## ERG


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Subscription Rates:U.K. \&1,00 for 3 issues U.S.A. $\$ 2,00$ for 3 issues (please send doIlar bills, NOT cheques) Other countries..International Money Orders...or by mutual trade agreement...fanzines, books, magazines etc....and this can be arranged for by Stateside readers as well.

## MINI-ERTITORIAL

In 1959, when ERG first appearea, fanzines were as plentiful as meteors in SF films....and they all went in for large anniversary issues (if they survived for twelve months). However, the effort involved in gestating and giving birth to these mammoth affairs almost invariably killed of $f$ the publication on the spot.

Since my only ambition for ERG was to onjoy publishing i.t, (a motive which seems inexplicable to certain modern, self-styled, 'critics') I never noticed the first year sliding by...or the next, or the one after that. Tricky things these years. Before I knew it, the 20 year mark was approaching. I succumbed and put out an Annish. The ripples had hardiy dies away, than I realised that another, year end was loomine on the horizon..the bif one, 21 YEARS of publication. Other francines have earlier first issues... but only ERG has survived with a regular quarterly schedule...I purr slightly at the thought of having set a record. you are now holding Britain's oldest regular quarterly fanzine. ....and I have a sneaking suspicion that it might also be the world's oldest regular quarterly....unless of course, you know differently.

Whole forests were decimated to bring you this issuc, treat it with care. Regular servicing will ensure that it lasts for years. Avoid getting eye-tracks over the pages as this detracts from the tradd-in value.

Now that the 21 year mark is past, I can forget annishes for a whilec.. 25 years should be a good target for the next one. However, since this annish coincides with my retirement after 32 years teaching, future issues will bite more docply into a teacher's slender pension (Even if the clegr Comittee which has now been sitting for TEN MONTHS. "finally reaches an agreument about teachers payl. So, ERG must become an even more limited proposition. Postal rates have been hiked punitivoIy...just mailing out a year's issues takes 54p. In viow of all this, I can no longer hold the previous subscription rate. New rates are listed above.... I hope you will subscribe, as free-loaders must now be drapped, If you do not subseribe. or respond by way of regular trades or lemtemerm afraid weili havo to part. Unless you prefer to trade with kee by hay of mainmine or SF magazines. III accept any SF magezitic, space travel, aircraft, cinema or similar
publicationn．．Popular Science，Popular Mechanics or whatever，at its face value，in trade for EivG．Finus，if you send ne fow issues of Popular Folyine to to a face value of $\$ 2.00$ ，ther you get the noxt three issues of ERE．If in doubt，contact we first and well work something out．

For Usina readers，I fancy an alternate schene．Subscribers who make no response to the magazine are not really viablo for its needa，as their cash does $N O T$ cover the noterials and postage involved in mailing＇an thom an issuc．．．so，how about this ？If，on receipt of $\operatorname{Brg}$ ，you amil a decent（or，that＇s subjective，but you get the idea）woc and enclose app in stamps，you will autonatically get the next issue．Wo both gain，You get four issues per year at the old rate．or a saving of alnost $10 y$ an iasue．I get feedback response from the roaders．If this schome proves satisflactory，I plon to phase aut ardinary subscriptions entircly．The nane of the gario has to be RESPONSE．I hope youlll play it friends．

Every so oiten，I get a Iottor asking how ryy stateside trip is firming up．Tror new readers，let me state briefly that Dave Kyle and Lynn Hiclanan（with Ifirst Fandom）havo arganised a fund to got ne over to an American Conventione．the Toreascon in Bcston．．（（and if any rich．kind philanthropists want to mail in a dollar or a couple of grain，tho peace tic send it ian．．．Jynn Hickman， 413 ottokee St．，Wauscon，Ohio 43567 USA。 or to me in the U．IS．．．．．thank＇se kindly，one and aII））

So，the plan winds to maturity after several previous setbacks． Next August 22，Val and I fly out of Heathrow to Boston，and will be staring at the Boston Sheraton for that weelsond．．．．Friday until Monday ．so jî you live in that area，why not drop in and visit ？？on N nday，J eatich the 11－30w plane to Detroit where I shall be aecting up with Lynn jfielman（any chance of a brief detour into Canada，Lynn？）and drising down to Whascon．On The Wednescay，Illi be transforred to Minhacl Banks and visiting a couple of Acrospace Muscuriso Thursday we set of fo torive back to Boston，arriving there
Fouctey：Smptasth in time
for ToRjaciout 2 and a ravizion with Val who will Erve boun whooping it up at the Boston Shorisitom in ay absence Gonos Monclay，Sopt． inst，and the 9－30 pry filicht out of Boston（Care to host us frow noon to gmj0 aryone ？？）and back to the $\mathrm{U} \cdot \mathrm{F}$ 。 and a king sまてe trip repers to type． onend ex courses nolving a sound filum of the rhole trip．
see yout memry．



The question, "Car mactines think ?" hinges largely on what you mean by 'think'. One dictionary J corisulted save 'think' tha to 'work out in tho mind. ${ }^{\prime}$...thich, since maohinos doH't havo minde, wond seom to maice on end of the problem. On the ather hand, if we accept 'ainds as the part which does one's thinking, then we've gone the full circle and if a machine can think thon it must have a zart which does the thinking.

Let's try again. "to think, is to work outo...somewhere." Well, can a machinc do that? Cbviously, we dor't mean work out the anowor to a simple suri if somebody prosses tho butcons fur it....as in a calculatoro However, if our machine wil?, in the ridst of somo other process, docide that it needs to know. osey, what $2+2$ makes, and proceeds to work out the answer...then that may bo thinking.

Careful thaco..if the machine's instructions (its programo) tell it to do such a task if need be, then it is morely following what it has been set to do....'if thiso.do that' and is exhibiting no more brain power in the thinking departmont than wher sprinklor which decides the rochil is on firc...and tharetore sprays water in $2 l l$ directions...even if tho heat cones from some clot lighting up kis Meerschaum directiy beneath the termprature sensor.

I would funcy that if you offer up a problen to a machine, and the machine digests it, mulls it over and finally decides on a course of action which will result in solving that problenl..then that rachine may woll be thinking. Let's digress a monent and look at another typo of behaviour which is generally elassod as thinking. an animal in a mazo. After a fow attempis at throading tho maze, proficiency is gained and tho animal roducos its errors to a minimun. Is this process 'thinfing'. If it is (and most pet owners would swear that it is), then we already have thinking' machines in existence...plus widgets which wander around in search of nower points to plug thanclves into for a remeharge, a process analagaus to one's pet hunting out the hidden dish of Krunchy Kernels of whatever...without a sense fismell, I night add.

We talk elibly of animal 'intulligence' and the skille shown in learning tasks - the peamsorting pigcon or the antics of the trained dolphin, maybe even the trained guideadog. All these seem to exhibit thought patterns which pass for intelligence..or 'thinkinct. But maybe they
are sinply conditioncd responses... 'Do this = ehting that' or putting it another way, when we train pigeons, dolphins or guide dogs...are they 'Icarning by conscious thought'..or are we just progranring then. Eren if you plump for the forr $x$, In inclined to wonder if 'learning' ism"t the binloécal oquivalent of the machine's 'progranning'. After all, ranchines can be built to do the peamsorting trick and other activitiesa within the physical \#inits praced upon then by their design.

If by such rule-of-thunb yardsticks as the ability to 'learn' how to do various tasiss we assesa the ability to think....then we Do have thinking nachines with us today. Howover, I nust sacily aduit that peasorting, baze running, newspaper-fetching and other antics are largely stinulus-response affairs, and as ouch de not necessarily indicate there is intelligence hiding under the thick skull (or hatch-cover). Admitted, a certain mount of menory is requaned...but machines have menorics. . bobiks, tapes, discs, bublie-nenpries, and flip-flop circuits will all help a machine to remenber your wife's birthay. A boilor themostat will note a temperatufe rise and adjust its heatine accordingly, but no one would clain it "thought about the task.

To solve the problen, Turfing proposed non-visual connunication (phone or telegraph) between hunan (A) anc contact (X).... with X being either another human..or a thinking machine. If, after a suitable spell of nattering, A is unable to identify whether $X$ is huan or machine, then one qust accept that the rachine..if not 'thinking', is operating in a way indistinguishable fros auch activity....and since a difference which cannot be discerned ceases to be a difference...then the machino is saic to bo thinking. In practice, I fancy Turping overlooked one dead-sure whay of spotting the maching every tine....simply pose a long string of factual and mationatical questions. If response is $100 \%$ correct, thon you can be sure jou are tolking with a machine....unless of course, sorieone told it to silip in a few nistakes evury so often.

Certainly, if such a test were carricd out using some of the 13year olds in my classos, in position $X$, then poor old A would wonder what thircl category had slipped in between huran and nachine. Would ycu credit a 13 -year-old who fllent..... bis home city by the name of a ninor suburb? Who labelled Briatifin's nain city as Doncaster or the


 If you con't put in a question, thon you don't get a response. I'I玉nclined to think that a real thinking machine would Nop roquire priruing with a question, or incteec, the stimulus of any sort of comunication, but Weulc bo sclimpriming. It woguld oxarinc ita onvironment, decirle on some aspect whteh int didn't quite uncerstand....an? tinen set about finding an explanation. It would initiate its own schemes and ideas and then worls out how to camry ther out. Thus, if a GIGANTIC THTNNAC pauseci in the task of calculating wing moct strosses in supersonic airoraft. anc suanonly procuced a statistical cornparison of cancer cceaths with environmont, habits, work and life style...or a now fusical sonata... I'c. ratye that gacket as a thinking machine.

When that day omes THIMKIAC may woll ignore cancer or musie, but instenc, levote its energios to devisting and. creating THTNEIAC 2. Once stortod, such a Line of activity woul스 son coscalate beyonc any dreams of control and we woulc have a realatime cotossus on our backs. Provirot亡t made itself a Union card, nothing could stand against it.

Maybe not next year.ect even next deoarlo, but intolligent machines aro on the way.......

It nakos you think, doesn't it?


177 th Century. Pascal's machine numbered up to 99999

T9th Century, Babloage's machine was to have 1000 nueber stores, each of 50 places

Early 20th Century *punched cards were up to 80 digit nurabers.

1946 ENIAC weighed 30 tons and used 18,000 valves
1980 a desk top minicomputer can equal inIAC with some $50 K$ bits in its monory.

The Kuman Brain has some $10,000 \mathrm{~K}$ neurons... a lans way ahead...but progress is catching up to it. Any bets on whon it will get thore?


SF fans are, I believe, eternal optiraists. After all, we not only hope fox (and sonotines believe in) a grand and glorious future for Huruankind, but also place ourselves one step aheal of the mundane pessinjets by even believing that there will be a futuro:
Fannish optinisn is evon pyrsuits. The sight of a near-broke fan raide a busted flush during a con poker garie, or a quick on of many fen arriving at cons in cars which barely move, carrying licorse plates indicating that they travelled 800 miles or ac to get there t- that's ontinism. The proverbial ant clinbing on elephant ${ }^{1}$ a $20 g$ with dubious intent pales in conparison. .

Being a fan. I an likewise optimistic -- perhans overly so. If I could show you my collection of Insing lotery tickets, you might in fact consider the term 'optimost' to be an understatencnt. But I kewp trying, hoping for that inpossiblo 'Iucky: number', and wiming $\not \approx 2.00$ now and then there's even optimisr in ry losing. I'm keeping the tickets, you sec, not to paper the wall, or evon to make a lamphate (as Bill. Bowors has done). No, what In waitine for is philatelists to begin collecting lotiery tickets; after oll, thoy colloct tax stamps too!

Still, this silver clout of cheery optirism about Iosine hoos have a inal Iining. There is, to begin with, a weokly crash of disanpointment as the TV announcer roats ofe the winning nunibers...
... There I sat, cra:Iing in anticipation. Ponisht I risL שIN, I tole nyself. The odas are with ne; this is the ton-thousandth lottery I've bought. I had a precognitive ryeari, and I need the money. I WIEL HIN: I could feel it! pinally, after all the pre-ermptive bulu, it was tile. Pime tr draw the 100-villion dollar nunber. The announcor began erraing the nursbers cut of littile containcrss, readeing then off as he went. "Three,.. Seven. aline. "Eighto." THATS IT ! Those are ny numbers; only one nore to go. Be three, be three. "Anct, the announcor smiles, "the final nuraber is..." pause for effect. sThe final number is ...THPTeE "

## HURRRAH:

"Oops, sorry about that folks." The announcer cuts into riy celiriur. "That final numbex is Eight. Might, I rond it wrong. ${ }^{1 t}$
**GRSSH* Mt ireares shatter...along with the TV tube....
WBLL, it's not quite that bar. But I have hacl sone very close calls, though nover close enough to win the big noney. Also some vory frustrating experinecs. The tine I alnost bought a $\$ 10,000$ instant lottory winner, for instance. Picture if you will, yours truly on pay day.. a couple of extra dollewe burning a hole in my pocket. What to do ? Well, says I to myselt,
says is I think I'IJ waste a sollax on an instant lottery ticket.
rine It just hapeened that the next stop for ne, aftor leaving the bank, whs a grocery stcre which sold lottery ticketg. In I walked, deciling to do the repaix job on the nachine first, and buy the ticket on the way out. Fine.

Howe minutes artur entering, I hat finished the job at the rear of the store, and was wakine up front to buy ny ticket. I began hearing screars anct checrs, then prelsume. What? \#ar the President waliced in ? No, a wonan has bought on instant lottery ticket $-\cdots$ the one I litin't buy -- and hat won TEF THOUSAND DOLIARS! Prustration? Kes, to put it mildily.

and then there are the horse races. I lrave only bet on a horse once in my life, having stayed away fron it because I understand the practice io adfletive, (If you believe in onens and such, yau may call mo a dunciorm hoaled Iool-br this one)' It was March 21 1973, ny birthday. "Iwas a fine day, and, by coznodence, I lept seoing signs sayting, "Happy Birthday" as I drove about town on my futies. Thourh they were noant for others, I was cheared anyway. In conjunction with these sicns, I saw the nunber b repeatod in namorous fashions. Two bank message boare's for example, which displayed time and temperature alon; with Birtheay Greetings for sorsebody or other. read 66 legrees. I was iriving alone Sixth Strect when I noticet a bie "Hapy Berthacy, like" sien in a shop window.
fy 6th repair call of the day, odlly enough, was to fix a leak in the soin syeton at "Bar 6' at Latonia Race Track, in nenrby Kentucky. And, incrudtible as it may sean, I arrived a fow rinutes before the start of the Sth race. It was dy birthrlay, so I decidec to chance a $\bar{p} 2$ bet, just for the Heal or it.
hnt, So you know that horse numbur 6 WON. . . at 120 to 1 ? ?? Richt, but $I$ ha bet on nurber 3, my 'Iucky ${ }^{\text {th }}$ nurber...it didn't cven place。 But I still buy lottery tickets. You can't get ruch nore cotinistic than that. Oh yos, in cose you ripht bo wonderinf, I do win at ono thing. I always win lots of pennies off ay wife at poker $\mathbf{- \infty}$ but I have to give her the money to pay ne uff.
 and Michael also sends news of :-

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EUROPEAN SPACE AGENCY MON MAN IN SPACES
Gponsors an art
Competition for the 18-21 year olds.
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ALI compatitiors in that age nange, are invitod to illustrae the thome of Man In Space, choosing their own form of empression :- drawinge, paintinge, sculfptures, mod els postors, poems, short stories, plays, audio-visual prosentations, musical comporitions otc. ( (Now llow do they hope to judge that Iat on any comon bassiss ?? ) fhere will be national prizos, as this is open to all European countries. Closine date is JUNE T980...so get weaving on your entry=or pass this to anjone who may bo interotted if you re too Iong in the tooth. Grand prize (apart Prom a scad of trips, hwards and ruedals otce) is a visit to the Kennedy Space Centre and the Shuttle and spacelab facilities. Fror detaila, wite :- Fr. $A$. M. Hughes

British issociation Young Sciontists, Fortress House, 23 Savile Rorl,


According to ny records, this little piece first appoared in Ro. Pardoe's 'Songuld' during 1979.... the magozine then folded.
 shocter sky. Thunderous peals of
poaling thunder crashod crashingly acr.,ss the henving heavens. Doop बown in the depths of the darksono village, the only road bridge crashod into the roaring flood waters beneath, taking with it the only telephono line loading to the bleall nansion on the hill. Torrents of water stroanel fron the sleios on to the tovy covored walls of the fitately crumbling Ophand Manor. It was raiter a filthy night.

Tithin the najostic walls of the venerable building aIl was wamth. light and festivity. Gathored round the festuve board and festering nerrily, were the guest of old Lord Elpuzz, scion of the Ophand Clumo Foor harl ebber ani flower across the great banqueting table. Wino had had objed and flowed oven nore freely and as the revelry reached its Leight, a bleary-oyed Lorif Elpuzz staggered to his: feet. The old noblenan polished his sre ctacles, wiped away sone: of the food which had ebbed and flowed across his once floaningwhite shirt front, and surveyod his guests. Raising a thin-veined, aristocratic hand, he waited for silence. Gradually the nerry buzz of intellectual conversation slowed, dithered a bit and finally ground to a halt. Bvery eyc was on Lord Blpuzz as the guests waited with 'bate? breath. "Hic!" said his Lorship. He paused and rused awhile, perhaps Latin was nost the right language for this occasjon. He began again in the ringing tones which had once rallied the troops in the latrines at Aldershot. "Friends", he orated. "Look around you at all these riches". At this point, Lorc mpuzz waved his arns wido in a aagnificent swec;ing gesture. .which caught the soup tureen before hin and slid it neatly off the table and into the lan of Laly Lucille Astic. fith true aristocratic savoir faite, Lacty Luciille took up Ver spoon and disposed of the debris. Ognoning the minor contretemps, Lorci Plpuzz continued. "Soneday, all this will belong to ny heir. That person's name will renain a secret until ryy ceath, but this I will tell you...that person is sitting at this table tonight. one of you here will inherit all this..." He repcater the nagnificent gesture and Lrady Lucille resignedily reached for another spoon to renove the contents of the custard bowl. "I five you a toast "l cried his Lordship. Raising his powdar bllye balloon glass, he declairce the Glan Motto. "Ophand, Always be Dindodefi Lord Eipuzz drained his glass in one gulp, uttered a terrible screan of esony and orashed to the flocr.

Hemolock Shones, one of the poorer offshoots of the Ophand fanily, was the first to reach hin, but by the tine he knolt beside the body, Lord Elpuzz was merely a haphazard collection of cleanly picket bones. Sonething flapped limply anong the bets of the glass. Shones swept it aside then lad his hand against the skoletal rib-cage. A strange, eurie trilling whistle fililed the air -- the unconscious sound Shomes made when confronted by an enigna. He roached a lecisinn, "Fiis Lordship is dead," announcerl the master sieuth.
"Poisoned ? ${ }^{\text {M }}$ quericel a quavering voice.
Mhorse, "frowned Hermlock. "Sone utter cad slippec a rare Piranhe-Paranha fish into his dirink. The ordinary type can finish the flesh off a nan's bonos in 25.9 seconds. This was a steroid-fed competition type bred for the Olympics and it cide the job in less than ten."
"I knew there was sonething fish about this set-lp", whiner? the pirnply faced young Lick Larss who had recontly returned frou Paraguay Was it murcer, do you think, or did it get there by accident ?" "It was murier all right", said shomes in his deen bronze
 colourc! voice. "And whoever dic it left a clue." He stooped and retrieved a slip of pasteboard fron between the victirl's centures. Holdine it to the ligit and acljusting his bifocals, the ran of bronze reac? out, "Don't put nuts in the armourii.
"That must bo where the aurderer hid the fish", ycIIed out headstrong old Branner. "Let'e sod if he left any noro clues. Beforc Shones could stop him, the old
fellow totterod across the roon, raised the vizor of the TE, - (nearest suit of armour (wom by Lorc Elpuzz grandfather at the ciege of Covontry) and thurst in his head to look for deo sharener to a grinding crash as the vizor, is loadine Prannerfs nock. The corpse slumped to the floor whilst a hollow 'Boing' fron within the armour donoted tho arrival of his nut at the botton.
/That elininates hin," saic time sleuth. "The on" thing to do is to remenact the crine. Onc of us must take the place of Lord Elpuzz and go through his roverints to find who could hove slipped the Piranha-Paranha into his wine! "Suppose they sjip in another one ?" quavered the quaverinf voico. "Not a chanco", scoffed Shomes. "I will take his Lordship's place, and to prevent any Piranheparanha getting at ne, I will tie this toa-strainer over my mouth to kecp out any such danger. Come, to our places; Let us remact tho crime."

Pive ninutes later, Shonas reacher the gesturing stgge. Once again, the soup tureen nale rencezvous with Lady Lucille's liseon lape She looked resignedly at the ness. "To hell with it," she said, and standing up, remped the soiled gown and sat down again, composedly in her uncerslip. Ten seconds later, at the second cesture, she rose again and liscarded a custar? - overed slip. The remaning guests began to ses the possibilitios inferent in this reconstruction and waiter? eagerly for further gestures... but Ehones was intent on the job in hand. Raising tho baIoon glass, he took a long swig ant replaced it on the table. Reroving the teamstrainer from his face, he sniled benifrily at the onlookers. "See," he saic. "Perfectly safe," he said. He took a slirn cigar fron his pocket, struck a match anc lit it. "The inlentity of the murcerer is obvious." He sriled wickedIy, "It was of counse..." At this point, the cigar betweun his lips explociec?
'Jock' Savage was first to the body. Whipping out a strangely shajed device from a secret pocket in his cumrerbund, he operated a switch on the didy and within a few seconds had collected the nortal remains of Hermiock Shomes. A strange, eerie trilling sound filled the roin. It was Jock Savage's portable bagpipes which he played in moments of great stress. The man of green (so named for the colour of his teeth) marched up and down, deep in thought. His eyebrows smouldered, and a low buzzing came from beneath his collar. Savage paused. "Another murder" he announced and Lady lucille noticed the way his vibrant voice vibrated resonantly.ortand another clue " he added. Adjusting his kighmower contact lenses, Savage read from a slip of paper..."Smoking can affet your health."

Three of the guests turned ahen-faced, rummaged within their clothing and withdrew a motley collection of smoking equipnent.. two Meerschaums and a Churchwarden. Three hands rose and flashed down. Three pipes shattered at their owners feet..... and three sharp explosions marked the renoval: " three more names from the list of suspects. Savage quickly plied his pocket vacuum cleaner, then eyed the remaining guests. Doddering cold Potsodo, equally doddering old Schweinfeva and the tall slender Lady lucille clad only in hor brief silk undies. His gaze lingered thoughtfully on her Ladyship. His eyes lit up, "I think we should enact the crime once again " his ddep voice rumbled. "But first I must refill the soup tureen and the custard bowl. Lady Lucille gave a resigned shrug, and old Potsodo's fock

The job wass soon done. Potsodo, Schweinfeva and Lady Lucille took their places. Savage donned a tea-strainer to keep out Piranha-Paranha, and laid a fifteen foot cigerette holder to hand as a protection against exploding cigars. He began his speech.

In due course, the soup tureen landed on Lady Lucille's lap and with complete indifference, she wiggled out of a lacy but soup spattered garment and cast it fron her. Potsodo's face an even deeper shade of purple, his eyes bulcal. Vainly cluthcing his heart, he slid beneath the dining table. Then the custard bowl spread across Lady Lucille's upper storey and her custard-soaked bra flew through the air, it was Schweinfevads turn to follow Potsodo into oblivion. The Ophands never did have strong hearts.

Savage shot a penetrating glance at Lady Lucille. With only tao of thom left alive, he was beginning to buspect her. Nevertheless, he took a long swig at the Chateau Frontenac '94, lit the stogie in the end of his fifteen foot holder, and sat back to puff meditatively as he studied Lady Lucilee (Savage had no heart troxible).

There was a tiny pop of gas from the stogie. A tiny need, poisoned with the venom of a drittle know Amazonian fanzine sped up the fifteen feet bore of the holder. Savage was dead before his body reached the floor... silence reigned except for a strange, eeric trilling noise. The body hed fallen on the bagpipes.

It was at this point that the old and trusted rateiner of the Ophand Clan dashed in, grabbed Lady Luc.". " undcr one arm, and the vast treasure of the Ophands under the other. He had been the culprit all the time...after all, in any decent murder mysterya it is always the butler who did it.


From time to tirie, whenever the fancy takes me, I hope to natter about some of the botter.or more unusual fma Hhich have come my way.

This will NOI be a ratchet job, or might of the Iong knives.ofanzines should be for fun...NOT misory. Even if a fanzine is utter crud, soneone has works d on i.t and hoped to gain pleasurc therefrow. Harsh vituperative cournent will not coax such an editor to inprove, but gentier, moro constructm ive oriŁicisrn mifht holp.

As a schoclnastor, I do not get chila ren to ixprove, or try to inprove by flaying then verbally....rather the carrot than the goad. So let it be with fanzines. I want FUN in ny fandor, not FIEUD. So on to...

## S. T. COM MENTARY

Bruce Gizlespic, GPO Box 5195 AA , Nelbourne, Victoria 3001, AUSTRALIA.
$\$ 5$. A for five isghes (and convorsion pro rata). I. have No 57(inv. 79) to hand, containing 16 (photolith?)pages, larga $\frac{1}{4}$ tg. in article on How To Be A Critic'; some excollont reviows, and if fum tboufhtful and interesting latters. I enjeyed the 'Critic'..nice huriour, but Id rato the reviews as the nain reasen for huntins cut this fanzine, proudonymous or not. Then rigain, if letters get $y ; u$, those aro not the average 'hackletter' so pick whero you like, it is all good stuff. Hy only criticism is thot I'd like to seo SFC rumine fow srall 'fillos' of the sarce quality as the writine to fully round out the excellont little zine.
SOLMRIS $30 \mathbb{N}_{2}$ orbot Spehner, 1085 St.iann, Longucuil P.\&. Canada J4H 223 will coat you $\$ 1.50$ single or 6 for $\$ 88.00$. SUPERBLY prosuced, top-level artwork and photographs grace its slick 44 large pages (it outshines raga like STARBURST and can eive GALILEO a run fir its ronoy. You get two bits of fiction, interview and articles, plenty of bork, filn and ather reviews with coasional fuz mention. This iss defiritely for the sec...in ossonce, this is the re-nased 'Requier', but if ynu hadn't noticed the narlo change, you could be forgiven. Iittle else has altered. Oh, there is one gnare it is entirely in French..so if you have perdued tho plume de votro tanto, this isn't fr you.....but if you can parlez bion...then don't niss it.
 Canada T6G )Y9. It IS a nontliy..achieved by a rotating editorship. 18 qto. paces, $\$ 9.00$ a year us. Very neatly duplicated, variable ortwork, fair: to goca pice hoydirgs, ond articies, raviews and letters. Minor criticisa is that it is stilil a bit introvertod to personal events....but otherwisc, a good, chcerful fanzine, pleasant to read...not gosh-wow-fanish, or too skc. I like the fronthiy idea, and once it finds it.s level it will be a winner.
 and the price modestly olains．＇easily worth $\% 300$＇Well，you do get 50 siperbly printed photぁlith pages with some（but not a great deal）af the best art mrounde and sone not so good．Where a photo pf U．T．Moare to accompany on interview．Yarbro（C．A）writes or suspense techmiauas；a checklist item，（Robert J．Howard）；in exarination of the Gor books．I wonder if that has a connection with＇Gor Bliney＇？．You get a mail colung a bit on SF Targones．and nany more gacdies．Oh yes，they como down a bit an the price．． 65.00 will get you 4 issuas．．．frorlitichnel Ward．P．O．Box 1496， ©upertino，CA $95015 \mathrm{U} . \mathrm{S} . \mathrm{h}$ ．Jts price equals fnalag plus a bit．．．but I focl its quality surpasses recent issues of the old wagezino．
NCTMENON 3428 fully（anc well）illustrater，photilith pages of news，books， reviers，cartonns and lotters．This issue is rather heavy with Con－nows and contributors＇photos．Review of the film＇China Syncrome＇Beautifully turnod out，and well worth ita JK rate of f 7.00 for 10 surfaco rajl issuese． or 813.25 by aix．．．．UK agent is Brian Wagker， 2 Daisy Bank，Quermare Re， Lumenster Lancs，but the zine oomes from Brian Thurogord in australia，who has a mow ac＂ress：－ 40 Korora Ra．，Oncre，Taihake Ishand，Hauraki GuIf．IK，
 nakes jt about ${ }^{1}$ ？$n$ thick．Very few illos，so the jssue is jormed with highly rembeble stuff＂＂Whos Afraid Of Gene talfe？＇and a＇Gene folfe Biography＇ both by Pivermer．Thore is ar article on reccnt poll resulta，gome boolr rovicws，some fanzine commentary，Iotterg and tong axticle by Philip Jose Furmer，$\$$ 고11．61604．U．S．A．

THE LOOKING GIASS
$\therefore$ slin（t4pp）beautifully produced bit of worke．covex ly Mive Roden，some superb interior art；a piece on VIR by Jinda Fushyager which ought to get you started；子ettars，reviows（and that
 peres of excollent ant and indy fudrischakis oxcellont kish colukn．45c from Ban Phives， 25 Parkway，Montoliaix，NJ ofot2．．．．．（and Ben，I found that nota）
UTVNOMW PTESS
 facets of fanzinc production（sounds İko my Duplicating Mptes），rothods of roproduction，explanations of differont types of farmines etc．Aimited éation pamphlet mimod at the ímzine editor and non－editor alive Includos the adidrosses of meny SF books and magazine publishers and manufactufers of layoutmratater praducts．Frice $\$ 2.00$ from Ben lutvos（acedress above）。 Een also offare from UNKNOWN PRESS ：－$A$ FNN iRP PORTWOLTO．TO full page

 vouch fom the fact tha＊production is impeccable．

 4 issues for 82.00 or Brian will trade 3 issuos of bofon for 4 of yours ehow can you lose？This iscue also has a lettorcol，a Poll forre and Autoclave Con news．Get this and Panzine Fanatique and you＇ll not mias much in
 me at the airport on Monday nugust 25 or the $1 T-30$ flight out af Boston．


Diuch as it pains me to adrint
it; I often malre an ass of ryself for no good reason other than it giving me something to do. Torking in the British Library (as it is my fate at the moment) is akin to those sensory deprivation experiments carried out a few years ago. To say that it's boring is a bit like saying that liss Tinited Kingdor 'Iooks O.K.'. In a word, it's hellish, and I'r convinced that three years in the place has finally taken its toll. Last nonth for example, I walked down a crowded street wearine a hideous rubber mask. I've always derived a certain perverted enjoyment from surprising people. I was ifnored! It could have turned into a peculiar situation.

Speaking of peculiar situations, I ran into someone the other day who was under the impression that unamned spacecraft such as NASA's two Voyagers are shut down shortily after launch until they reach their targets. In fairness, this is understandable, since the only tine the TV and newspapers mention then is when they start sending pictures back to Earth. The fact that continual tests, calibrations and manocuvres must be carried out for the entire mission is just not Pradline material; which is tho reason you hear nothing about it. It's doubtful whethor Voyager will be naking the 'Nows At Ten' again until the Saturn oncounter bperations begin in August of this year.

To give you an idoa of what goes on in these somcalled coasting' periods, this is what has been hapmening to the Voyager spacecraft sinco last Decerber. At the beginning of the nonth, tests conducted on Voyager 1 's photopolarimeter (dosigned to detect surface and atmospheric chemicals on Jupiter, Saturn, and their noons) confirmod that its sensitivity to light was virtually nolmoxistent. The duvice had given causci for concern during the spacecraft's encounter with Jupiter, and was said to be no longer capabie of recording usaful data. On Deceraber 15th., Voyager 1's control rockets were fired for 37 minutes in order to offect a flight path adiustment and speed increase of approxirately 11mph. Following this course change ranoeuvre, the spacecraft failed to orient itself properly with the high cain antenna pointed at Earth. An internal conmunic*tions problem between Voyager i's central computer and its attitude control system brought about a promature halt in the reoricntation soquence. Efforts to correct this by the controllers were unsuccessful. On Decomber 15th. Fuli cormanications were restored when the spacecraft was nanoeuvered so that its radio antenna bears swept around the Sum and located the Earth. It then aligned itself properly on the alth with its control sensors viewing the reference star Canopus and the Sun. Dy nom the following day, Voyager 1 was operating in its normal cruise mode.

On January 2nd. Voyager 2 measured the uItraviolet Iight fron two stars. The following day, Voyager t executed a slow roll in order to carry out a special measurenent of the Sun's marnetic field. On January 15 th. Voyager 1 was positionod to enable a TV comera calibration asing sunlight Ioflected from a plate on the base of the craft to take place. Then, on Jan. 24 th., Voyager 2 was rogrammed so that: its radiation and ragnetic ficid instrunents could scan in difforent diroctions. Engineering and soientific Fata were recorded for lator playback to iorth in onticipation of a 24 hr . commutications blackout. This went accorcing to plan anc reoorded data were treansmitted to Earth on the 29th and 31st. At the time of writing, Voyager $\uparrow$ is $232,900,000$ rilles away fron Saturn which it will pass in November. Voyager 2 is $342,000,000$ miles from Saturn which it mill pass in August 1981.

MINMUM Brass conferencos, on talk shows, in ragazine interviews... The question guaranteed to bring a hand to the forehead or groans of resignation from an astronaut. "乡hat is it really like ?" Fur anyone oven vaguely interested in a conprohonsive answer, although perhaps not ono that relates to the spaceflitht axporience, Tow Tolfe has written a bonk entitled:-
'THE RIGHT STLDF: Chuck Yeager hal the right stuff. Tith the entire loft sile of his face burned, his left eyo socket slashed and calsed shut with dried blood anc a severely burnod left hand, ho stond waitine for the rescuie holicopter. .his parachute rolled up, and his helnet in the crock of fis aril. Pete Conrad hat the risht stufe ancl could get away with duming an onera baf or a Goneral's deak anc announcing. "You'ro lo-king at a man who has given hincelf his last enema." Buc Jonnings dian't have tho right stuff and onded his days as a rosster hulk with no head.

Hithout the right stuff, you were either one of the alsomans, or dead. ..."It was a flamed sharie, but he seald have known better than to wait so long before Iowering the flaps."

What was it REALEY Iike ? Rone the bo:k and fine out.
it THE RIGITP STUFF" by Tom MoIfe
Fublished by Jonathon Cape. 36.95
Dave Griffiths.
((AnT I've just got word frow lifle Banks of ancother highiy rocomended bouk...whicit
I haven't yot beon able to run
Eomn....
THE ROCKET The History and Developnent of Rocket and Piissile Technology. David Baker PhD

New Cavondish Bocks. *.. Mrice unknown, but it. souncls geod. B.T.J)) )



POBETR BLOCF Los Angeles Cal迫ornia

Twenty-one years ago I was living in Weyauwoga, Wisconsin, and truly believed that my life was over. Aside from a few sales to SMUTTY SF and the like, I had nothing to keep me going except an occasional CARE package. Then ERG entered my life and everything changed. Not necessarily for the better, but changed, nonetheless.

Mind ver, I'm not saying that your magazine is responsible for what happened. I cannot absolve myself of blame, for that would be chickening out and the old question of which came first, the chicken or the $\operatorname{BRG}$ has never been truly resolved. and your publication have had some effect on your readers. considor the power of the printed word, as demonstrated by the Bible. Then remember that God only wrote two editions, whereas ERG has now reached seventy. With all that verbiage going for you, it's a wonder to me that you haven't becowe a cuIt-figure like Harlan Ellison or Ethel Lindsay.

Nevertheless, you are a power to be reckoned with, and now that your fanzine has attained its majority I cannot allow the occasion to go unnoticed. You deserve full marks for all you've accomplished over the years; like Roger Elwond and Sol Cohen, you are truly a Publishing Giant, and when you get to the Noreascon, Isaac Asimov will let you kiss his ring.

There is little I can add to such homage, except to wish you another twenty-one years of fanediting success. If you continue with the zine for that much longer, then ERG will be exactly the same age I was when I believed my life was over. Which will serve it right.

Incidentally, it's rather difficult for me to say anything apecific about ERG because I have never been able to discover just what that word means. liy guess is that it must be one of those Dritish expressions, fike twit, barmy, or bugger off. I tried looking it up in the dictionary, but without success. This may be dry in part, to the fact that our doe has chewed away evary page of the book as far as the letter). When he gets up to $P_{3}$ I don't know what I'll तo.

Sorry about that; it must be the result of secing too much of Benny Hill on the telly. As a matter of fact there was a good deal more of this sort of thing in ry letter until my wife exercisod $\because$ prew of censorship and emasculated it. Hoping you are the same, Bob ( ( Gee t'anks. Re that cult. have you never heard of devil worship? As for God, well he didn't have the British Post office to contend with. An ERG is the small amount of energy I originally intended to spend on the 'zine. Keep your dog f'ed on Spratte, buy a good dictionary and avoid such problems. As for Bemmy Hill, well he is our answer to Charley's Angels and lindy and Mork. B: ther 2t years of flRG would see me tangling my beard in the duper at the venerable age of $78 . \ldots$.till, they say you get madder as you ged older. TJ) )

Milliarn Bains Mat 13 G Tocil Uṅv* of Warvick Coventry CV4 7AL

A friend and I had fun with model rockets in our youth, but rather than concentrating on the modelling as the Anerican ones do ((They go for modelling and performance) )) we were merely content to sce ours work. Rather less dangerous than the old weedkiller-andosugar bombs that pre-adoleseents of all ages love to play with, but not much so. Our naximum apogec with a completcly homemade rocket was $25 f t$, and I have a photo of one doing a magnificent sub-orbital hop to an (ostimated) 6" peak. Altering Guy Irawkes rockets is cheaper and gafer, and worles...usually. I 甘lush to recall the one that launched its second stage from a height of $2 \mathrm{fte}$. . When it was coming down, nose first. And the one that wobbled to 20 fta and hovered there. Oh well, these were based, vaguely, on the aerodynamic principles oxplained in the self-sano manuals you refer to.

In imerica, onc can get Iiquid fuel rodels (( 1 fiy son had a water-pressure powerod one in tho early fifties: )") which I believe, can be made restartable. Theso cost, of course, and are not for the beginner who is advised to stick to the solid duel trits. The ongines for solid fuel aro available in the U.K., although on a rather under-the-counter basis generally as their legality is questionablo. As for importing them, do it by surface majl. The engines are based on cordito, I bolicve, and I suspect woule deteriarate, or even ge off in an unprossurisod luggage bay. ((TTomorrow the stars.)))

## KEITH FREFMN

 269 Tykeham Rd Reading RG6 1PLA.C.Kyle (((Dave Kyle's son))) brought one of the rockets you discuss, back frow the States several yoars wep and I believe, it was launched in the grounds of his school. whether permission was got (somehow), or whether it was done "in ignorance" I don't know. A far chy from my schooldays when we discovered a part of a metal foill milk bottle top, fixed around the scraped of hoar of a match, whon lit would soar from one end of the classroon to tho other! Experiments quickly proved that more than one match-head cause. weight/thrust problens.. althorgh they dir shoot along the ground in a very satisfying manor. ((I usect silver papor..then gractuated from match-heads to homemade gunpower... but ry hore rad charcoal was too coarse))

Tilliam Bains. 0 of course a lot of critics will junp on you (anc hin) for putting this 'haritscience artjcie in a fanzine...but no natter in what out off-thew ray place, the truth will be told (no one ever mentions it being believed). Personally, I think the gravity at the rir must have some strange propertios, or rather the properties of gravity at the rirn have strange effects - this explains why one can leove Eowe, go Jiast (you can go West, but I didnIt like the sounc of that anc, cventualiy arrive back home. It aust bo that at the rin, gravity causes you (unknowing Ty) to start travelling round the rir. Why 'gravity' rather than electromagnetisn ? well, think of the gravity of the situation if travelicrs coulr fall off the edge. inother thought, naybe this gravitational quirir is less powerful on the Fostern eclge.. ((CTry to be spocific about gravity)) and may explain the origin of the phrase "Going West". (Explain to the youngsters about RAF slang, Terry). ( (Well, it's quite simple, if anyone went for a Buston in a fatal prang, we used to say they'd bought the farm. Inyone not hampered by the HDOID (and thorefore not as din as a brown type) could get clued up on such gen by doing some charpoi beshing with a good gen bouk... ok? ))


Roger radeington 4 Comareial St Norton, Maltan TGRS . Vemher von Braun taking part in the Germanic equivalent, , mond such men and their pioneering efforts, there wouldn be an
 and radio control is hamstrunge.so we have no space programme.and limited other experimentation )) where still tinkering with tho most primitive of launching mechanisms, seare to be a negation of all rocketry shavid stand fow: We should be exmerinenting to find new ways to send those rookets hiegher. Exploring the ways of doing it。 In sone alternato universe I expect that nodel rocket enthusiasts aro discovering the principles of antigravity; of the long forecast rTL drive; which they uight yet, in this untranad I seo model rockatry now, as more the equivalant of the model rainday enthusiasts, thet is spencing their tine and finding their onthusiasia in the nostalgia of the old steam lines and rawroating then, rather than looking forward to the shape of future transport.

I ookint throufh your book reviows calls to mind how many of the great elessics ana gtill in print ancl finding a new generation of ronders. I man, you've got 'mhe Kraken Wakes' in thare, 'The City And The Stars', 'Voyage of The Spaco Beagle and literaly half a dozen others. Kight be un idea for a competition to rues which titlus peinted today will bocone clacsic, the winnor boing docidod in twenty yours tirno. (CAnyone willing to wait for their prize ? Ofthand, I'd but a good arcentage of the winners would bo the 'olassic' of twenty years ago. D)
Mrs. PoJ. Boal 4 Wisifield Nay Charlton Heights Wantige, OXOR

I've mado up the nodel accordm ing to the sacret plans on the inside of the onvelone you sent ( $($ How many uther readors
 noticed I'd nade the orvelopes out of old technical drowing papers?)) Irm sorry to tell you the full scale model didn't get of f the ground. (( (Irm not surprised, it was a postaholo difgor))). Tinfortunately, as avory school boy know, scientists are not agreod as to the Locotion of the Earth's odge or the thickness of tho world's disc. (( If the disc is as thick as the average trate unionist's alvull, then we shan't get through it D). While the harctare for any such explatory mission must of nocessity, incorporate a good deal of theoretical sueculation, I am sure that the only possible starting point must be in Burnondeay. We should enlist the aid oi such serious minded scientists as Bob Shaw. Ints is possible that his ship Yurin 8 is powerful enough to overcorne the forces that keep us tiod to tho Earth's surface. (((Presurably its syrabol woule ve a Velsk look P))) Thenk you for ERG 69, a fun issuo nicely balanoed by tho sorious philosophicsi dobate in the lottor colum. ( ((Finh.. I missec? thato $)$ ) My ringers, timo anc purse no longor allow ne to indulgao in nodelling, but I have a doar frionel who's son hamps on every word of your articles on the
 ((Thatés why I like space modela)) Fen poople realise that our air mpace is so crowded, that thero are vury fow areas left where it is legal to cven fly a kite。 (KUorse..this city used to have suveral model boat lakose. and now oven they have beon eifvertud to other uses. Just whero CAit kifs play ?))

DOUG YOUNG
14 Church ist., Whitstable Kent about 12" Iong; driving seat. I started making them after seeing Fritz van opel in his rocket car..pictures in the newspapers of the time. They used to go like hell, very spectacular!
HIKE \& BAMKS P.O. Box 312 Milford Ohio $45 \uparrow 50$ U.S.A. ition. (You calculate how lone your model will stay in the air, including boot , coast and descent based upon its weight, coefficient of drag and engine size). and I'll be building a 5 ft tall rocket for 'Super-Roc' duration (rocket has to be over $5 f t$ talil) and longest in the air wins. Fich Cardillo, the other NAR member, is doing scale, ( $A$ 'Hawk' missile) and $B / G$ and 'Super-Roc'. Te wil.I have a $\hat{I} l y-o f f$ to see whose model does the best for entry in the meet. With any luck, we will cone home with trophies or ribbons. (( Jest of lunk and may you clear the board of trophies. I'll sure take you up on the offer to launch one when I'm over there in August)),

A bimonthly listing of SF books published during the previous two months with notes on those promised for the following three, conpiled by Gerald Bishop. Subscription Rates: $\$ 1.50$ ( 6 issues. Post free)
There are also cumulative bibliographies of past years available: 1969/70 1972/73 S. 1.25 each 1974/1973 气3.50
American titlc* will be found in Joanne Burgers' Forthcoming SF Boolss, a binonthly listing covering four to six months. Sub rates... 22.50 ( 6 issues. Airmail) Joint Sub. to SPBPIB and FSTM 83.50
ind Joanne has amual lists for the years $1972 ; 3 ; 4 ; 5 \& 6$ §1.25 eazh (forthooning, 1971..reprint, 1977 and 1978)
ORDEP FlROM..... Aardvark House, P.O. Box 10, Hinchester, Hants, 502248 A

 on some unspecified day.... (Sam forgot to mention that inportant bit O! data)...DAVID MARK PEBD LONG. Mother and baby both fine... drop them a line at 1338 Crestview Drive/Springfield/IIlinois 62702. I lnow it was some tine in January....if it comes through in time 11 tack it in here ( ) A LONG life to all concerned.

WANLED TCOLOSSUS AND THE CRAB: by D.F Jones...trado or buy he or pb .
 rint hardoovors and paporbacks. Contact the oditor. ilso intercsted in books on the cinema, astronony and popular scionca... what have you got ?

In ERG 69, I nentioned an article by Harry Andruschak, on the conet rission of $1985 . . . h_{\text {here }}$ it is, roprinted fror STELIAR TANTASY NETSLETTER ...

by Harry Andruschak (Jet Propulsion Laboratories) has wanted to Iaunch, has been a rendezvous with a conet. We know so little about these inhabitants of the Solar System. There are problens, however, to such a rendezvous. Conventional rockets do not have the energy required. Even the mighty Saturn $V$ is hopelesly underpowered for the Eiesions planned. The solution has been the ion-drive, otherwise known as Solar 汤ectric power.

Then there is the cost of such a rission. It is steep..and at the momant, we are in a financial squeeze as far as funding for Nish goes. In 197.8, we tried to get financing for an ion-drive mission to rendezvous with this. very active young conet. Money was refused, to the anguish of nuch of the scientific world. JPL cane up with a sccond chance at a conet nission, It will have to be started next year if it is to get off the ground in time. I have no idea whether Congress will givo wo the money. But if they do....

On hugust. 1.1985 , is Shuttle will blast off fron KSC. Once in orbit, its bay doors will open, and a swacecraft perched on an IUS (Incrtial Upper Stage) will appear. The Shuttle will ease away from the IUS, then eive the order to fire. The IUS will launch the spacecraft out of Earth orbit and away fron the ecliptic. Then the spacecraft will separate frod the booster and unfold enormous wing pancls of solar cells. 30Kw will be generated to power the ionmencines.

On Nov. 28 1985, the spacearaft will have a fast flyby of Comet Halley. At this tirle the conet will be 73 days from perinelion, at a diatance of 1.5 AU (Astrononicsl Units, about 140 milli ion miles) fron the Sun. No rendezvous is possible, since Halley will be noving at an incination of $162^{\circ}$ to the ecliptic. Instead, a srall probe will bo dropped to pas through the tail of the comet. A poor second best to what we could have done with a rendezvous, but at least we will get soue inforaation. Halley will continue on to periholion on Fob. 9 1986. Ind that is that for 76 years, as far as probing Halley's conet goes.

The spacecraft will continue its: journey, usine its ion drive to clirb out of the plane of the coliptic to $12^{\circ}$, the inclination of Coret Tonple Two. This conct is a rather older one, with a period of 5.3 years and a perihelion distance of T. 33 dU . On July 18,7988 , the spacecraft will have achioved rendezvous with Terifle Thu. 60 days fron perihelinn an at a range of 1.5 AU . $\mathrm{F} \cdot \boldsymbol{r}$ nost of the next year, neasurenents will be taken of cometary gases, appearance, ionisation and so on. The spacecraft will follow the coret rouncl the sun and all the way out to 3.0 MU . The mission is to be teminated on July 14, 1939...1400 doys frou first launch. Wish us luck in getting money fron Congress, frionds.
Ande in a letter on Feb.15, Harry says.. "Trie rission is cancelled due to lack of funds, and that is a cam shane, as it would have been a fun mission to be on".

Agreed, Harry...now if only wo could power one with the hot air fron Congress, Parliazient...and umpty thousand football natches ...


Harry Harrison has written a delightful spoce opera sondmp and this has beon superlatively illustrated by Jin Burns who supplies sore 50 vexy detailed paintings. Privato Parrts has been exiled to Strabismus, but when Lortiun is found there, the giant robot machine RRigG is sent to Iay a railroud to the mine. Being of low IQ, he goes slap through various cities on the way. When actiniral Sodiy takos his personal train along the line, accompanied by a horde of troopers, Private Parrts ancl the Iuscious Etyreon Pone, they mect hostility ant renace. True lust finally triumphs. Hilarious, souped-up fanzine hurour with torrif゙ic illustrations..drool over Styroen Fone i succossful alliance of the coffee-table art book witit a tonguc, firmily-in-cheek, space opera. I loved it. If you can only afferd ono of these two goodies, nortgage the canary and buy 'arn both.

## THE UKTHNX

Koittitaumex Siderick \& Jackson 25.95

Just as snall-tine crook, Danocles Fontgonerie is about to be gunned-dtw, alien observer Xorialle intervenea in order to experinent on a human being on behalf of the Galactic Concensus. His experinents turn the criminel finto a super being who sets out to overthrow Yorialle's plans and to oppose the Concensus. The results and ovents are highly reniniocent of one of $P$. $K$. Dick's Galactic romp. The first half of the tale is sheer, grippinep wishfulfillmont in the clascic vein, but the galactic adventures seemed to be rather offmithecuff and lacked tho pace of the beginninge Neverthelese, Dariocles puts up a scintillating pexformance as a now style superian and although this probably won't win any fugo, it should still get a good reception, especially by the Iess strait-lacen.

FARNHAMSS FREEHOLD $====\approx===========$ Corgig El. 25
Robert A. Heinlein

Hugh Farnham has prepared carefully for nuclear war survival, but when it starts, he, his framily and their coloured servant Joseph are blasted into the far future. They start to settle in to a new life, but are quickly picked up by the new rulers, the blacksoand white people are for slavery, rape or castration. A situation which reverses Joseph's menial role in a neat eharactor change. Farnham is the archetype Heinlein father figuro but the yam is highly readable both for plot and writing skill. Recommended.

KINGMAN by Ben Bova
Futura 'Quantum' $\overline{\mathrm{L}\}} \mathrm{C} 25$ and
Sidgwick \& Jackson ©6.95

This is the story of one man's dream set against a hard-core background of space exploration. Chet Kinsman, alienated from his rich fàher, is junior Air Force lieutenant with his heart set or getting into space. and later, to the moon. We follow his progress through confrontation and pronotion as he faces problens, bureaucracy and the hazards of space travel. Set in the vory near future; qutbentic as fiction can evor be, this could almost be the dramatised biography of a contemporary astronaut. Maybe not Award material..it is too 'roal' and hard core for that I'r sorry to say (I personally suspect that onIy 'oolly' tales win awards) but this is a coupeling novel. Whether you buy hardcover or soft you'Il not regret it if you like real SF. For ny money, Igd rato it as Bova's best to date.

THE FELLOHSHIP OT THE TALISMAN
 Cliffore D simak Sicemwick \& Jackson 20.95 convey a holy ranuscript to oxenford. Their jourmey involves crossine th Desolate Land; a wancloring, unfixod area populated by wercwolves, trolls, denons and the rionstrous Herriers. Along the way, the travellers acquire a ghost, a goblin, a hernit, a witch and a boautiful, griffin-riding girl. From here on, it is a trek-through-troubles, with nagic, mayhen, mysteyry and ronsters as our heroes wander the land. Of recent years, Sinak has worn this plot into the ground with tales such as 'Destiny Foll', Shakespeare's Planot', 'Cenetery korid' and so on. Even the 'ghost' has treklecd bofore. is share, but although Kinuk has produced avellwritton tale and a lively assortment of characters there's nothing new here for the long boiling pot. ilternatively, if jou haven't read the others, then this is a real treat.

## GiTTEA2Y TO IT19BO

Chris Lampton Sidgwick \& Jackson 25.50

Bic business tycoon Hawkesworth has
 oponed a portal into an alternate universe populated by the Zzyri. He arranges an encrey transfer which involves sacrificing merbers of a race, native to the portal world. Allison Carstairs, his secenc in comand sets out to foil the schene.

The result is a roundmthe-houses adventure yarn with sevaral loose ents (bow did Carstaire retain his "Leech" while boing brainwashed and rebuilt?). Hawkesworth proves highly inplausible, as ce Carstaire and the two alien races. Elowever, the yarn has plenty of fast action and if adventure and excitenent is what you crave, then you'll fincl it aplenty'here. This could woll havo appoared in the old istounding before its kecline.

After a thousand year journey, an autonated starship selects a planet and begins to Grow, cducate and awaken tho embryos in its taniss. An alien influence initiates a change in the procedure. A Eanding is made and the colonists find they are on an island so set out to make a bridge to the nainland, then find they have to cope with strange creatures, humanoids and further interference from the "Mianipulators'. The author has given his colonists an Arab culture and done it superbly. Characters come alive with credible motives and dialogue. The plot grips you frow page one, avoids irritating loose ends and hold you till the end. Written by Garry Kilyorth, and 95p from Ponguin....and you'll not regret buying it.

MHE OUTHARD YRGE
Wyndihan \& Parkes Penguin 95p

The Tronn saga of five stories fron the late fifties. The Iroon'men have an urge to space, and here we have each nale descundant in turm doing his bit to aid man's destiny. Each Troon is a mix of Bigsles and Dan Dare and the tales have that mellow blandness characteristic of earlier British SF. Tradn (each doscendant is virtually the same man) saves a satellitte fror missile attack; nakes the first Mars landing; oxperiences atonic warfare fron the surviving Moon Base; escapes fron Brazil:s space nonopoly to land on waterloged Venus; and finally tanages to live twice after a disaster in घpace. Smooth, pleasant stuff, but not compulsive reading.

MTRACKE VISTMORS Jan Watson Fanther \& 2.00

Michacl Peacocke is seduced by a blonde in a WFO. Later, after hypnosis by John Deacon, strange events and visitations comence. Together with Deacon and UFO investigator Shriver, he vistts the moon and meets an alien race before einding that even reality is being warped by a group minc This is lass a story than a catch-all ained at 'cosnologists'. If you believe in UFOG, Pyrarid Power and von Daniken, then you'll drool over this one. It explains just about every sort of occurrence you can inagine.

The authers postulate that Earth's history was vastly boctified by ice ages and catastrophic bombardnent by remants of a dicintegratod fifth planot. Orthodoxy is wrong, so the writers supply their version of plate tectenies, the death of reptiles, nagnetic variations and so on. As a Iayman I susnect such etatenents as ntornaloes are sustainod lightning boIts, and hurxicanes are nirror-inages of sunspota! The debatints atyle is of the orior, 'it can't be A, therefore it must be B' (ignoring the possibility of C,D or E, etc.) Howevor, if you scoff at orthocoxy and, profer an altermate lock ot our planet, then here it is.
THE LJJCK MACMTNE E.C.Tubb

Dobson 起4. 95
When a pair of downat-heel teachers at an nth rate private school get kettled in the crmany of a rejected research scientist, anything can happen. In this case, it does when they stageer back to the school lab, and, by区int of electronics, voodoo-drums and a touch of psi power, banage to create a working 'Iuck machine'. The results are disastrously successful and there is a sting in the tail. This is tho best Tubb tale I've read (and the earlier ones were good). In 'Iuck Machine' he comes up with a beautifully constructed yarn with touches of Thorne Smith..and even Padgett's mad scientist 'Galleghex'. Tubb mines a new vein of humour and finds the mother-lode.

# N/SA 

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| Viking News Center | Viking $2-32$ |
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| (213) $354-6000$ | Junc 30,1977 |

MARS AS PHOTOGRAPHED DURING THE VIKING-2 APPROACH (Early August, 1976) - Viking 1 Lander events and activities dominated the attention of the Viking Flight Team early in August last year, overshadowing much of the approach science completed by the Viking 2 spacecraft prior to its orbit insertion August 7th. However, its approach program was trouble free and produced an impressive volume of science data - including this dramatic color approch picture of Mars taken August 5 from a distance of 419000 kilometers (260 355 miles). Viking 2 approached Mars more from the dark side than had Viking 1 in mid-June, providing a crescent view in contrast with the half-disc perspective afforded by the first spacecraft. Contrast and color ratios are enhonced to improve the visibilisy of subtle surface topography and color variations. Bright plumes of water ice clouds extend a considerable distance northwestward from the western flank of Ascreaus Mons - the northern most of the three volcanoes aligned on the Tharsis "oulge". The middle Tharsis volcano, Pavonis /hons, is barely visible within the dawn terminator below and to the west of Ascreaus Mons. The great rift canyon system, named Valles Marineris following its discovery during the Mariner IX mission, extends from the conter of the picture at the terminator downward to the east. Its full length is ncarly 4800 kilometers ( 3000 miles), including the complex at its west end named Noctis Labyrinthus (sometimes called the Chandelier because of its branched, inverted-triangle topographic pattern). The bright basin near the bottom is Argyre, one of the largest impact scars on Mars. This ancient crater is near the south pole (which is nol visible in this picture), and is brightened hy isy surface frosts and fogs which are characteristic of the near-polar regions when each is experiencing its hemisphere's winter season.

