Dagney Major, with Los Monstruos.

Next numbor I have is the 20th, with a helluva good pastel cover for Honry Kuttnar's Hydra. Six heads, once human and Inhuman, float dead and dying in a blue-1it, moon-lit pool, as a detached head hangs in tho hazo in the background, staring-dotachedly. Manly Wado Tellman, Soabury Quint, Edgar Allan Poo and Loslio F. Stone are the other contributors to the issue, Poc with "F. Trip to the Moon", Quinn with a deGrandinarrative, La Casa dul Tiompo Inmovil (The House Whore Time Stood Still).

Only 3 storias in ${ }^{2} 22$, Which givas tho cover to Thorp McClusky for Dos Fantasmas: A ghoul regarding an uprootod cross which has beon invertod and riplanted on a grave, while spectres minglo with tho wind in tho background, A fantasticlassic is reprintod, Toófilo Gavthior's ivatar, and Josi Mallorquif Figuorola contributes a 41 page original, Delegado de la, Muprte, vhich my knowledge of Esperanto suggests to mo mens "ri "F Prity". This issue, incidentally, was published in 1941.
\#ु foaturos iijodo (Foar) by Figuerola, a 44 page futuristic novelet of th. warring world of 1982. into which onters "a new and torrible oloment". "Part 3 of tho Kolleyarn from Woird, "I Found Cloopatra" (here called "Tho Tomb of Cleopatra"), appoars; and Gustavo Adolfo Bécquer offors Tres Fechas, James Hilton is translated with El Mazo, and Tracc Barcas by Geo. J. Rawlins rounds out the issue. $\overline{O f}$ the latter tho blurb siys, Una luz ultratorrana guia a puorto una barca fantasmal. Solocting similar Esperanto words - Unu lumo pretortera gyidas al pordo unu barko fantazia--I beliove it roasonable to guass that moans A supramundano light guides to port a fantom barque.

In the last number I have (\#49, June 1945) the lead story in each of the 48 preceding rumbers is listod. Elena Vasquez' translation of these titles folloms:

*Luciernaga. "Noto the anciont word for serpent," says Elona, "naga, cropping out in a modern language."
"Undoubtediy the worst story you have ever printed is L. Ron Hubbard's 'final Blackout.' It is kad, not because of its style or because tha plot is dudi, tut becausu of Hubbard's vicious ignorance of mass psychology and political science, his contempt for a democracy foundod upon the pill of the pople, and his failure to take into account the historical processes of action and reaction.
"His initlal premise that a devastating war has ben raging for years until all Europe is in ruins is absurd. The first World War lastod but little over four yoars and ended because the trocps of all the Continental powers mere so near to mutiny that the few rulers who had not already been overthrown wore afraid to orden further slaughter. Three great dynasties fell--tho Romanoffs, the Hapsbucgs, and the Hobonzollerns--yet the exhaustion in November 1918 was far from beint so complete is Fubbard picturas. The masses of the conmon peoplo will undargo an immense amount of suffering at the hands of their masters, but a timo is at last raached when the peoplo mill no longor follow thoss masters to doath. The present European war started with a long stalamate on the Western Front because the rulors of France and Tingland ranc afraid of mutiny if their drafted troops were ordered into battle, und it was not until Hitler saizad the tactical advantage of attack that thoy accepted the peril of revolution as a losser evil than milit...ry dofoat.
"Moreover, Hubbard's depiction of the British Communist Farty as stupid and corrupt is a little harsh. Stupility and corruption do not appere to be rife in the ranks of the Russion Communist party; on the contrary, the results of allowing the workers todacide for thamsolves how their industries shall be run appear in the statistics on production and distribution, on the number of students in schools and colleges, and in the advances of Soviat sciencos in surgery, botany, chemistry, mathomatics, physics, et cetera. This Russian Party is tho only sot of Commists which we have yet had a chance to obsorve in action and it is sheor stupidity on the author's part to ignore factual, rocorded data in projecting into the future.
"The military achievements of the Commists should lead Mr. Hubbard to respect them. As is woll known, the Red army smashed the Mannarhaim Lina in Finland--a feat pronounced impossible by all the other generals in Europe--with fever lives lost on both sides than wera lost by the British in their disastrous attempt to land at dallipoli in the first Warld War. In addition, the Soviet army developed the tactics of landing invading troops from airplanes while other military experts laughed the idca down.
"However, I cannot respect either the intelligence or the charactors of militarists. The trade of professional murderer is not such as to attract to its ranks the highest type of person, as is shown by tho fact that milltary dictatorships--so lauded by Mr.

Hubbard--have invariably been characterized by a callous and bratal suppression of human rights wherever they have leen put into force. Compare H. G. Wells dictum that the world would one day ve under the nokle and beneficent leadership of the aviators with the wantor and unprovoked bombing of Shanghai, Canton, Ethiopia, Madrid, Varsaw by these same noble aviators.
"I hope that you print this letter, but I have my doubts; we are in times now when it takes courage to speak out against the vicious propaginda designed to drag us into a forelgn war which thebard's story contains. His praise of militarists; his contempt for the 'rabble,' by which he means trose common people who do not want war and who are willing to fight for peace, the 'rabble' mentioned by Lincoln in This country with its institutions belongs to the people which inhabit it'; his disregiard of the poner of these common people to enforce their desire for peace under our democratic constitution-all these are simply a subtle way of saying, 'Var is very bad, but it is inevitable and we must therefore follow our trave officers wherever they may choose to lead us.'
print pro-war propigend of this kind hecause most of your readers are young men of draft age who may be cilled upon to shed their blood in a foreion land for the defense of the British. Empire. De not forget that we shill be told that we are fighting for democracy if this country goes to war--but democracy is nothine else but the rule of Hubbard's despised rable, while his rule of amilitary oligarehy is a thinly disguised fascism, in no way diftering from Hitler's regime.
"If American
democracy means anything, it means the rule of this so-called "rabble."
Ray St, Clair -- Astounding Science-Fiction, Oct. 1940 EC: Any truth to tho rumor thit St. Clidir was a Futurian pseudonym?
"And about the Communists in Russia, does Mo. St. Clair really and nalvely believe that the Russian workers have the nerve to say how tho industries and other forms of human effort should be carried on? I i e dictatorial rule in Russia is more complete than in the Fascist countries which at least allev some of their citizens to elevate themselves by honest effort. In kussia the higher types of people are ground down to the level of the peasints who, by brute force only, rule them. The Russian rulers, roilizing their incapabilities to become the sort of persons in any way that the upper classes were, satisfied their inferiority complexes by degrading their betters.
"If Mr. St. Clalr thinks Russia is such a woncerful, onlightaned country, I suggest he go there and stay there.
"If all my plans for the next four or five years work out, I shall be a socond lioutonant in the amy f the Unitod States, and I can think of no graator pleasure than to nave Mr. St. Clair in a platoon under my command."
S. Murray Moore III

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\text { -- Astounding Science-Fiction, Dec. } 1940
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"My! my! such a passionate hatrad for the army is displayed by Mr. St. Clair, and such a wall of ignorance! Surely this hysteria has bean brought on by expectation of being called into the army."

Donsld Tard -- Astounding SciencemFiction, Dec. 2940 ECt Well, under the circumstances who kin blame him?
"Mr. St. Clalr, Who wrote the lead-off letter in the omerpondance soction of the cctober Astounding, is obviously orte of the Comrades. ience he possesses a remarkible amount of gulifibility and a peculiar type of logic. Very peculiar. A person who holds an author responsible for his characters ${ }^{\text {P }}$ political belicfs possesses an unoontrolled tendency torard extrapolation. Pay no attention."
J. I. Cliark
-- Astounding Science-Fiction, Dec. 1940 -0-

- "Nir. St. Clair could hardly have pickod a worsa example to prove the prowess of the fed Army than their heroic defense of Russia against the invading hordes of Finnish capitalists. The fact that, after months of trying, with an absurdiy vast priconderance of man-power, artillery, airplanes ind timks, they finally broke throuch the Finns' modest littlo strip of karbed wire and blockhouses, does not prove them mighty warriors. It proves nomore than that they were not utterly hopeless. The best that can be said for them is that thoy were shown as better organized than the Ethiopions, kettar equipped than the Chinese, and braver than the Italiaris. The riod army did bettor in its brush with Chang Hsueh-11ang's runaby Manchuri..ns in 1929. But that was before it was discovered that a considerable part of its officers corps was composed of foul traitors who relieved in rapprochement with Germany, and had to be liquidated.
"The rest of Mr. St. Clair's letter, with its use of terms of high emotional contert, such as 'professional murderer' for army officer, and its suktlo identification of the common people' with peace-at-ary-price isolaticnists, doas not seem to call for reply. His alloga tion that Hubturd's story mas pro-war propaganda mas adoquately answered in the blurt. It would be interesting, hovever, to know whether St. Clair mould be as firmly ron-interventionist in the event of a war between Japan and Fussia.
"Fin lly, my spies inform me that Hubbard is not really a Fascist symputhizor. H's a kind of philosophical anarehist, with a nayve beiligf to the effect that the military are a superior and altruistic lot who can be trusted to sat things to rights when they've been bolixed up by the corrupt and craven civilians. On $t h e$ fallacy of this last balief, at last, Mr. St. Clair and I can get together."

Caleb Northrup -- Astounding Science-Fiction, Dec. 1940 -0-
"This is the ripst time I have ever written to Brass Tacks, $b$ u $t$ this time I'm afraid Reader kay St. Cliris lattar set me off. It's about tima I wrote anyhow.
"In the first place, regarding the aforementioned reader, after reading his letter I have drawn the conclusion that he is one of t\#o things: (a) a very poor judgo of science-fiction iterature, or (b) a (five words cencored here)."

Jon F. McLend -- Astounding Science-Fiction, Dec. 1940 -0-
EC: Whew! Well, after all that maybe we should take a look at Hubbard's story, to see for Durselves. A look:
most mononotonous, and Frisman, feoling a decided gain, lost his earlier respect for this fellow.
-- Astounding Science-Fiction, June 1940, p. 142
"An interesting study for those who have the laisure for that sort of thing is the relation betmeen life and litoratura; or, in plainer language, the effect of political and economic events upon the writing.
of fietion. Those effects appour in science-fiction as strongly as in any branch of ifterature, and, I think, to a much greator extent than in other pulp fiction.
"The events of the last few ycars, having punctured a large number of illusions that wore at one time entertained by vast numbers of poople--a disproportionatoly largo number of them bealonging to the soi-distant intoiligentsia-aro interosting in this respect. For certainly history would soom to have gone out of its way to confound the prophets and the philosphers. To give a simple example, consider the military promass actually displayed hy peoplos involved in the current wir, compared to thoir roputations.
"The Boskonians--pardon me, I mean Germans--turnod out to be rathor better than expectad, and the French much worse. The kussians first did worse than anybody but the diehard anti-Communists axpacted in Finland, and then much bettor than anybody but the Communists expectad against the Germans. (By the way, what has becomo of Mr. Way St. Clair? We haven't heard a pap out of him.) The Jupaness so far have done better than they were thought able to. The only pacple who have livad up to their reputation - are the Italians, of whom Napolson's Marshal Murat said: 'These Italians are all alike: put thom in red coats, put them in blue coats, they run away just tho same!'
"A type of sciencu-fiction story that was common ten to five yerrs ago mas one wherein a dreadful war, instigated by bloodthirsty generals and grasdy munitions misors, was averted by the youne hero who elther incited the innocent masses on both sides to revolt against their leaders, or by mans of some suporsciontific trick rendered all weapons useless. The authors made plain their assumptions that (a) whenever a war occurred, the blame lay on both sides, and (b) that without the latest lethal gadgetry, men would not fight.
unately both assumptions were wis wrong as wrong could be. Alittle attontion to history might have shom tho writars what has merely boen confirmed by the evonts of the last five yars: that innocence, ractitude, and an attitudo of peaceful giva-and-take are no protection to a nation, and that, men mure fighting long before they had airplanes or capitalism. I don't racall soeing any of these stories lately; aan it be that the writors have loarned in lesson, if only temporarily?

## "Another

fallacy involvad in stories of this type is that of personification of War, frmaments, et cetara. H. G. Nells furnishes an example: in the 'Outiine of History,' first published in 1920, Mr. Mells carefully exposed the fallacies of nineteenth-cantury nationalism. with its personifications of John Bull, Germania, et cetera. Then at the end of his book he spoke hopefully of an eventual victorious war on Tar, thereby committing the same mistake himsalf. The error in such thinking was put in a neat nutsholl ky a character in Willey's story 'Fog': "It doesn't shoot; men do."
"We still seem to have a couple of similar fallacies with us; let us hope that thay will likewise disappear under the impact of evonts. They may be described as the Galahad fallacy and the David-ardaliath fallacy.
"The Galahad fallacy is the idea that my strength is as the strength of ton because my heart is pure." It finds specifio expression in the notion that courage and military skill are correlated With honasty intogeity, kindliness and other paciflc virtues. As the British pat it, Bullies ara always cowards. Unfortunately this does no土eseant to be necesgarily true. Neither is the converse true, as
riany of the Nazis appoar to believe. It is just that there ic nomor relation whatever.
"This mental climate may become a serious handicap if it leads us to continue trying to fight a virtuous and gentlemanly war. Porsonally I'm tired of seeing my side on the receiving end of all the more egregious treachery and frightfulness. Touldn't it be more desirable to establish b bureau of moral obliquity in our state department, with a section of treachery and doceit, a section of fiendishness, and so on? But perheps I $1 . a$ bettor not bear down on this Idea too strongly; a convietion of noral siperiority is in undoubted asset to a belligerent, whether thercal superiority itsalf is or not.
"The David-and-Goliath fallacy is tho notion that weakness has an inherent advantage over strongth, and smallnass ovar bignoss. Striking examples of such thinking are found in suth recent stories as The Warrior Race ${ }^{\text {i }}$ and 'Beyond all Wespons.' It his lod one of my most intelilgent and mell-informed friends to sperid most of the last threo years explaining how, by means of some choar and simple gadget or tactic, we can lick Adolf Schickelgruber and his eighty millión Boskonians practically overnight at ragligible cost in blood and money.
"It also appears in the persistent hostility of amateur military theorists to such lurge nilitary units as the brittleship, which during over a century has been doomed successively by the shall gun, the mino, the torpedo, the submarine, the bombing plane, and at this writing is doomed by the torpede plane. To quote Marshal Marmont, in a Iotter writter arout 1837: 1-from the day... that steamors, or cven snill sailing vessels, mere armod with one or two [aixans/ guns-one single shot from which is sufficient to destroy the largest ship--it kecame absurd to construct line-of-battle ships, which not orly cost cno million five hundred thousand franes, but which have become useless.' --or or the other hand improvoments, in construction, armament and tack tics may make it as useful as it ever mas. Some such improvements are clearly in sight now; but it'll be a fer yours before thoy are tried out, and meanwhile the airplanes will be improved, alse.
"So watch what happons by all mears, but don't go off the deep and with sweeping prophecies about the imperding obselescence of this or that weapon, or the imminent collapse of this or that nation, especially prophecies based on the David-and-Guliath ingog. In history, for every case Where David has licked Golisti, thero are dozens in which Goliath mash--ed David flat and choppea him irto littlo bits before he even got his sling shot wound up. It is stili true in at least ninety-nine cases out of a hundred that you can't lick something gith nothing-Mahatma Gandhi and his followers to the contrary notwithstanding. Ind the fewer stories thist are written on the assumption that you can, the better it will be for the country in general ard my digestion in particular."

Caleb Northrup -- hstounding Science-Fiction, Mar. 1942


4. The comittee on treachery is raady to report,' said Delilah, rising from her corner, where she and Lucratia Borgia had been having so animated a discussion that they had fililed to observe the others crowding about Cloopatra and the papers."
--J. K. Bangs, The Pursuit of the House-boat

EVER SINCE I begian uging research several years ago I have been the target of criticism from groups and individuals who are pposed to the extension of the humbilife span. Well, t be quite open-minded, let us have a look at the question, "Is research to the end of prolanging human life ethically justirlable? ${ }^{n}$, however obvious. the answer may seem to us. First, to keep the record straigint, we's better put down the objectives of aging research.

In the first place, dicates clearly that the reached its optimum. The 18 years, the Romans,25 a century ago the average States was still under 40 . males average 65 years,females however, the averuge is but is still down to 27 ye.ers. conditions the average Southern Europe to about Western countries. As a the human tissue without etics should give a life years, with a maximum of about 200. With a change of issut 120-150 etics, as shown by tissue culture work and by analysis of immunity curves, the avorage life spin might be about 800 years, with a probability of $25,000(:)$ as the maximum Simms, Logarithmic Incraase in MortalIty as Manifestation of Aging, Jour. Gerontology, 1, 1/. At present researchers in gerontology, the biology of aging, have their eye on the flrst goal, extension of human life to about 120 years on the average. The final coal can be tackled on successful conclusion of the first.

Furthermore, every investigator wishes to add "more Iife to years, not only more years to lifo." To extend human lifo in a Struldbrugeish senility of general physical and mantal debility would be a horror from which every gerontologist rould be repelled. Fortunatoly every lota of evidence so far indicutes an extension of the healthful middle span, and a shortening of the find senescent period. That is the goal.

Finally, gerontologists consider that if the human intellect has any value, the use of it to extand, in a healthful manner, its own existence is surely the greatest goal. Conversely, if mind has no value, with its preservation serving only to add to the total of experienced misery, then the topsy-turvy viowpoint of Poe's Mellonta Tauta should prevail and work on agents to shorton life would seem the desideratum.

Now to get to work on the critics. Let us classify them.
We have first the type that says there are too many people in the world as it is; that people on the whole would be incapable of gaining enough fram the added years to balance off the disadvantage of keeping
them on. Nevertheless these samo critics generally seem to take it for granted that they're of bettor stuff, such as could use more time on this sarth to excellent advantage; they assure me that if arything is found out they would want, to use it for themselves, their families, arci --of course:--their frionds, but to bs sure not to let it bocome public! I won't argue with this self-appointad ilto. To hell with then?

Then there are the roligious objectors. Many religious people corsider it 2 "sin" to extend the divinoly-ostablished" span of human life. musingly, they comoniy forget that all religions teach that there was a period, legendary fron the standpoint of the scientist, in which their early ancestors livad very lore pariods of time. Thay cannot, apparentIy, use logic to aprly to themsulves what they belisve their ancestors at one tima attained. Cne basis of religious objection is in sex. Most wastern religions consider sex a sin. When one spuaks of extending human life, the uninforiaed critic is likely to associate the notion With the "monkey gland" iiasce of some years back and mentally envision some old satyr triping ovar his berd in hot pursuit of a luscious 16 -year-old. He thinks that aztension of lifa cains rejuvenation of the sexual nowers alone! When inforaed ss to what aging rasearch really is such critics ure often all for it.

Take a look it tho soci-I uplift boys! Thay argue thus: In mosst parts of the worlu the avarage IIfe span is low, as notad above. Consequently wo should not work on langthening the life span until the averige iffespan of all courticis lifted to our level. By essentially similar logic it wuld seam that since nearly all of the telephones, cars, washing machinss, tc., and $98 \%$ of the penicililn, streptomycin, and the like, are prciuced and used in this country we should abandon furthor production and improvement of such itoms until the most nackvard parts of the wicrld hava come around to their use. However the social uplift sot cunnot soo this. Thoy buy a car as usual and go to the hospital when in nead of sureical attention; I have yet to see one go to a witch doctor or uso a zobu cart! Thase creatures are excellent examplos of educitad people without the ability to think. Ey emulation, and by example, most of the world mants to produco material goods the same as America. So with the lengthening of human Iffe in the United States and the westarn part of Europe, the rest of tho world's peoples will be led to accept the new geriatric and public health techniques rasulting from westarn research mi so illl raise their average length of life also.

The Malthusian political economists who hava never read Malthus also have their say. They spaak of over-population and the evils thereof True, overpopul tion is a curse. Eut thosa critics tend to think alone this ono line; they quite forget that it's also quita appropriate to use their brains to correlata this idea sith the other factors that have been found to influancs the popizlation picture. In every case in which the life span has gone up the birth rate has gone down. In every country wherein the life axnactancy is low the birth rate is high. For example, India with its population of akout 380 miliions. During the last ten yeurs her population hus incraasod by 6 millions, but the life span is Jown to ${ }^{2 r}$ years. It is surely a reasonable prognosis that if the life span goes to 120 years the rirth rata will drop lower than it is today.

The philosophers have this question for us: What is the use of living a long time? One saes so much unhappiness in the world, so much
misery, so much apathetic boredon. Well, what is happiness? I belleve more people are hippy than one suspects. First of all. a person is happy if he thinks he is, and wishes to continue oxistence. Irrationaliy or otherwise most men cherish their personal survivil. Also, in those countries that have long life spars the well being of the people makes it possible to live in such a manner as to induce happoness. I atm undor no illusions as to the primitive life, the lot of the mountaineer in the poor lands of tho world. I have seen them and lived among them, and know that the poople living there get away as fiast as they can-if the: can. Happy people do not willingly leave a place and seek another. Al-so, the biological criteria of happiness need further examination. In experimental animals the treated, healthier, longer lived animals enjoy greater physical activity, have health and spirit longer, and retain their desire for the females longer. I have seen mice at the relative age of 75 years tear holes ihrough wire netting te get to the females, while the control animals of the same age pay no attention to the females even when placed in the sume chye with them. A primitive definition of happiness, perhaps, but it's a test case! What does anyone live for? If unhappiness is so great that life should not be extended, would it not be logical to consit suicide forthwith?

Personally, I consiler aging research one of the musts for mankind, and get an intellectulal thrill from it. I would continue in it even if I knew that ten minutos after a successful solution of the problem a chain peaction would transforr the earth into a nova! A scientist often works because he likes wiat he is doing better than anything else. That is happiness.

Also from the personal viewpoint of the research worker, it is seldom that an investigator enjoys the fruits of his investigation. Thus, three of the outstanding pioneers in the ficld of aging have died without seeing their very importint work develop. Bogomolets died recently, aged slightly over 63. Robertson died at ahout 35 and Malisoff at about 50. The latter two worked themselves to death.

Do you favor cuncer research? The incidence of cancer now doubles every five year periou after the age of 35 . Thus, anything that keeps people physiologicislly younger lessens cancer. So aging research is also a form of cencer research. I know that with yeast nucleic acid the trasted inimals (mice) have only abcut $1 / 5$ as many tumors as the untreated animals.

I truly believe that of the hundrea or so people who have challenged me as to the othical side of aging resourch the majority have never stopped to analyze the problems they envision. The conquest of life is on a soientific parity with the conquest of any other natural phonomenon. Just because it touches human boines so closely is scarcoly reason for adopting the "sacred cow" attitule. Fortunately the vast majority of educated poople, and most of the untaught ones too, favor aging research whenever they understink thist it is all about. Most noople would take advantage of any alvances--providad tho treatment was short: If, as all evilence seems to inaicate, the bast rasults will require daily attention from the age of 35 or theraibout, inartia will then orevent the majority of people from taking the fullest advintedge of aging advances. This mould leave the emergency therapeutic aspects for those of 60 or over. Such mosuras would raise the general life span to about 90 years, while $\alpha t$ the same tima the fiar sighted membars of the populationspould tiake advantuge of all tho iiscovories leajing to the
greatly extended life span. In fact, that is what happens today. How many people actually use the knowledge of nutrition, prophylaxis, and preventive medicine now known? Only about $0.1 \%$ of the popalation. How n.any fans know or use all such knowledge? I have never met one yet! rou know, in order not to feel ton bad we often say we are living in an tomic age, in a modern world, and so on. Actually we are kidding ourselves. How many people have been in a jet plane? Have seen U-235, or uranium in any form, for that matter? Use the newer antibiotics as a matter of hygiene instead of being forced to by necessity? Have any conception of the advanced morld picture that modern science possesses? So we see that while our barbarian age has points of civilized interest the most part of men linger behind. We go with the mass, not with the vanguard. Instead of fretting about aging rese.arch and the problems it might create in our present day society, we will do well to consider that it will likely be our great-great-grandchildren, not ourselves, who will make the complete aprlicition of any alscoveries made today. That will be true, generally sperking. Yet I hope that this discussion may encourage some fans to take a sustained interest in this field, to learn what is possible in it today and what may be looked for in the immediate future, and to thirk about and discuss the possibilities of an extended life span for vitizing the accumulated experience and knowledge of individuals insted ol permitting them to die just when they begin to learn how to live.

Do you remember the toast in John Hawins' novel, Arix of Fire?
"May you live forever -- and I mever die:"
Why not take that as our motto? ?


## TIE PIIRONTISTERY

"Despite the great differences in philosophical and metaphysical theorles and beliefs, and the admission that we cannot even conceive What are the ultimate units or mater, every person in his daily life shows by his actions that he beliuves matter to be reil."

$$
-0-
$$

"In attempting to envis.age the mechanism underlying a phenomenon, it is necessary to focus attontion initially upon the structural level where the crucial.factors are oper.itive. Thus with radioactivity we consider the nuclear level; with chemical problems, the atomic and molecular levels. Structures of the most diverse chemicil nature (iron, wood) may function as choirs, though tests may be devised to bring out the chemical differences. As a rule changes at lower levels exert potent influences at higher levels, and vice versa. Apparently conflicting observations may of ten be resolved when structural interrelations are properly appreciated and aporaised."
"It is we who are simple, not niture."
-0-
C_E_REBBUSSIERES

Chief Cerebuster Chandler Davis is on tap, as usual, with several winsome contributions, all of which can be tackled with considerably less than a. working knowledge of the tansor calculus. Leave us hear no complaints on that score then. (NB, nothing wis said about what may have to be drug in to solve them, evolve simple general theories, etc.!)

1) PM's puzzle page carried the following nifty. Given the layout

you're to use ouch of the integers l thru 10, one in each circle, such that the sum of the absolute values of the differences of adjacent pairs is maximized. I think 93 is the bast that can ba done. I tried the same puzzle using numbers 1 thru 19 in the layout

\& got 378, which I thou pretty good. However when I sent the thing in to PM's puzzle editor he returned an implausibly unsymmetrical array which gave 381. Is thor any simple general theory, I wonder?
2) A cable containing $\underline{n}$ wires is strung across a river, after which it is discovered that the wires are not labelled. You are given one battery, one buzzer, \& an unlimited number of short wires \& labels; by successive tests you are to label the wires. What is the minimum number of crossings of the river you must make in the process? General solution (for all $n$ ) required, with proof. It took me about 15 minutes, but I didn't find the neatest method; if you're lucky you can do it in 5 minutes. [You're an electrical engineer, Lopez, how about it?]
3) Find the rule of these series:

$$
\begin{aligned}
& 1,3,7,6,4,9,10,12,7,6,13,18,19,21,25,24,13,18, \ldots \\
& 0,1,3,4,5,8,10,11,15,16,18,19,22,23,25,26,31,32,34, \ldots
\end{aligned}
$$

Of course, a solution with as few arbitrary constants as possible is wanted. I should hasten to say before you start work on these that I've
boon working a couple of days on the first \& haven't got it, \& that I made up the and but nobody ils: hus solved it so far.
4) Given throe equal circles, tangent, centers on a line. Draw the line thru the intersection of the first circle with the line of centers, tangent to tho third circle. What i's tho length of the chord cut off on this tangent by tho middle cirle? (Vary easy.)


To take a break at this point, well lot you ponder on the why and wharafore of the following misnomers, iso dredged up by HCD:
A) Tho "fundamental theorem of algebra" is not used either directly or indirectly in $\operatorname{Ilb}$ rt's MODIRN HIGHIR ALGEBRA before p280; there it is assumed without proof.
B) In tho calculus of variations the "complete isoperimetric problem" is solved as special case of the "restricted isoperimetric problem."
C) Earlier this term all 3 of my courses (Advanced Quantum Mech, Higher Algebra, \& Cal of Variations) were simultaneously discussing field theory. "Field Theory" meant entirely different things in the 3 cases.

$$
-0-
$$

The renowned Herr Doktor Professor Priv. Doz. Dipl. Ing., T. O'Corver Stoneleigh, DDT, in the course of his reconCite researches on accumulative arithmetic and the biliary calculus his produce the following remarkatio demonstration which we hope will rot give you higher mathematicians too bid a turn:

Proof that the tangent to the ellinse,
$4 x^{2}+2 x y+2 y^{2}+x+y-3=0$,
is nowhere horizontal:
Differentiating (1), we get

$8 x+2 y+2 x y^{\prime}+4 y y^{\prime}+1+y^{\prime}=0$. (2)
If the tangent to the ellipse is horizontal at any point, then at that point $y^{\prime}=0$ and (2) reduces to
$8 x+2 y+1=0$.
ut if this equation is correct then we must have, on differentiating gain.
$8+2 y^{\prime}+1=0$, or $y^{\prime}=-9 / 2$,
hich obviously contradicts our original assumption that $y^{\prime}=0$. Having hus reductioed tho proposition to an absurdum, we conclude,
$\therefore y^{\prime} \neq 0$ and the ellipse his no horizontal tangent. QED.

Now for solutions to some of tho preceding issue's nogetn naggers: Davis does the honors on Thompson ${ }^{\text {'s }}$ constructions:
"I defy anyone ignorant of projective geometry to solve DBT's 2 little teasers. Using projective methods they go thru mkay. Both require the following construction: Given a lino segment AB with its midpoint M, \& an outside point $P$, to construct a line thru p parallel to $A B$, without using a compass. To do this, take an arbitrary point $D$ on NF . $M D$ intersects $B P$ at $E$; $N$ intersects $B D$ at $Q$. Now suppose $P Q$ not Parallel to $A B$, so that they mot at a point $R$. Tho quadrilateral PEQD has pairs of opposite sidasmuting at i, B on $4 B$, also its diagonals cut $A B$ at $M, \underline{R}$. Therefore $A, M, \underline{B}, \underline{h}$ form a harmonic sot, and since $A M=M B$ this requires that $R$ be at infinity: $P Q$ is parallel to AB. QED.
"Now DBT's second problem is this: Given two nonparallel coplanar lino segments with midpoints, and a point outside their plano, to construct a plane thru the given point parallel to the plane of the given ines. We simply use the above construction to get lines thru the point parallel to both the given lines, \& there we are.
"The first problem is mossier. Given a regular polygon $A_{1} \frac{A_{2}}{p} \ldots A_{n}$, fth $n \geqslant 5$, to construct a similar polygon with a given point $\frac{p^{2}}{2}$ as one rertex. First, we find tho midpoints of all the sides $A_{i} \underline{A}_{1+1}$ and of all diagonals of the form $\underline{A}_{1} \underline{A}_{i+2}$ as follows: If $\underline{n}$ is oven , draw the lino between tho intersection of $A_{n} A \frac{n}{2}$ and $A_{1} A \frac{A}{2}+1$ and the intersection of $\underline{A}_{n} \underline{A}_{2}$ and $\underline{A}_{n-1} \underline{A}_{1}$; this cuts $\underline{A}_{n} A_{1}$ at 1 ts midpoint. Also $\hat{A}_{1} \underline{A}_{n} \frac{n_{2}}{2}+1$ cuts $A_{n} A_{2}$ at its midpoint. If $n$ is odd, draw the lino between $\frac{A_{n+1}}{2}$ and the intersoction of $\underline{A}_{n} \underline{A}_{2}$ with $A_{n-1} \underline{A}_{1}$; this cuts both $A_{n} \hat{E}_{1}$ and $\frac{A_{n}-1}{2} \frac{n+3}{2}$ at their midpoints. Similarly construct all tho midpoints in question.
 $A_{1} A_{2} \ldots . A_{n}$. We know wa can construct $\bar{t} \frac{p}{1} \frac{P}{2}$ parallel to $\bar{A}_{1} A_{2}$, the point $\frac{P}{2}$
 lino thru $\underline{P}_{2}$ parallel to $\underline{A}_{2} \hat{A}_{3}$ at a point $\overline{\mathrm{P}}_{3}$; tho lino three $\vec{P}_{2}$ parallel
 Nil certainly satisfy tho conditions.
"I'm sure this isn't the solution Thompson intended, but I haven' $t$ dreamt up any other way to go about tho thing." LDBT's salutions ara essentially the same as yours, Chan, only Don used a diagram. Wo leavo it to our readors to translato your symbols into Thompson's diagram. This good for your semantics, chums; worth a hundred hours at the ifferential.]

Davis also solved Rothman's two problems; so too did Al Lopez, by dint of blood, sweat, toil, and Steinmetz symbols; like se:
"I) Eliminating superfluous explanations,

$$
1^{1}=\theta^{\ln i^{1}}=\theta^{1 \ln 1}
$$

(In means natural logarithm)
Our problem thus is to determine the value of the logarithm of a comflex number. Let $u+1 v=\ln z$. Then
*

$$
\begin{aligned}
z & =e^{u+i v} \\
& =e^{u_{e} i v}
\end{aligned}
$$

But $e^{i v}$ represents the vector angle of the number $e^{u}$, and $z$ can be represented by a number $r$ at an angle 6 . That is,

$$
e^{u} L v=r L \theta
$$

Now equating magnitudes and 190 we obtain:

$$
\theta^{u}=r \quad v== \pm 2 k \quad \text { ( } k \text { has all values from } 0 \text { to } \infty \text { ) }
$$

or $u=\ln r$
Hence in our original equation $\ln z=\ln r+i(\theta \pm 2 k \pi)$
Whence for our problem $z=0+1$

$$
=1 \angle 90^{\circ}
$$

a nd
and

$$
\begin{aligned}
\ln z & =\ln 1+i\left(\frac{\pi}{2} \Rightarrow 2 k \pi\right) \\
& =i\left(\frac{\pi}{2} \pm 2 k \pi\right)
\end{aligned}
$$

$$
\left.1^{1}=e^{1 \cdot 1\left(\frac{\pi}{2}\right.} \pm 2 k \pi\right)
$$

$$
=e^{-\left(\frac{\pi}{2} \pm 2 k \pi\right)}
$$

whence it is seen that il is a real number with an infinite number of values, depending on the value chosen for the arbitrary constant $k$. For example, for $k=0$,

$$
1^{i}=e^{-\frac{\pi}{2}}=0.208
$$

"2) If $z$ is a complex number whose real part is zero, then

$$
\begin{aligned}
& \sin z=\sin (x+i y)=\sin i y=i \sinh y \\
& \cos z=\cos (x+i y)=\cos i y=\cosh y
\end{aligned}
$$

The hyperbolic sine varies in value from 1 to infinity.
The hyperbolic cosine varies in value from zero to infinity.
[Note that Lopez' solution has the sine going to infinity through imageInary values. While this satisfies Milt's conditions, since there is only one "point at infinity" in the complex plane (unlike the Cartesian xy-plane which his infinitely many such points) which is approached along any axis in tho plane, we may add that tho sine can bo made to
approach infinity along the real axis, too, by taking z as a complex number whose real part is of the form $(1 \neq 2 k) \pi / 2$. Then

$$
\begin{aligned}
\sin \left[\frac{(1+2 k) \pi}{2}+i y\right] & =\sin \frac{(1 \pm 2 k) \pi}{2} \cosh y+i \cos \frac{(1 \pm 5 k) \pi}{2} \sinh y \\
& =\cosh y
\end{aligned}
$$

Which is real and approaches infinity as $y$ is increased without imit. 7
"The addition problem with a little deduction and a lot of guesswork resulted in $\mathrm{I}-1, \mathrm{~F}-2, \mathrm{~S}-3, \mathrm{X}-4, \mathrm{E}-5, \mathrm{Y}-6, \mathrm{~K}-7, \mathrm{~T}-8,0-9, \mathrm{~N}-0 . "$

Here's Rothman, himself, with something to say on Chan's asteroid problem, and some other matters which fit in as well here as olsewhere.
"Today, in lieu of studying for my mechanics final. I wasted a lot of paper on the asteroid artiliery problem, working out elliptic orbits until I was blue in the face. Finally decided you can't shoot a shell at $45^{\circ}$ and yet have it land at the antipodes. This is with the gun at the north pole. Mebbe if you had the thing on the equator and the asteroid rotated fist enough jou could workit. Well, let us hope your orbit calculations did not cuse you to lose as much sleep as did the astronomer who discovered the new asteroid. The grift of the artillery problem is that a shell firod at $45^{\circ}$ will fall short of the antipodes if fired with anything less than escape velocity, while of course if the muzzle velocity is oscape velocity or higher the shell goes off on a parabolic or hyperbolic orbit and never returns. As Davis remarked: One friend of mino (no stoop) set tho problem up \& got the oxplicit answer without roalizing that for $45^{\circ}$ you have the escape velocity \& the projectile won't come back. Incidentally, if you try you may succeed in worrying yoursalf about the fact that the escape velocity is the same for all angles of takooff. What happens to the angular momentum of a projoctile like tho ons in the problom??"
rotating body which Spoor brings up is certainly not $\frac{1}{}$ trivition of the my naive, Nowtonian days, I used to think of inertia and contrifugal force oxisting ragardioss of tha surrounding univorso, but it seoms that in general rolativity this is not so. Eddington's "The Mathomatical Theory of Relativity" has a soction entitled The Electromagnatic Nature of Inartia. So thora is more to this than moets tho eyo.
all out of probloms for the problom paga, but wa might let the ganluses in tho FAPA takc a swing at the old clock paradox of rolativity: Two space ships sot out in opposito diractions, so that f has a velocity of 180,000 miles par sec rativo to $B$, and likawiso $B$ has a velocity of 180,000 miles por soc rolative to A. Aftor oach travels an equal distance from earth, they reverse thoir paths and return, to meat at tho place whero thoy loft. According to tho time dilitation formula of rolativity, when they moct dgain-A thinks B's clock ought to bo slow, and likowise $B$ thinks A's clock ought to buslow. What actually happens? Hell, Milt, I sprang that one back in Efty-13, to tha complete deyas tation of all available goniusos. If you can explain it, pray do!

## 政-shour

"'The dandios, tho fops. Tho fandios, the dops. Tho doppies, the fands. The dondies, tho faps....'" - Franz Werfel, Star of the Unborm.

by Ray C. Figs


Star-nosed mole, who Ives in tunnels he digs underground, slightly enlarged.

TERRY DESMOND, Writing in a recent issue of Dodge NEWE, ia anxious to learn in answer to the following questions: How would you like to try swatting a house fly as big as a collie dog - or to scamper around tho house, broom in hand, in draws his name?
"Such a world of giant insects do es exist", so says Terry, "but it's the photographic. world of Iynwood M. Chaco, a nature-alist-photographor." His specialty is that of taking "olobem upi" of some of tho most horrible and odd looking insects in the gallery of lower-lifo forms. Such specimens would make Bofris Karloff 'green with envy', ono would presume.

Chase, has, succooded in bringing into sharp focus the fecpal expressions of flies, moths, spiders, grasshoppers, beetpes - through ingenious to dification of basic camera equipment.

In his trips afiold to socuro closomp studios of insect lifo, Chaco carried small cameras such as the Exalt 35 mm , and tho Reflex Korollo $2 \times 2$. Those, howovor didnoti provo satiafactory for such closeup work. A bollwos adaptation was added.

Thus, in this weirdly magnified world of Chaco's, the eyes of the common fly become giant soerchlights, their. loge 11 ke horse's limbs, their faces take on the appoarence of poodle dogs.
[Don't shoot, Chaco - wo want to stay our natural
001f:)
$E$
S
I
a department of positivistic negativisms............................
W
STEFUMBLERS 3.3: Nopa, I bolicve I vould facl considorably perturbed if the scientists should by and large adopt Dr. Wiener's viaws in toto. Although his motives
R are surely irroproachable, there soem to be a number of things sariously wrong with his argumonts in justification of tho
A action he takcs. It is unfortunata, for example, that he should offer such gross misstatamants about guided missilos
$R$ as his roasons for rofusing to participato in thoir development. What Ilne of reasoning leids to the curious conclusion
T that such missiles can accomplish nothing boyond the indiscriminate dostruction of civilian populations? Civilians do
$N$ got killod in wars, most surely, and aro ospocially oxposed if they livo and/or work in regions contining military, in-

- dustrial, or governmantal activitios vital to tho war effort. I can only raport a question which I'vo askad bofora in this
C column: Wherein lies tho dichotomy between "civilians" and slain in warfare? Until such a distinction is shown to me-nor until a missilois perfected that is destrustivo only to Kremlins and pentagons - I must porsist in considering tho destruction of aithor olvilian or military porsonnel oqually brutal but, unfortunatoly, avoidable only to whatover extent wo can make war itsalf avoidablo. The assertion that our dovelópment of missiles would furnish no protection to our divilian population (one might as woll add military to civilian in such a statoment) involves the w.k. offonse/defonse dichotomy whose fallacy should noad no further demonstration. At that wo hive not montioned tho probable devalopment of countormissilcs which afford the only known moans of destroying alroady-lanchod missilas short of thoir targets.
grant, for the sake of tho argumont, that a scientist's rofusil. by withholding information, to pirticipato in military rosourch can in some instrances be justifiod by spocific arguments compariable to Wiener's for missilg research. Fron so, we ought still to examine with circumspaction tho offocts of such policy. As Wienor admits in hia own oaso, he cannot accomplish anything bayond a more protest, and tho possible convarsion of somo uthor scientists of liko mind so a similar course of action. Thoro are broadly thrac outcomes to which such an act of protest might lead. fit tho luast it will oncourage scientists to undertako an oxtonsivo roaxamination of their rosponsibility as suoh to humanity. This is most cortainly salutary, and indead is quite mell undor wray alfoady. Tho curront (March 1948) Bullotin of tho fomic Sciontists Emonthly, \$2.50/yr., from 1126 East 59 th St. ${ }^{2}$ Chicago37 has a considor:ásia symposium on tho quastion; it displays a comfortingly wida divargence of opinion, incidentally.

To tiake tho rovolt of the scientists into its second stage we assume that sciontists will actuajly tako Wionar's position in sufficient numbers to hindor seriously the devilopment of now and daadiar wapons by this country. What then?

At this stage wG cun't postulatG unanimity of opinion among scientists as to the wisdom of Wianer's coursa. Sentiment will be dividad betpaen fear of the nev weapons and fear of the enemy, with equally well-meaning nen turning up in one camp or the other as they differ in their evaluitions of the political and social climate. Wiener in his letter exhibits politicar evaluations which many of his colleagues must doubtless consider extreme; I rather doubt, for example, if Dr. Karl Compton sees oye to eye on this issue with the distinguished member of his math fac. ulty. So it won't altogether be a matter of the scientists withholding their talents from the crooked, wamongering, politicians, or from misguided engineers, technicians, and second-rators. It will be scientist against scientist, and "I can't help you on that; you're on rocket research" counterposed to "We've got what you're looking for out at Brookhaven, but the FBI won't clear you." This sort of thing will make a travesty of the meeting of minds in science; perhaps it is the unavoidable down piyment on survival, but I don't think the scientific world will ever take it with resignation. Furthormore, if wo can't expect unanimity of policy among sciantists in this country, wo must have aven less hope for multilataral acticn by sciontists internationally. Polftical conditions under the onciy ragimes suggest strongly that scientific opposition to whatevor inmanent programs they may be undertaking would recaive short shrift indad, as compared with the ralative. freadom with which Wienor and thuso who juin with him can say and do as they have. This could lead tu $\quad$ Gighting the balance of powor in armaments in.. favor of individuils and governents whose behavior has thus far been so unreassuring that fow.of us trust them at all. What, too, of the reaction of scientists in the smallor countries to the laad ourtain abcut our own workin nuclaunics and rockotry? At prosont they seom rather generally tu have beon repelled into an insistence on publishing their own work without restriction. We must expect them to be conlly disposed tcward any conscrship at this time.

Considerations like those
leave the third stage, in which sciontists have achioved an effectivo. legree of control over tho applicaticn of thoir disccvarios through tho odium of a unifiod program fcr withhclding goneral publication of informaticn deemed likoly to bo misused, a highly unlikely one. However, even granting the omargenco. of a surt of sciontific guild/priosthood in controi of all crucial. technolegy through its monopoly on sciontifio and technical knowledge, there isn't much chance that an organization of such power could long maintain its integrity as purely an crganization of scientists. As the arbiter of all important politioal and economic decisions it would wind up by taking unto itself those political and ecommic functions, and with them, no doubt, the functionaries. The resulting elite would be utterly dangerous because of its utter unbeatab111ty.

Thus, while I recognize that Dr. Wiener's expression of his vievis is necessarily limited here by his purpose and mediun, I have taken the foregoing oxceptions as a counsel against going overboard for so vastly simplified a thesis.

Hey, Bill, is your exclairing over Gardner's "...the first dozen best novels published in Starting..." intended as a gramatical criticism or a literary onc?

The Explication of the Feoblo is onlightening, but scarcely oxhaustivo. You've but scratched the surface, lad. For exampla, "Unglish ilttlosure" P litaraturo purveyed by Unger, a bloodsuckor of Brooklyn 4, Now York (USA). (iittlasure $D$ tho chore of tho
leech.) Also Unglish $D$ hungerish = hungry; littlesure $D$ little sure: $A$ nultiple reference to the fanish zest for science-fiction, to fans as a class, to a famous essay on fandom by one HCK, to the plight of authors Tho write nothing but science-fiction, and particularly to authors who 3old to Gernsback. Also glish DBlish, with the distortion in spelling recalling ghughuism and other matters now better left interred. Whence TJnglish $\supset$ unblished $\supset$ unblessed by Biish. Also littlesure $\supset$ a ittered shore; a reference to the Gernsback delusion worked through Sir Isaac Newton's famous words: "I do not know what I may appear to the world, but to myself I seem to have been only a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me." The implication here is that the science-fiction reader finds the shore so littered (with the usum litter one finds on bathing beaches, namely paper ( Dhigh order abstractions, also fan$z$ ines), crusts of bread (the staff ( $\supset s t f$ ) of life), and morsels of lunchmeat ( $D$ lunchmeat)) that he never even gets to see any pebbles or shells. This should suffice to give un idea of the insufferable richness of the Fooble. For a comprohensivo disquisition on this particular phrase I refar you to the chapter on Unglish Littlesure in the 5 th volume (now in press) of Stoncleigh's "An Ectomisation and Defenestration of the Feeble of the Who's and tho Guilden Yeggs".

I did not spell it "Willimczyk"。

The atomicohyerophoscilloscotimeter ad is streamofconsciousnesslike. It's interesting to find that the theory of thing things does have practical applications after all; it's a fact I've long suspected. . . . Well, now, leave us have at least me vote in favor of the joke page; I'm a sucker for such things. And one more vote for Free Bottle... les pass the bar 'round once agin.

EXPLAGAMINATIAN pp: 9-14: Ah, if only it were "fargobrawlers", what fun we could have!

GGENBITE OF INNIT 4.5: Verdoux, I should imagine, is a pretty accurate andlysis of what chaplin is driving at -- yes, even to the animate-animoid compartmentialization. The elocutionary style of writing, though, is one that suffers in its relation to this very audile reader. I must say much the same for. Credo, too, though doubtless my impression that it's precious is largely rooted in my simon-pure ignorance of what it's all about. What's existentialism? I Ilked the Kurt List article when I read it, but scarcely romember now just what it contained. Jim's piece was excellent; it must have beon published after Renascence was withdrawn from Vanguard, for I don't recall anything quite that good in the issues I recelved. Recordia: Ah. now there is Lowndes in the style I like.
SNARK 6: I don't mind the roprints, Doc. (Anything, yes, anything to Get out of sonding anyone matarial of my own!) Probably any comments on your objoctions to the proposcd VAPA/FAPA morger should now be modified in tho light of recentest developments. But since I don't yet know just what's bohind tho lattor, I'Il go ahead anyway with what I imagine I'd've said if I'd had timo last time: I think that the otjections based on administrative differences between the two apas are somewhat contrived; we could probably offect a satisfactory compromisc or even adapt totally to FAPA procodure if we really wantod to, without latting the change affect the contonts of our magazines. The art of
getting along in the FAPA nowadars is much liko that exhibited in tho mundano apas, namoly to string along with your particular clique and more or less ignore what you don't carc for. However, thare are those Tho apparently can't adjust in this may with sufficient ease, and as long as we've a substantial number who feel that association with the FAPA would seriously interfere th their enjoyment of our activities -t's likely safest to remain independent. Anyway, it's doubtful. If, the l'APA would take us in as a group now that its membership quota is fil1ed. Amore valid objection to amilgamation is that the considerable amount of juvenility now previnlent in the FAPA would repel the type of recrult we re looking for: it must be admitted, though, that Vanguard, despite its loftier standards, has been singularly unsuccessful at the recruiting game. Our efficient Boi does get us members of considerable talent, but once in they seldom have much to say nor da they stay long. It's markworthy that our most active racruits are also fapans. Which serves to commend Stevenson's suggestion that those who want a wider circulation and more exchanges: than Vanguard affords go biapian. Then if most of us eventually do that we can consider closing domn VAPA; this, however, is unlikely to happen if those two intransigents, Lowndes and Blish, continue to put out more copy than the rest of us do all together.

SNARK 7: "Street-words-or-peol.'s words are not necessarily bad words; they usually spring iuto being to name something for which no name has existed." Well said! (And ith such an amusing study in hyphenation thrown in for frae, too.)

TUMBRILS 13: Gad, Blish in VAPA and Speer in FAPA to contend mith this time--my aching back! ih weal, I've plenty of cuvils with the fragmentary comments, some of which I'll have to skip. As for the rost:

I've beon impressed by the axtent to mhich advertising is devoted to plugeing items of tho sort one buys inyway in his day-to-day shopsing; yet the advertising's not wasted if it creatos a preference in he customer for tho advortisor's product, oven though that may not bo iignificantly different or bottur than those of his competitors. Most pooplo aro swaycd by that typo of advortising simply bocause thero's no point in rosisting it, and I\&Il bot that you ara, too, more than you realize. The advortising analogy soons protty shaky to me, but I refenin from rocking it any furthor. Maybe numbers and siza don't count so wuch in human relationshins, but, onother, human attitudas do! Whonovar large numbors of poiopla got th sam iduas at tho same timo and beliovo in them intensely, you'va a combination to reckon with. I remember vory woll how everyone I talked to on 8 Docamber 1941 felt. fill of which but leads to my provious argunant, which still stands. Wall, I won't demand a comparison of tha historical miliou of Martin Luthor's crufanac Ith that of the WRL, since it probably would ba unfair hockling for details; you might think it ovar, though.

Uh-who did you say promisod Thom that a domonstration (to Japaniso reprosontativos, i presumo) of tho atomic bomb vould procido its military uso? Spoak up, lat's havo the complate story on this doublo-cross - if it actually happanad, that is. I'm at a loss to imagine who in the Manhattan Project was authorizod to make such a roquast on bohalf of tho scientists as a group, or who in the govarnment could unqualifiedly grant it. Certainly tho Manhattan District sciontists activoly oxprassed their opinions and woro in consultation with the governmant ragarding the uso of the bomb; for instance soc Szilard's "Momorandum on Atomic Bombs and the Postwar Position of the Unitad Statos" (Bullatin of the Atomic Sciontists. 3, 12),
submitted to the President in March 1945, and referred to Secratary Bymes on Roosevelt's. death; the report of the scientists' Committee on Social and Political Implications headed by Dr. Franck (B.A.S. $\frac{1}{2}, 10$ ), thich went, to the War Department on 11 June 1945. Finally, an even more representative opinion was expressed in an informal poll by secret ballot taken by Daniels among the Chicago scientists on 12 July 1945 - (B.A.S. 4, 2) which together with several petitions and lotters went irectly to the White House, and was immediately acknowledged. This poll had reached more than half of the scientists at the Metallurgical Laboratory, and all who were approached voted. The results showed $15 \%$ favored full military use of the bomb, $46 \%$ favored the experimental demonstration before militiry use, $11 \%$ wanted public demonstration of the homb's effectiveness with subsequent military use withheld, while $2 \%$ felt we should keep our atomic dovelopmants secret and refrain from using them in this war. In viow of this range of opinion, who was it who asked for 2 "promise". on bohalf of the "scientists of the Manhatten Projoct"? It appars that in any evont tho military use actually undertaken coincided pretty wall with the majority preferance of tho Chicago sciontists, falling as it did botwoon the first and second altornativas. Possibly full military uso would've been made if the bombs were avallable in numbor (which they woren't), but I seo no point in conjecturing over that. Remember, too, the unanimous report of the four representatives of the scientists appointed to consult with the government, which stated, "We see no acceptable alternative to direct military use". Are we to string up Fermi, Lawrence, Oppenheimer, and A. H. Compton along with Truman and Stimson as "war criminals"? In short, Jim, your assertion seems to be without foundation in fact. I'd suggest that you carefully investigate the source from which you got it, in order to spare us if not "emotion words" at least outright untruthe.

It would inde日d be astonishing if the arguments for American policy in using the bomb, influenced as that policy was by the recommendations of the scientists and other able men who were certainly aware of its onormous implications, should be so easy to demolish as you assert. Parsonally, I still concur pretty well with Stimson's report, at least as far as the use of the bomb at Hiroshima. Our swift follow-up. at Nagasaki, though of undoubted military value as a bluff, implying a striking power which we did not in fact possess at that time, could, I feel, have been deferred and probably avoided altogether if we'd chosen to tuke a calculated risk in so doing. But men aro still homo saps, and the Japs then wero not the funny little men wo now take them to be.
minor quibble: "Terror bombing of .. civilians" scaroely can, or noed be, excused under tho lex talionis. It's a part of the very effective tachnique of saturation bombing, the purpose of which is not to mako resistance by the enemy unprofitable but to mako it impossibla. The lox talionis, on tho other hand, is not concornod with subduing the malofactor, but with the application of a crude kind of "justice" dosigned to mako tho criminial profession an unprofitablo ono.

Your points in connaction with, the offectivaness of resistance against superior force aro woll takon. A ragime that has to bo maintainod by force probably represents a state of unstable oquilibrium, which is an ancouraging thought indeod in a world that seems moro than avor to domonstrato tho political theories of Silas MacKinloy.

I don't objoct to tho use of emotional terms per se in this discussion; I do objoct to their uso whan they are inac. curataly descrigtivo or whon they introduce affoctivo eloments which in-
terfere with rational evaluation. I cannot see how such a demand can be construed as a desire to exclude pessible action on the ideas. (In fact, I always did say there's nothins like action for getting things done.) What manner of abstractions are you taking as referrents for "universal nilitary training" and "conscription" that you seie no reil difference between thom? Ma, I rafer to universial military training ${ }_{1 m} 1948$ and conscription usa, 1948 and find plenty of difference between them 9480 f the two, I consider conscription the lessar evil for these reasons: (1) is unvarnished, dircct, military sorvitude it is an institution that the American pooplo ar unlikoly to accept on othor than a temporary basis in time of morgency. (2) If war should come the conscript troops would undoubtedly $b$ of somo usc. Mis, on tho other hand, saems to ma not only wall-nigh usilss but also a far moro insidious danger, in thet it is likely to be passivaly acerpted as a permanent system. Those most directly affocted by it. ar without tho nolitical powar to do anything about it; furthormor, it is susceptible to whatever degrea of sugarcoating and watering-down may be reeded to sell it to the boys' fond mamas.

Thanks for granting (verbally) that the draft-card burning was "meaningless" statistically, but it looks nevertheless as though I must continue to worry the notion, even at the risk (about to be realized, I fear) ef an arid discussion of the meining of non-meaning. If the WRL demonstration did in any degree "pound home into the noggins of our mil-itary-headed State Department that an unknown proportion of its draft army is going to be disaffected" I fail to see how such a result can be at once accepted by you as both accomplished and "meaningless statistically". Nor, on the other hanc, cught a demonstration that the area of disaffection was negligible to le regarded as statistically maningless. I'm sorry, Jim, if i seem to be latoring the point, but i must make it as clear as I'm able that when. I used the term "meaningless statistical1y" I meant just thit; I did not mean either statistically indeterminatel947 or statistically ineffectivel947. As near as I can make out. you have equated all three of these terms, or at least are equating terms 1 and 2 on Mondiys, Wednesdays, and Fridays, and 1 and 3 on Tuesjays, Thursdays, and Saturdays. Now when I condemned the draftecard burning as morningless, I appliod the term in the same sense that I do if I say that the equation, $3 x+=5$ is meaningless. Obviously the equation is sense-free because an essential part of it is not there; not becauso thare's a term which is not written bacause it's negligible (0) or unknown ( $y$ ) or irralevant ( 10 voits). The missing term in the WRL demonstration consists in the lack of correlation betweon a small outburst of disuffaction ameng civilians in Fobruary 1947 when the draft was obyiously on tho way out and the probablo disaffoction in an army to be drafted at whatovar unknow dato in tha futuro a conscription and or UMT program could bo gotton through Congross, and probably during a scvors war scare. If you WhL boys can whip up a comparable demonstration a year hence, whon it soms likely that conscrintion, at laast, will have been enacted, or cven right now, for that matter, I'll probably grant it statistical mouningfulnoss (ovon if you ungratafully do. not! ). f.t the worst it would confirm what I suspect to be the oaso; namoly that the WRL and its sympathizors (even including dissident old me) are and will likely continue to be an ineignifieint minority as long as the present difficult international situation persiste.

As to
whother such activities would be desirable is another matter, of course. I feel that there's cause for concern with the possibility that they'll do more harm than good, and that tileir harmfulness to the promotion of
pacifism may increase with their "strtistical effectiveness". I don't know whether or not the WRL has rated a notice in Tom Clark's Index (which I somehow missed seeing), or how it has been making out at avoid ing the fatal endorsement of the Communist Party. The last doesn't really matter much, I guess; if the WhL succeeds in making much of a nuisance of itself it'll be tagged in the public mind as seopy, anyway. (Even the comparatively staid Bulletin of the ftomic Scientists has had some trouble keeping its name clear.) And in any event I don't want to see you go to jail; I'm doubtful about how much pacifying you'll be able to accomplish out of choksy, but it's a sure thing as to how much good you can do within.

Well, I haven't boned up on the Rt. Hon. Lord Vansittart's contentions, so must inquire as to the sense in which I committed my alleged Vansittartism: Did I actually by mischance hit on the central thesis of his position and thus commit myself, lock, stock, and barrel, to the Vansittart policy? Or, if our common locus is more marginal, is it so peculiarly a doctrine of his Lordship's school that verbal precision demands its bnine termed a "Vansittartism", presumably replete with all the affective connotations the word possassos? Be that as it may, I'll attompt to ans:or suciz of your quastions as appear capable of boing answered:
 has 1 ong boon one of my minor orthusiasms, and still romains for me tho most (Indoed, only) lucid and objective oviluation of nationalism in its various manifestations (of which Toutonism is but one) I have yet encountered. He makes out a good case, I think, for why the Germans tend to think and behave as they do, and why Teutonism is off-trail from the other western nationalisms. I'm not going to rehash his disquisition here, as the book is quite commonly available (Dover Publications, 1780 Broadway, NYC 19, currently has it at the remainder price of $98 \notin$, incidentally). If this putting the case off onto De Sales $1 \mathrm{~m}-$ plies that I am tiking my data too much predigested, I'll admit that this may very well be so. I'm not a scholar and I haven't access to much of the pertinent iliterature; yet one of the reasons dor De Sales' making such a spectacular hit with me on first encounter was the way in which he confirmed and collated my previous unorganized impressions of the German character. In particular he shed a great deal of Illumination on a problem that had bothered me during the thirties, namely just what it wis that was wrong about so much of the German science-fiction which Gernsback imported during those years; e.g., Ludwig Anton's "Interplanetary Bridges" and nearly all of Von Hanstein's stories on the "Electrapolis" theme afford interesting juxtapositions ef intransigent nationalism with a pecullarly infantila exaggeration of the wish-fulfilment motif. Thus neurotic symptoms crop out in a quite sizaable block of prowara German stf. But in any event, I bolieve that the data justify at least the following generalizations: That Naziism was not a philosophically isolated singularity in the German cultural pattern; that that pattern had been Nietzschean in tone for a nistorically. significant period of time prior to the advent of the Third Reich; and that its manifestations in Naziism were psychotic.
(2) "Do you subscribe to the hypothesis of collactive guilt for crimes committad by people?" St. Alfred have mercy on you, Jim, and have you stopped berating your wifa yet?! Obviously I cannot give a catogorical answor to this typical damned if you do/don't question, since it's quite meaningless (except possibly as a psychiatric datum). On specific considera-
tions, however, I'Il give you tyo answers which may assist in our reaching an understanding: (a) As I said last time, I belfeve that the Allies were justified in taking the war int Germany, not only as a matter of military expedience but also as a quietus (harsh and cruel-meer~ vinly:) for the folk-myth that German military might is actually undefeated and undefeatable; it just jot sold out the last time by bad, mad, or craven leadership, but the nexi time--Sieg! I also confess to an emotional, irrational, reeling, which I don t pretend to justify, that the nation that stirted tia last two great wars ought to take some of the pasting along with the unoffending low countries. (b) I am not in favor of a good many (probably most) of the postwar punitive measuras taken against the Geman peopie. The donazification program, in particular, I believe is being blindly and stupidly pursued in a way that may one day prove disastrous to the peace of the world.
(3) Modern Germany,
from the time of Bismarck on.
(4), (5), (6) May I take these together? They all seem to be based on the premise that a political, or geographical, or ethic, or any othor unit of population is identical with tho simple sum of its Gloments. Fathological, nonsurvival idontification, m'boy. You chonge, gay, the political divisions and you perforce change the structural relationships batricon the eloments, which correspondingly chinge the reults tu b, ctod. Cripes, Jim, do you think that psychotic behavior in th individtal arisos from a puraly intarnal derangoment of his nurili falctions, 隹hout any relation to evants in the world outsids him?
(r) I'd huzard a guess that psychotic Nietzschqanism might be transmitted by the same genes that transmit hookworm.
(8) Must I znswer all these in tie necessary detail? I've already missed another deadine as it is. If I may be general. I'Il say that I regard all historically existent nationalisms with which I've an acquaintance as considerably unsane; I confess I don't follow. the line of reasoning whereby you classify nationalisms rooted in such diverse causes as religious fanaticism, groed for wealth and power, expansion of active peoples into geographical on economic vacua.. all as manifestations of psychotic Nietzscheanism. This is not to say that I don't recognize Nietzschean elements (not necessarily psychotic) and psychotic elements (not necessarily Nietzschein) in nationalisms other than Teutonism. As - For the quastion of "guilt" for nationalistic axcesses, I have already indicated why I raject the quastion. Thara may be some doubt in my mind at times as to what I am tilking about hora, but I am pretty positive that this was one thing I mas not talking about.
MEANHILE 1: And to think this was the "unknown" whom I blackbalied for mombarship back whon I mas 'hird Constrictor on the BoA! Hatemo, Stevie, I dosorvait!...... I don't know the history of Efty-last's covers; I filchod it from a Haldoman-Julius booklet of silly vorse. is Specer pointed out in FAPA, thore's another stanza which I omittod.
"...if it's Hamilton you know damn wall it isn't sci-oncor-nor adult fiction." You came frightoningly naar to getting a sormon on this toxt, Burton. Howover, I'vo nover yot startod a sermon on page 33 of an obsequious Publication, and don't intend to let no procodents looso at this timo-no sir! Instcad I'll just romark-briofiy, I hopa. I can't altogathar 30 along with your sentiment here, avan tho I recognizo that much of tho iifforence must lio in our doubtloss different raferronts for "adult fiction". The point's that while, for (by
your yardsticks) good and suificient reasons, you don't care at all for Hamilton, I do like to read a certain proportion of his output and find nuch that is admirable in it, and I don't believe this liking is altosether due to a possible predilection of mine for bangoang space opera.

I hope one day to get around to a long-planned essay on the role and Imitations of exact science as an element of science fiction, as I have long felt that the literary effectiveness of the so-called "science of science fiction is primarily a matter of its proper presentation and only secondarily of its soundness or absurdity. If the author has the skill to make the reader accept as fiction a notion which in cold reality may be ridiculous, he is of ten quite justified in doing so, I believe. There is much excellent science fiction to attest to this. Admittedly most of Hamilton's science is bosh, but he has written stories which I have read with a pleasure that was not greatly diminished by my knowledge that they ware scientifically impossible.

## My

first oncountar with Hamilton happened to coincide oith his first appearance in Amazing "Stories, back in 1928 when the ghastly Paul covor for "The Comet Doom" scared hell out of me. The story did, too, and I was interested to find on rar ading it rocently that I still found it an enjoyably suspenseful chiller-diller, even in these days when I no longer refrigerate casily. This, daspite the fuct that the "science", such as it ain't, of trie story tikos some hair-curling liberties with the accepted fucts about comets. The plot, too, is strictly from stock, aith metal men who descend in cone-shaped "space flyers" (to dredge up a nostalgic old Gernsbackism) and sot up machines on a lonaly island in order to sover the earth from the sun's gravitational attraction and cause it to be towed away into intarstellar space by tho inexorablo gravitational fiald (sic!) of the graen comot. All 11 fe on earth, of course, is theraby doomed to bu snuffod out forthwith by the deadly gases (sic!!) of tho comet's onvelopg. Yat out of these poor props and others oqualiy dubious Hamilton whipned up a tale that I stili can rank among the better oxamples of tho atmospheric scicnce figtion story, and as one of the extromaly fow which have (for me) succeeded in doing anything with the horror motif. Hamilton, whatever his other faults, geldom overwrites an emotional scene; it's his very sparseness of style here that brought to life for me such elements as the malefic comet beings, whose cylindrical metal bodies, equipped with cable-like tentacles and topped by a cubical head, foatureless oxcept for four glowing lenses, glide about with silent efficiency on spidery metal legs, and the plight of the two human captives forced to choose between death and etermal iffe--as comet men in metal bodies, and of the revulsion of the narrator who sees his companion gradually swayed to the lattar alternative and at length submitting to the grisly operation wherein the living brain is transferred and a new machine, differing from its companions only in having but two logs, tontacles, and eye-lenses, arisas to join in the comat men's activitios as tho discardod human body is destroyod with a flash of tho droad "light ray".

Well, possibly the forogoing is but a demonstration that my plarsure in scienco fiction is considerably more thalamic than yours. I've no particular regrets at boing so constituted; I enjoy it, and I onjoy roading storios which stimulato that affective feoling for tho outr' and marvolous that I havo tormed sense of fantasy". Even in his loss odifying productions, Hamilton quite commonly manages to put ovar somo fillip which docs that to mo and theroby adds savor to an othorwiso insipid dish. A case in point, I belicve, was his aerly sorios in Weird Talos whorain tha oarth (or was it the
univorse?) was savad with monotonous regularity from an endloss variety of melancholy fates at the hands of spider men, snake men, even liquid en. About the only thing these stories possessed which causes me to reember them with wore pleasure than pain was their depiction of the strange camaruderie of the earthm in, Dur Nal (I think that was the name), and his crew of fantistically assorted extraterrestrial entities as - they went about their orld-saving with unquenchable blan.

I don't wish to imply, though, that wy appreciation of Hamilton is so utterly non cerebral. On the contrary, I recill offhand quite a number of his tales that left me with consider food for thought. The changing viewpoint of "The Man V'ho Ivolvad", Mich I described last time, interested me vory much; it's an idea. with story possibilities that have yet to be fully exploited. Le Cirp's "The Exalted" is an example of what can be done with it. "The problem of allegiance in "The Conquest of Two Worlds" was one that created quite a discussion in the letter column of the old Gernsback. Wonder Stories. The mystery of "The Space Rocket Murders" found its solution in the form of visitors from Venue, when the peaceloving inhatitants of that world feared for the consequences if their planet became accessible to ths W.ar-like men of earth; hore Hamllon made an early, and possibly oricinal, use of this plot.

I think it can
be sald, therefore, thet Haniltou has araly shown himself to be capable of writing considerably bettor stuff than Captain Future. End of semon (which seams. to have merged despito risolutions to the contrary).

Hell, if anyone threw "sf rs" at me, I'd probably translata it as yet another veird avoidance fcr "Ians". . . . The Fan Mail from VKE I didn't get aithor until its asutoric maning was inadvartently revealod to me in a lettor from Davis; it turned out to be an allusión to my remissnass as a corraspondant. . . . . I don't know of any fans who arg simon pure Korzybskiltas, though there may be some who think they $2 r \in$.. . It's konstan'tsio.

Well, which of the dutifully publish d FAPA things this time suficer so pianfully by comparison? I'Il admit as valid any complaint ovar roprinting the proviously-publishod Davis item in but slightiy drossod-up form; it's still good fun, though. Tho Ackerman-Vasquez articlo is a prortinant contribution to tho scantly-rosoarched ficid of foraign-languige fantasy, and, whokintel Fr. James?, may even shed some light or tio psychotic Niotzscheanism of the Perón rogine. Finally, Gardnor afain with a scienco articlo this time. I doubt if you'll like it aly bottor than'his others, but isn ${ }^{\text {c }} \mathrm{t}$ it intoresting to learn what a sciontist thinks of his own work?

I'm slightly
astounded that any similarity in stylo should bo found botwoen the writings of the ovar-up-in-arms roliheim and the importurbabla Chauvonet who was prone to get excitad more over the outcoma of a boat race than ovor that of the human raco.

Well spoken on animate al' Matson; I felt the same but didn't have the patisnce to put it down. . . . Widner contributed the cartoon thet hodod up Corebusters in Efty-16; It was inadvertent, though, and probably oughts't to bo considorad actIvity.

HORIZONS 9.1: I'd fecl guilty if I passed this ovor without the usual acknowledgment of its usual excellenca; however, the
only comment I can think of at the moment is to mention that Amazing's predilection for bellowing out in caps hit a new high recently with a 3tory in which some deific character rambled on for a page or so without once descending to the lower case.

SHARD: Such an enthusiasm! 'Iis well placed, though.
SNARK 8: Well, I've dipped into both symbolic logic and general semantics to a small extent, and must report that the logic, which I studied first, hasn't yet been of very much use to me. The semantios, however, hit me hard on first encounter as something that i could apply immediately and frequently to everyday situations, and this I have been doing, so that now I find it pretty much habitual, even though, as must be abundantly evident, I can scarcely claim that I've had my s.r completely overhauled and vilves ground...... Perish the thought, of course, but I still can't help wondering what would happen to Vanguard if both Lowndes and Blish were to disappear from the roster.

DISCRETE 2.3: I can agree somewhat with Sostman's forebodings, though he does set up a number of implausible minor conjectures (e.g.., Patton would've played the Hitler role had he lived). Are we, however, becoming so reactionary in the face of the present impasse? I am more than over amazod at the faflure of the isolationism, Which was so powerful an influence on our prewar policies, to become articulate again in this postwar era and in this country, which could get by with and (temporarily) gain more from isolation than could any other nation. Quite to the contrary, we seem to have taken, and are proposing to take, some astonishingly long strides toward internationalism. Indeed, to me the present anti-red hysteria seems to be based not so much in a trend to obsolete, prewar, stiandards as it is in a too-messianic interprotation of the role of Amoricanism in the new internationalism. Currant history soems more than ever to work out the pattorn described by Do Sales.

As for Honry's conclusion, I'd put it more diractly to say that the immediate problom is to reach an undorstanding, not with international, upporciso, Communism (the ERP secms a roasonably good way of doaling with that), but with tho presant Russian state. But how can wo bost accomplish that? Ought wo to force tha issua of obstructionism in the United Nations at onco and attompt to strengthen that body even at the risk of the withdrawal of Russia and the satellite nations? The purpose of this, ideally, would be neither to wage a jehad against the Russian system nor to bring about an era of good feoling in some (necessarily) miraculous fashion. Rather, it (again ideally) should serve to actualize tho domocratic nations' potontial suporioritios in physical and morial ressurces and to use them shrowdy in tho gamo with Russia. Bg that as it may, it socms good senso that if wo can no longar hope for an offectivo world federation with Fussian participation, thon we had botter do what we can to achiove tho most effectivo alternativo, a Streitian union of like-minded nations. Is it. such an unrealistic dream to imagine that we can do this now, in this decade? In many respacts the possibility of attaining such a limited objectiva seems at the prosont most sanguine (in tho figurativa sense!). It appears that the exasperating and frightoning rcality of Russian intransigence has succoeded, in this country at least, in arousing a nowerful sentimont, both popular and official, for revision of tho un into a considerably more poworful authority than had socmed realizoablo to us at San Francisce in 1945. Certainly it is a remarkible phonomonon to find Congross In an eleotion yoar ongagod in formulating moasuras aimed at ostabilsh-
ing a politically and militarily potont supranctional authority, Remarkablo, too, and hoartening, is tho socctaclo of the town motings which havo taken time out from locil prooccupations to vote resolutions calling for an all-out world state. Hiav. wo over lived in such an atmosphere taforc? It would be a tragedy were this wave of internationalist sentiment to dissipate in futility when we might ride far on it toward the planet-wide federation we so desperately need. Yet in the end the nossibility hinges on the sobering questions; Can the UN survive walkout of the Russian bloc? Will the nutions who would join in a universal relinquishment of large areas of sovereignty risk doing so if other nations abstain? To me it siems only common sense to assume the answer to be affirmative. Nevertineless, I am concerned to find among others such a one as Walter Lippmann, who is procably the most astute political analyst of our day, strongly advocating the onposite view. I am unablo to discount this; I do wish, though, that he, Marshall, and the others who have spoken out against UN revision at this time would stata thoir cases more explicitly. I've an awfully queasy feeling I've lost track of the score:

From this distance, tho lrublish-Lavis controversy looks to me no more meaningful than any t. $r$ variant of the el heredity-environment fistwidding. Argurisnts oi tiat sort genarally arisa from misuse of the labol "instinct.", and iu thit not what you'vo bagn up to here? Is not "altruism" bottur tage d as an abstract sontimant, in tho psychological moaning of the tim? Santiments, as racall tho dofinition, aro supnosed to bo acquirod factore in montal lifo wheroin one or mora innato tondencics (i.e., instincts) havo kocomo linked to particular objocts or situations in such a Kay that tho amotions typical of the instinct(s) are evoked by the situation(s). The ordor of derivation, or acquisition, is, I baliove, from instincts to concrato sontiments to abstract sentimonts. In the cas of altruism the innato factors involvod are siid to be the sog. "tander instinct" of solicitudo for offspring and the "herd instinct". Thus we sce that while we have inborn tenden cies involved in and inscparabla from altruistio bohavior, those tondncies are not por se "altruism", or "social instinot", or whatever ono may choose to miscall it. It's a very dangorous analogy 80 compare human society with that of a bec-hive.

INTERMDDGE: $\quad$ By comparison. I'm tompted to roname the presont bolus
TUMBRILS 14: SMAPA? No-vialue orientition served up cold, bgod! Well, that's an unfairly curt dismissal of your essay, to be sure, but I haven't time now to comment more than brfskly. (Cheor up, though; you'll undoubtedly be able to draw me out eventually to stomp about on the battlefield long after the other warriors have gone home.) Brfskly, then, you read, as though you had plumped for direct action in the first place and are trying to ritionalize it in the second place. Though bad semantically, that, in itself, might be quite tolerable had you done it without doing such frave violence to the formulation of "scientific method". Ex. A: "That method cannot operate on fractional or false premises, and no other perises are available to us now." D o you know of any apolications of scientific method which do not operate on fractional premises? Ex. B: "rthere are two varieties of scientific method, one of which, operation from an astablished premise, we have considered above. The other, which consists of behaving as if Italics yours a given set of premises yere true until the evidence indicates
otherwise, is called empiricish, and in politics it is the Mark of the Beast." Why the dichotomy? How are premises "established", if not empirically? Finally, the examples of scientific empiricism in politics which you cite as evidence of horribleness are exemplary not of empiricism but of dogmatism; nicht wahr? In general, the pattern of your argument seems to be that of this somewhat dubious exhaustion of alternatives whereby you arrive at individual action, which remaining alternative then becomes, by an alchemy I scarcely comprehend, the acceptable alternative. . ...In solidly with you in a liking for the seedy crosswords; they ire tougher than they look and personal enough to be fun.
STEFANTASY 3.4: Thanx, Bill, for them kind woids; I wish I would pubIIsh more often, but I von't!. ... As for the "Veterans of Future Wars", wherever did they get the quaint idea. that future wars are going to have any veterans?
HAIR I. rose: Major Slutch sounds ditogether too much like the character whose Hagerstown lecture on atomic energy wis reported to us by Harry Warner some time ago.
VANGUARD AMATEUR 4.1: Sotting up standards for who shall radd our outsay the least. Any conceivabla irruption of substandard material into the mailings obviously must b blamed on tho member who publishos it (don't look at ma like that!), whilo as for "paculiar mail", I don't think ovan Degler in his heyday ovar ovartaxed anyono's wastobasket.

AGENBITE OF INWIT supplement 1947: In tha groove.
SNARK 9: Don't blame Chan for that possibly innocent "thorough familD. theo. Whority with...Reich ramark. That was me joshing Davis, not jerned, am happy, and' ve oven racruitad anothor member myself so soon! -. . . y y as, the Bar Harbor Philharmonic: They ajwiys wera a sprightly lot. There is, howovor, no truth to the rumor that the destruction of the town by fire last season was duc to the unmitigated elan with which they rondorod Tschaikowsky's 1812 Ovarturo. Incidantally, the allusion to the BilP Was singularly apt for me, as I rocall how often I used to confusc Dr. Russall Ames Cook of the Portiand, Ma., Symphony with Dr. Claronco Cook Little of the Jackson Canceresearch lab. of Bar Harbor.
UP-BEAT 1: I wish I could get york like this out of my mimeogranh. or me, for that mattor. . . Without looking up the contoxt of tho phrase, I'd axplicita tha "k" of "tho k pross" as "kept". ....What is the unconditional avaluation that makes me a fan? Doubtiass I have some of the formur, but I can think of none that seom protinent to the lattor.
UP-BEAT 2: I practically nover use whut symbolic logic i know, but then I know vary little symbolic logic. As I said back a form pagos, genemal somantics scoms to mo moro immediately usoful for everyday situations; symbolic legic scems to tic in battor with math., at loast whit few of tho more extensive treatises I've ancounterod all were oriented mathward. Of course mathomatical concepts and techniquos may turn out to be of incroasing importanco in daaling with probloms wo commonly think of as far removad from math. Honry Lanz, for oxamplo,
in his book, In quest [two words! $]$ of Morals, uses the mathomatical notion of invariance and a notation borrowa fron the tonsor calculus. A. current projoct of mino is tha investigation of these Lanzian ethioal quations to detomino, if I can, whothor they'ra roally a useful techiiqua for probloms in bthics, or simply an illustrative analogy. 'I'vo Lot read any of the Mits series, but should imagine from reyiews that they'd furnish karely nore than an orienting background, and at that robably should be combined with readings in the various popular and semitechnical works of Keyser, Bell, and Russell. What me badly lack is a comprehensive backgrould traatinent of panthatics corresponding to Eell's monumental Development of Mathematios. As for an introduction to the manipulatory tochniques of symbclic logic, there are any number of elementary books that presuppose little or no previous acquaintance with logic. You'll find a briaf bibilography in Parke's very useful Guide to the Literature of Mathonatics and Physios; he recommends Tarski's Introduction to Logic and to the Mathodology of Deductive So1ences as readable and stimulating. I would suggest ushenka sheory of Logic, perhaps because it's tho only ons with which I'm closely acquainted; howaver it is a brief, Iucid, and. antortaining exposition and can bo gottan through easily vithin, fow woks, even though it claims to provide sufficiant tochnique, to noble tho student to road the famous and formidabio Princinia. Pifit. tica:0i. Whitehedd and Russell.

JWC $3 r^{\prime}$ 's
out at Air Trails, or rathor retirato, his doific spot in the background of Sests far-flurig or in? I hadn't noticed, as I abandoned fir Trails when it went biack to Pictorlil again. I should ve asked Campbell at Philly just wotholl ho was toylng to make out of the magazine, anyyay. Considoring the spocilizud nature of the magazino and its advartising accounts, any attampt to convert it into a genoral science periodical would seom impnactical; bottor it would bo to rovive the old S\&S Propross, Which piloted tha Sciance Illustratad policy back in tho iarly thirtios.

Don't mind my commant on Icky, Burton, Itwas in jost: Thore was it, and I, and the diadine, and I had to inink of somothing unny, quick (don't ask mo ry!).

HORIZONS 9.2: Yos, it is astonishing what meaning can now be read into that five-your-old fishley. announcement, and especially the temminal cartoon. I wonder how ruch is raally thare and how muoh originates in our dirty minds.

PHANTEUR 4: Welcomo to our littie forcing framo, Don!
QUARTERI 1: is woll-nizh uncomantableion by tho likes of mo.

"THAT'S WHAT WE'LL GET WHEN TTE HAVE SOCIALISM, FOLKS:" DEPT.: London. Ihursday, spril 1. (AP) -- Britain took ownorshio hodnosday midnight of 21 the nation's eloctric utilitios, sixth major antorpriso to bo natlonalized undor tha labor govornment's sodialist program.

> YET MORE DEPT.: By all the rules of the stanjey style shest, that preceding page should have wound up the mailing reviews for this issue. For the past six months or sc said issue has been falling almost-periodically between the two stools of tahellwitdedeadlinei'll postmailit i'll putitinnanexmailing without pull. itself out of that potential well and alight upon either. While it's certrinly bigh time something was done to break the vicious cycle, and indeed we could have hit the former alternative this time, it: nevertheless appears that the soonness of the l8th mailing has caused us once again to lemniskate around the postmailing resolve and accelerate wildly nextmailingward. Leaving the foregoing cluster of metaphors for the delectation of our puzzle fans, we therefore hold forth for yet another turn of the glass and review the l7th mailing:

STEFANTASY 4.1: You and me both, Guglielmo: I'm down with a severe case of surplusmania myself! It's a fact that I've recently begun to dovelop a disturbing interest in alectronic widgetry, and that is a trend which can but, and disastrously for a scjence-fictionist-just look what it did to Calapbell! Aready I've gone so far as to build an oscilloscope and I now sperid hours staring with hypnotic.fascination at the squiggles I get on the screen. Jazz, I find, gives more interostine patterns than doos symphonic music. Does this moan that I am insensitiva to the fincr things in wavaforms? And then there's that clatch of 1 -kilopatt transmitting tubos; I'm still unsura as to what I bought thom for, but how, could I pass, them up at 90 cents apiece? I'II probably usa them for the RF heator I've bean accumulating parts for, providing I can locate a 3000 -voit plato trinsformer at tho price. I can pay befor tho surplus markat drias up. Lot's all got bohind the surplus fmatour Parts fssociation and its program to stamp out amatour journalism and other forms of juvenila dolinquoncy!
the rotary MeHoathrow's ad for still peddias carbon mikos of World War I vintage, inough of course it docsn't mention that qualification. As for the bomb-sight deal, Lesserstoin's latast flyor advisas that thay also can supply usad atomic bombs (not in good condition, not guarantocd) at a lower price:

How
now, Sir, what d'yo mean "it doosn't matter much how I feol about motabol..."? You'ro fiirting with dofoatism. Yos, you can bo a militant anti-motabolist; just purchase tha largo, conomy-sizc, packet of CyanoTabs. (Or would that maan involvoment in ascapism?)
SNARK 1: Woll, how about giving us tho Lowndasian revision of "Tho AnImold Idea"? Perhaps it would prove more afcoptabla to some of us than did Matson's vorsion. (It could scarcoly prove lass so.) find I'm sure your version would ba much more warthy for fighting-over purposas.

SNARK 11: The "oxistontialist" formulation of "froodom" is too much two-visluad to suit me. (Though your formulation of that formulation is somewhat bottcr.) Tho troublo with thoso two-valuod things is thoir tondoncy to bocomo ono-valuod to a cortain typo of mind, or undor tho stross of circumstances. E.g., M. Duval, late of the underground, who wont over to the Nazis whan captured and threatoned with reprisal on his family,had to choose betweon the altarnatives of saving his oomrados of the resistanco or saving his wifo and childron. Sinco
the alternatives existed with regard to the situaticn, he wis "fres" to make a choice, therefore he was "responsible" for the choice he did make, therefore M. Duval after the war is over is to ke harged as a collaborationist. The famous unanswerable question of the Ediscn 3cholarship tests. about whom to save from death in the desert, is of a similar nature. So too aremost of the questions about "guilt" which bedevil Fr. James so. They're all more-or-less aristotelian in that they assume the objective existence of an abstract "cerebral man" who can weigh such issues with the fine, objective, precision of an analytical balance. Van Vogt's "games machine" might do that, but we can't.

PHANTEUR 5: This is somewhat more representative of DB than was the needs. "As Time Goes By" is an excellent job. In re "philosophy" it probably needs pointing out thet the intuitivo-philosophical approach, as opposod to the empirical-axperimontal, is one that. nas latoly assumed a strongly-intranchad position in some branches of modern scienco, and thus cannot be lightly dismissed. This is particularly trua of cosmology, of course, since in this field obsorvation affords us at bost only highly cquivocal dati, whilo exporimental cosmology, as of tho twontieth century, is in a primitiva stato, to say the laast. Hence wo cannot readily discount th. admittodiy mystical lucubrations of Eddington and his school without pretty much jattisoning cosmology as a "scionce". Boll has discurssod tho rolo of Pythagorean "numbor magio" in scionce in his vastly amusing littio volume, Numorology, and has latoly followed it up with a moatior and more sorious troatment, The Magic of Numbars. As Boll has it, tho basis of this invasion of numerology into tomplas formorly held sacrod to scionca, lios in tho assumption that the structuro of the physical univomse is mappable onto the structuro of mathematics, while the structure of mathematics is all mappable onto the structure of the arithmetic of the unanding sequence of intagars, which supposedly is man's one trustworthy"intuitioi". However, as Bell archly observes, "The tribes of the Amazon Basin"--whose number system consists of 1,2 , many--"were not consultod." on this last point. Presumably, then, by investigating mathamatical structura one theroby acquires informition about the physical world. You can evaluate the worth of this approach as you will; wa havo little assurance that we'll ever be able to apply tha pragmatic judgment of whathor or not it works to thoso ficlds in which it is most likely to bo vigorously apoliod. Mo, I'm still an ompiricist. But still it is very intoresting to find Bell, who is quite nonaristotelian and cartainly not in tho least inclinod to philosophically unsound, howover unappealing it may soem to our predo inantly Baconian orientition. In fact, at one point he throws out the exciting conjecture that tho advanced "science" of a thousand yoars hence may be one without laboratories and that our present-diay oxperimontalism will thon bo thought a highly naivo and primitivo approach.

UP-BEAT 3: Woll, there must ba a fingoring mark for notas to ba hit with the had, for I most certainly recall having scen somewhere, yoars ago, a photograph of an organist who usod a skull cap Which wis fitted with a projocting metal rod for the purposo of hitting cortain keys of the console.
HORIZONS 9.3: Footnotes and litoraturoferences aren't supposed to bo tucked away in places where they won't get in the way of the reader. If you read the proface of almost any introductory toxtbook you'll general-
ly find an admonition to ignore the notes of any particular chapter or section until you've assimilated the text.......There's quite a bit of difference, I'd say, between the orientation of a medical practitioner and the orientation of, say, a nuclear physicist. The MD's are rather closely and directly concerned with a variety of ethical questions relating to their methods and procedures; also they are pretty well organized by the AMA, which one does not often hear of being accus. ed of liberalism. It may be, though, that through the present rise to influence of organizations, such as the FAS, devoted to the social aspects of physical science, we shall get eventually, as an undesirable by-product, an increased measure of reactionary orthodoxy in the pure science fleld. . . . The Lone Indian Fraternity seems to be misnamed, since it appears to have untold legions of members. So it may wield a more potent influence than you think. I hae me doots, tho.
"Right now
the VAPA is in the vory uncomfortable organizational situation of a bunch of poople who aro sitting around trying to convorse and unable to think of something to talk about." HUH?!! Otherwise. I gonerally agree with your analysis. But I'm vury poor it difect convarsation, as speor once testified, and furthormore do not know of anyone in Rockiand to whom I'd confide, say, my faparemarks of a year or so ago anent the othics of infanticide.

I wish I could recall where I got that "Ein' Feste Burg" item; I also wonder about the authenticity of the evidence, if any, for the reputed great antiquity of the tune.

TUMBRILS 15: This is most remarkable: There seoms to be absolutely nothing in this issue to cruse me to assume my usual purple hue and jump up and down in rage. Perlaps I'd better look thru it again more carofully. The Discourso on Prosody finds me a surprisingly interastod auditor; I'vo long had a mildly Sylvester-like attaohmont for tho pure mechanics of versification, and shall enjoy going through this collation of the subjact, evon though I'd scarcely contamplate using it--my ploasure in versification mochanics not extending to mechanical versification.... Thesc Forteans never fall to amuse mo with their positive affection for the most difficult and complicated theories concoctable in preferance to simplicity and directness of hypothosis, and surely the "Halonic Theory is the prize example of this sort of thing. Your footnotes arc delicious, and the functional order in which thoyire stacked really sends me..... This in... uh, this fan checks you summat on Planot; I cian't recajil an issue that I considered really good, but equally I don't remomber any for boing a totaloss. Why couldn't tho axis governmonts (and specifically the $J$ a $p$ govornment) have accoptad unconditional surranden And uso of the atomic bomb seems a passing stringo moans of making it last longor and cost more. I agreo as to tha unsanity of the supposition that goographical location prodisposos the politicel orientation of a (4-dimension21) pooplo. Wharo and when did I assort such a thing? That is, you undorstian, not the samo thing as tho statement that given the ascendancy of a given political philosophy in a particular region, the pooplo being born in or migrating to that ragion will tend to acquire its political comploxion.

DISCRETE 3.1: A very fine thing, all tho way through, but right at the most acutely. (Thus, oh thus, do I avonge your putting off comments on Efty-sixteon from VAPA to FAPA and vice versa!)

