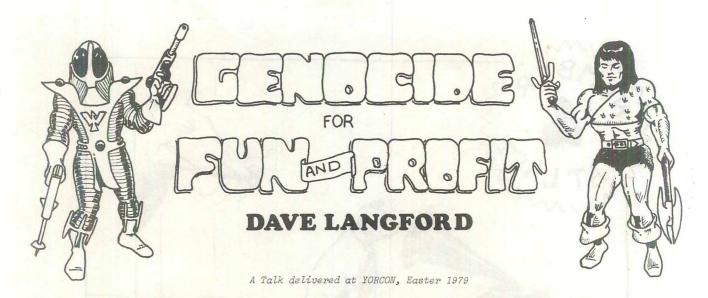


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DRILKJIS



I'm here because, in a moment of weakness, I wrote a book on the future of military hardware. WAR IN 2080: THE FUTURE OF MILITARY TECHNOLOGY! Great title, eh? Well, I didn't think so either, but the publishers thought it up, and they still think it's the best part of the book... I've called this talk Genocide for Fun and Profit because I had a good deal of fun writing the book---and, being an incurable optimist, I'm even hoping for a little profit. But of course war also involves the suffering and torment of innumerable hapless victims, and this is where the readers come in. Or in this case, the The object of the talk is really to send you all scurrying, hypnotised, to the Book Room to buy a copy ...and from the commotion at the door, I see this is already beginning to take effect. (I stole that joke from Bob Shaw.)

A little background follows for the benefit of any-body who wants to write a book like this: don't, I've done it now. Actually, the secret of success in this sort of speculative non-fiction is surprisingly simple. The important thing is to have patience. Keep reading New Scientist, drink two pints of beer a day and above all don't antagonise the publishers by writing to them about how you want to do a book. Follow these simple rules and, if my case is anything to go by, in the fullness of time the publishers will be totally unnerved by your silence and will write, pleading with you to write the book for them. Which is what happened to me.

As for the subject matter, I've tried to summarise it in a fanzine as follows: "WAR IN 2080 is all about the future of Killing People. It begins with a brilliant and lucid discussion of killing people with clubs and by the last few chapters is merrily cracking planets and detonating suns as a route to killing more people. In

between there are fascinating digressions on allied subjects such as seriously wounding people." I thought this was pretty fair comment, but in a little while I received from the publishers saying: "This is simply not good enough. We expected full co-operation from your magazine in our advance publicity for this book; instead your readers are being told that, despite the title, the book is actually about killing people. Whatever your book may say, and few of us have managed to get past the introduction, war is a clean and glorious business where people can release built-up tensions that would otherwise be manifested in ugly violence and aggression at, say, football matches..." This, I think, was about the time when they were trying to sell it to the Children's Book Club and were editing the more violent bits---so you'd read a description of a multimegaton nuclear attack consuming whole cities in this fiery hell of radiation, and then would come the line, "Of course the people who lived there were dreadfully upset by this...

The other problem with multimegaton attacks and fiery nuclear hells is that some idiot might actually launch such an attack, with appalling consequences to my royalties. Here's part of yet another letter I've received, this time from someone who hasn't read the book: "I thought it was damn sneaky for you to mention in your first chapter that there had been a vast nuclear war in 2064 and that mankind had been reduced to primitive weapons with which to wage war. I mean, Mr Langford, I did not buy your book to read about groups of people throwing rocks at one another --- that wasn't the sort of projectiles I had in mind. The use of bones as clubs and the gradual development of bows-and-arrows as well as the spitball do not fit in with my concept of future warfare. Frankly, Mr Langford, I feel I have been had --signed, a disgruntled reader [Terry Hughes]." It's

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an interesting point, isn't it? As dedicated science-fiction loonies, we're all bored to tears with vast nuclear wars; we expect future battlefields to have some more exotic props like planet-busters and colliding black holes, and yet a boring old nuclear exchange can rule out all these jolly things, leaving us with still more boring details of how best to chip your flints—not to mention talks to limit the fearful proliferation of the bow and arrow.

The assumptions to make, if the exciting things we read about are ever to come true, are---first---that everyone will indeed go on building bigger and better weapons without necessarily using them. In some cases they'll even have to do without testing them; a gadget which makes suns go nova is not something to try out in the back yard, even if you do have a high fence. Building and not using weapons is of course just what we've been doing for close on forty years. Whether they actually get used depends on the second assumption: that we don't run out of energy and start fighting over the world's dwindling stocks of coal, oil and Ever Ready batteries. There's little point in babbling about superweapons if we can't convince ourselves that there is at least an outside chance of people surviving long enough to build them, if not to use them...

So for one reason and another I won't dwell on the familiar World War III. You all know the scenario: it starts with an international incident as someone throws up at an embassy party, or with an "accidental" nuclear attack caused by a false blip on the American early warning system, or with a demented American general pressing the red button in a fit of post-convention depression. Extensive surveys of the literature show that in most cases it's America that starts World War III---my own guess is that if nuclear war does come about, it will be provoked by some obscure minority group with a grievance and a home-made bomb---the BSFA, for example. Anyway, the nuclear exchange begins and in no time at all we've shot up Herman Kahn's escalation ladder like a rat up a drainpipe, with ICBMs falling literally by the thousand. Though the basic business of missiles and interceptors is pretty much old-hat, there are some surprisingly science-fictional ideas being put forward for what they call "terminal defence". The important strategic point in nuclear war is to keep enough in reserve to be able to hit the enemy again---or, on the other hand, to be able to smash the enemy's entire offensive capability on your own first attack. This means that the best-protected places---second only to the governments' own hidey-holes
---are the actual ICBM launching silos. At the moment it takes a direct hit at ground level to knock out a hardened launch site. Among the defences that are being suggested are what they call "nuclear rockpiles"--which means letting off your own bombs underground and filling the air with millions of tons of flying rocks to smash oncoming missiles out of the sky. I think that's slightly terrifying. Then there are proposals for short-range nuclear cannon, various models of interceptor and so on; my favourite is the forest of tall steel spikes someone wanted to put round each launch site. The idea is that since a ground-level strike is needed to destroy the target, the attackers' missiles obviously won't go off until they reach ground level--- and just before they get there, they're impaled on these ruddy great spikes and put out of action. Then, of course, there's the notion for mobile launchers---not the submarines we know and love, but long underground tunnels along which the launch pads move on little railway tracks, ready to burst from the ground where they're least expected.

I might as well mention that in nuclear planning there is already a standard strategic answer to any defence---any, that is, which is even marginally less than 100% effective. The aggressor simply builds lots more missiles and saturates the defences. Clearly this doesn't work too well unless the aggressor has vast amounts of money and resources; I name no names, but it seems that there are approximately two nations against which it's not worth trying to defend oneself. Neither of these is Great Britain, which would have a hard time trying to saturate the defences of Liechtenstein: even if Britain went crazy and decided to fire both its missiles, at least one would doubtless be grounded by union disputes as to who lights the blue touch paper.

Anyway, once the standard version of World War III has been played out, there's not a lot left. The sort

of casualty levels they talk about (after a mere few thousand nuclear strikes on either side) are strongly reminiscent of those at convention banquets, with about 50% immediate fatalities and a rise to 80% or more as the after-effects sink in. The survivors have to eke out a meagre existence on contaminated food, again as at convention banquets, and are reduced to primitive weapons like flints. All of which may be very science-fictional, really, but it's scarcely up to the hardware we expect from a Chris Foss cover. (Not enough windows in a flint, for a start.)

Now: is this traditional version of World War III likely? It's becoming less so. At the top of its flight an ICBM actually leaves the atmosphere altogether and becomes vulnerable to a new class of weapon: energy beams, which if they work at all will certainly work best in space. Meanwhile, at ground level, there's much talk about new weapons which are in many ways more attractive to strategists than the ICBM. Nobody really wants nuclear explosions, for example, since they're so inefficient. One medium-sized fireball represents the release of enough energy to kill every human being on this planet, several hundred times over---if the energy can be efficiently distributed, one little packet of kinetic energy being set to throw a blunt instrument at each person. And though I don't want to use that simile about convention banquets again, the fact remains that nuclear explosions are extremely expensive and leave a nasty mess behind.

The up-and-coming offensive weapons are the well-known cruise missile and the relatively obscure Fuel/Air Explosive or FAE warhead. Cruise missiles are economy weapons; if necessary they could come rumbling off a production line like Japanese motorcycles, whilst ICBMs each take many patient months to produce, like British Leyland cars. The trick of the cruise missile is a microelectronics package which controls the thing to follow a terrain map with the fanatical enthusiasm of a bloodhound or taxman, literally at hedge height if need be. A relatively small and simple jet --- since this missile need never boost out of the atmosphere --- should allow the device to hop, skip and jump for a couple of thousand miles, hiding behind woods, avoiding known anti-missile installations, lurking always just below the radar horizon... until in the end it explodes within 40 feet of the chosen target. You don't need a very bright microcomputer to achieve all this ---it can be even stupider than the average Perry Rhodan fan and still have a vast number of evasion tactics built in. And since cruise missiles are small, you can launch one from a plane, a dozen from a submarine, perhaps a hundred from a ship: the defences can be saturated far more easily than with ICBMs, and at a fraction of the cost. No doubt improved cruise missiles will be sent on assassination attempts directed at individuals---they'll land furtively in a foreign city and consult telephone directories until they locate the victim's address. Of course there are disadvantages---important officials are usually ex-directory, for example. Other problems are the slowness of cruise missiles, their limited range, and the relatively small warheads they can carry.

There's nothing to stop people sticking nuclear warheads on cruise missiles, but certainly they can only carry little ones---doubtless just as expensive as larger ones. To stay in keeping with the image of an economy weapon, what they need is the Fuel/Air Explosive warhead, which tucks what is in effect a bomb several yards across into a small shell. The trick here is to use a volatile explosive; you'll doubtless all be arrested for possession of dangerous knowledge if I tell you that it's ethylene oxide. This comes billowing from the warhead in a cloud many yards across, and is ignited; the explosive shockwave can build up over this huge volume of gas rather than the confined space of a mere shell, and the result is quite impressive. Even now, they're talking about souped-up FAE bombs with virtually the same explosive force as Harlan Ellison---I'm sorry, I'll read that again---as the smallest nuclear weapons. In this way, whoever lets the thing off sits at home murmuring "How virtuous I am, I have used a mere conventional weapon." Of course, the nation it's been used against might not realise this was a mere conventional weapon, and one thing might lead to another, and before we know what we're back chipping those damned flints again.

Energy beams are the next likelihood on the list of weird weapons---lasers and particle beams. The science-fictional view is more or less summed up in the following extract from that celebrated story "Sex Pirates of the

Blood Asteroid", by an author whom modesty forbids me to mention---

"---And at that fateful signal, each of Nivek's countless ships and planetary installations discharged the full, awesome power of its primary projectors, the blazing beams of destruction combining into a hellish flare of incalculable incandescence against which no defence might prevail! "Nivek snarled in rage. 'Missed!'

"A nearby galaxy was blasted out of existence, but...."

Almost as thought-provoking is the assertion, first made by somebody in the early sixties and printed in the Guinness Book of Records for years after, that the supposition that lasers might melt an incoming missile was an exaggeration of 11 orders of magnitude---that is, a factor of one hundred thousand million. Right now, though, there are people who say that missile-killing lasers are absurd because they'd have to be much more powerful than those we've got---by a factor of ten to a hundred! This large difference is partly because lasers are very powerful these days, but partly also because certain ingenious people have realised that you don't need to melt whole missiles to put them out of action. This is the sort of point which Isaac Asimov likes to illustrate with some long and pointless analogy, and if I ever want my own sf magazine I'd better do the same---here goes. Imagine this hotel as being a mighty intercontinental missile; its essential core, the bar, represents the nuclear payload. This must be activated by delicate electronic circuitry ---represented by the elite gathered in this hall---and it is this circuitry which is specially vulnerable to lasers. Of course, I represent the laser which has put you out of commission and is even now preventing you from triggering the bar into a colossal, drunken explosion. To quote Robert Heinlein, in "The Moon is a Harsh Mistress"

"An H-bomb with circuitry ruined is not a bomb, is just big tub of lithium deuteride that can't do anything but crash."

This is rather misleading, since you will all be aware that an H-bomb requires a fission bomb to trigger it, and a fission bomb requires an explosive charge to compress the plutonium into a supercritical mass. Fire a laser at that oncoming missile and you've an excellent chance of messing up the firing circuits; there's also a fair chance that you'll trigger the explosive with the laser beam, while in any case we expect the explosive to go off when it hits the ground. What's important is that without precise and proper detonation of this explosive, the plutonium doesn't go fully critical (did you know criticality is measured in josephs?) and ten to one the fusion reaction never gets started...

Obviously a laser defence system has its advantages--with your beam travelling at the speed of light, there's no need to calculate how far the target is going to run before the beam arrives. Also there's no question of running out of ammunition so long as nobody unplugs you and the fuses don't blow. The disadvantages are just as obvious: anti-aircraft shells may be slow, but at least they don't get soaked up and scattered in the air as do pulses of energy. The largest and most promising battle lasers operate in the infra-red: by a fascinating coincidence, the water-vapour in the air absorbs radiation with special enthusiasm in just that part of the spectrum. Laser beams also wave about in the air for the same reason that stars twinkle, owing to the sky's being made of wobbly jelly... well, that's what Charles Fort says. Powerful lasers are even worse, since they heat the air and change its refractive index, producing a lens effect which automatically throws the beam out of focus. No wonder military technicians can often be found in corners picking their noses with their toes and complaining that whoever drafted the laws of nature was some kind of goddam pacifist. Particle beams have much the same problems; besides which, if you use charged particles like protons and electrons you have the beam bending several degrees in Earth's magnetic field before it ever arrives. This is great as a Freudian symbol, but less good as a weapon. If you use uncharged particles you find that they don't move at all, since without some sort of charge there's no way to accelerate them. Here the trick is to accelerate protons and neutralize them by hanging electrons round their necks just as they zoom off---this is how the American 'Sipapu' beam weapon works. I gather that 'Sipapu' is an old American Indian word meaning neutral hydrogen beam weapon.

No matter what type of beam you choose, it works less

well within the atmosphere; outside we have certain power problems since---Arthur C. Clarke notwithstanding---it's a long way to run electric cables. One possible ICBM defence system would consist of countless small satellites, each industriously storing solar power in preparation for its big moment when the ICBMs come flying from the atmosphere somewhere over the pole, and all these little satellites start shooting lasers at them under the guidance of larger ones filled with tracking gear and computers. Since this is a relatively cheap defence in that you don't use up interceptors---the satellites can obviously fire again and again, as fast as their batteries can recharge---it might make ICBM attacks not at all attractive to strategists who pay attention to their accountants. The cunning strategic reply is likely to be "Aha, then we won't use ICBMs." And they use cruise missiles instead, gosh, what a masterstroke of strategy, I wish I'd thought of it myself.

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Within the atmosphere, the problem's really very simple. If you can crank the power to a high enough level, you can use lasers or particle beams --- but not very efficiently. Which brings us to that good old sf standby, the laser handgun. I don't want to go on record with a spoilsport negative prediction---enough people have made fools of themselves by asserting that bumblebees, aeroplanes and rockets would never be able to fly, that lasers were an amusing toy with no conceivable application, and that Erich von Däniken sometimes tells the truth. However, just now the prospects for a laser handgun are not encouraging. Assuming that the fearless soldier armed with such a weapon would stray further from his base than the length of your average power cable, the likeliest choice seems to be the hydrogen-fluorine chemical laser, which produces an intense infra-red beam. The chap carrying it will require a large cylinder of hydrogen, another of fluorine, and something tougher than a spacesuit to withstand the laser's exhaust of hydrofluoric acid gas. Fearlessly he will stagger towards the enemy, clutching the laser head itself (I forgot to mention that this could be the size of a bag of golfclubs, only heavier). None can withstand the searing beam of radiation; nor is anybody likely to try; the enemy, rotten sportsmen that they are, will probably knock him off with an old-fashioned rifle at extreme range. Never mind; it should be worth a medal.

My favourite fictional handgun, of which few of you will have heard, is probably a little more practical; it's called the Dentichar handgun, and it projects this supermagnetic induction pulse which causes the victim's fillings to glow white-hot. Even that is perhaps less likely to be effective against people than biological weapons--guns firing poisoned needles, for example, or the lethal umbrellas which Bulgarians delight to use on defectors. It's about time I read you some real hard sf, so here's a specially thrilling description of the effects of a nasty weapon called the Delling, as described in Tully Zetford's notorious book "Whirlpool of Stars". The Delling fires little gobs of something known as "dis-gel"; the results are as follows...

"Giffler melted.

"His body deliquesced. It oozed. His head flowed and collapsed and sloughed. Still upright, he melted and shrank and collapsed, his body shimmered like a blood-drenched jelly. He shrank and oozed and formed a contracting pool of scum on the yard stones.

"The man in black, Goton Telander, walked out of the Custom House door. He still held the Delling. With a finicky motion he flicked his fingers and the electronic and neural circuits whipped the gun back up his sleeve. It had all been so very slow and yet so very quick.

"Giffler had been destroyed...

"A robot vacuum cleaner and scrubber darted out on rubber wheels and began to suck and clean the spot where Giffler had died."

So much for hard science fiction. Now, what about the exotic lasers we hear about: the x-ray laser, for example, without which no Larry Niven plot is complete? Well, the ordinary laser does its dirty work by amplifying a light pulse as it bounces back and forth between two mirrors; and unfortunately there's nothing which reflects x-rays effectively. They have this nasty habit of going straight through mirrors, or at best being absorbed in them. It might be possible to design a linear x-ray laser, with miles of laser amplifiers in a row to provide a long beampath without mirrors; the smaller x-ray lasers used in dozens of Larry Niven stories obviously use his celebrated stasis field to provide the necessary perfect mirror. If

you have a perfect mirror, however, you certainly won't care to stop with mere puny devices of this sort. An x-ray laser, like every current model of laser, depends ultimately on electron transfers between energy levels in the atom; the whole business has a distinctly damp-squib aspect when you think about the nuclear energy levels and the possibility of fiddling with them to produce a gammaray laser. The graser, as it seems reasonable to call it, would compare with ordinary lasers rather as a hydrogen bomb compares with a V-2, or as a science fiction convention compares with a Liberal Party conference. This is not the sort of laser to use for surveying and so on, unless you like large holes in your landmarks: one highly constructive use has been suggested by Carl Sagan, who thinks it a cunning notion to build a graser rated at 1000 billion watts (and that's an English billion, 1000 times bigger and better than its degenerate American cousin. This beam can then be directed against a star ten lightyears away, and it's believed that the intense gamma flux will be sufficient to trigger a supernova. The suggested purpose of this is wholly peaceful and nice--it's the only way to mine the core of a sun and get it to throw out some heavy elements, the assumption being that by the time we're in a position to build a graser of this power we'll have broken down the solar system into Dysonspheres of standardized living space (a sort of orbital Milton Keynes) and because electronic substitutes for sex still haven't caught on, we'll be desperately looking for more raw materials to make and power more little worlds. Either that or we'll all be dead, but you'll remember that I've ruled out this unwholesome scenario as lacking in interesting sf-warfare possibilities.

(Members of this audience, being fantastically intelligent and perceptive---that's why half of you have gone to sleep--will remember that this sun-killing business turns up in Larry Niven's stories. But he uses a wholly natural system without any of this nasty technology: one nova serves out large helpings of radiation to trigger the next, and so on and so on until the whole galactic core is going off like popcorn. I'm mentioning Larry Niven a lot because market researchers tell me that this name is a bigger attraction than "David Langford".)

Now, let's return to the more sober and sensible scientific predictions, such as a spaceship which---and I quote ---acquires "a mass of some twenty million galaxies concentrated at one point". The relativistic mass expansion has never been the same since Charles Harness launched that ship. Bob Shaw goes one better, with a million-ton spaceship travelling at thirty thousand times the speed of light and stoppable only by detonating eight thousand nuclear devices in its path. The moral is that however unsatisfactory relativistic ships are for travel---unless you hope to get a big kick out of keeping your good looks while all your stay-at-home friends are becoming fertiliser---these ships are excellent weapons. Take a missile weighing one hundred tons and travelling at around 99.99% of the speed of light. Go on, take it. You don't really need to put any explosive in that missile, since when it falls with uncanny precision upon the chap you've aimed it at, the kinetic energy release will be something like 220 million megatons. This is noticeably more than the few thousand megatons required to reach 90% depopulation of America or the USSR. Of course, the fellow whom you're firing this missile at may have taken his own precautions. Perhaps he's built a distant early warning system out in the orbit of Pluto, which warns him of the oncoming missile by relaying a radio message. This takes nearly five hours to reach him---it's a long way to Pluto--and, travelling at 99.99% of the speed of light, the missile arrives about one fifth of a second afterwards. Hardly even time to put up an umbrella.

The snag with this irresistible missile is that you need to take a long run up, and to put in all that 220 million megatons of energy, bit by bit. Even with one hundred per cent efficiency in accelerating the missile, that's a lot of money---if you ask for that much energy from Southern Electricity, they will smilingly send you a bill for close on 8,000 (English) billion pounds--- even more than they charged me last quarter, in fact. This is only the beginning of the problem, since, as at least ninety per cent of those of you who are still awake are thinking, you can't use the energy that efficiently. For less than the cost of attending this convention, you should be able to fly to the moon and back several times---which isn't intended as an insult to our wonderful committee, only to the efficiency of Apollo rockets. If we are to do despicable things along

these lines, it would seem considerably cheaper---and would also save a lot of blown fuses---if we could find the energy just lying around for the taking. Lumps of antimatter, for example. If I had a pound of antimatter here, it could be used to accelerate our missile to nearly 10% of its final kinetic energy. There would, however, be this slight problem of the 20-megaton explosion as the stuff reacts with my hand---that's the beauty of antimatter, there's none of this tiresome fiddling round with explosives, lasers or blue touchpaper to make it go off.

Indeed, I should pause to be rude about some of the heroic gentlemen who in Jack Williamson's sf stories (for example) have boldly towed antimatter about the place with little magnets. You'll remember the scenes: the spacesuited heroes cautiously use these magnets, meanwhile keeping themselves moving with the traditional jets attached to their suits. I'm happy to inform you that anyone fool enough to try this would shortly be dead: first, there is no such thing as a perfect seal, so air molecules diffuse through spacesuits; second, when you use little jets, these too emit molecules of something. In other words, anyone coming close to a lump of antimatter will be releasing molecules of normal matter in its direction. The first effect is that the matter/antimatter reaction on the side of this lump nearest our jolly spaceman will send the lump moving away from him. Meanwhile, highenergy particles and gamma rays wash his genes whiter than white. Should you ever find yourself in a spacesuit near an antimatter meteoroid, you are advised to get a long way away and---if you must push the stuff about the place---do so by squirting gas at it from a great distance so that the matter/antimatter reaction propels it the way you want it to go. This will generally be in the direction of your enemy, since---let's face it---however appealing it may be to use the energy of mutual annihilation to shove missiles at the enemy, it's even more appealing and a good deal cheaper to present him with a piece of antimatter rated at a snappy 1.2 megatons to the ounce. Pieces of antimatter larger than a ton or so can be divided into three easy-to-use sizes: continent buster, atmosphere stripper and planet smasher.

Unless you can find your piece of antimatter floating around somewhere---stealing by finding, they call it in British law---there is little hope of arranging one of these spectacular displays. There is a steady production line for antimatter in operation today---at CERN in Geneva ---but doubtless owing to the number of British workers employed there, the output is remarkably low: a few hundred antiprotons a day, perhaps. Even more disappointing, CERN don't seem able to hang on to the antiprotons they do make---there's some shabby story of the things just vanishing, though the American Chiefs of Staff have a theory that they are being pilfered and secretly sold to Communist countries. In any case, even if we could accumulate the entire output of antiprotons, it would take around 277 x 10^{26} of them to make a 20-megaton bomb---and to save up that many at the current rate of production would take rather longer than the universe has to run. The alternative source of antimatter is a dying black hole, which according to reputable scientists (and also Jerry Pournelle) should throw out great quantities of matter and antimatter in equal proportions. Find a black hole which doesn't look too healthy, and the rest should be easy.

Which brings us with rather suspicious neatness to black holes. This is an area where it's virtually impossible to say anything authoritative, for the simple reason that accepted notions in black hole physics generally last only for the two or three hours that it takes Larry Niven to fudge up a quick Hugo-winning story based on the topic. At the moment, all the best sf ideas involving black holes seem very slightly dubious. Using them for faster-than-light travel, for example, has two discouraging aspects; firstly, that there's apparently no way to get back, and secondly --- a more recent speculation ---you are liable to be put through a sort of mincer on the way, arriving in the form of highly disorganised gravity waves. Like British Rail, in fact, but more expensive. But we're talking about weapons: and there's no doubt that a black hole with the mass of the Earth---one, that is, about 0.9 cm in radius---would happily swallow up a planet if given time. However, if you have the energy needed to shift a mass that large, you might just as well use it to shift the Moon, say, into a collision orbit. These spectacular ways of doing things are so <code>wasteful</code>. The real advantage of using a black hole in this way would be that it's too small to break up with any conceivable attack; but there's

still a fair range of alternatives for future baddies to talk over with their evil cost-accountants.

To save these evil-doers trouble, I've done some sums for them. The thing to avoid is the traditional recourse of stopping the Earth in its tracks. That's very expensive. Shifting the orbit so that we boil or freeze is many times cheaper; and smashing the Earth into tiny little fragments is, strangely enough, cheaper still. Yet more economically, the arch-baddie could arrange to stop Earth rotating---I wouldn't like to say how, but you'll remember that our good friend Immanuel Velikovsky has suggested that by providing another planet with opposite spin, the rotation could be cancelled via immense electrical discharges between Earth and this spare planet. I think this would be a handy weapon, since the energy release would be enough to melt portions of Earth's surface, throw up fresh mountain ranges and generally cause alarm; Velikovsky is more moderate in his views, and thinks that the only tangible effect would be a small earthquake sufficient to topple the walls of Jericho. OK---we're really in the bargain basement now, trying for economical planetary ruin using puny energies on the order of the explosive release of only 60 (English) billion megatons of TNT. Next step down the cheapness ladder is to carry out some relatively mild show of force such as blasting off the outer mile or so of Earth's crust into space; and that's cheaper still if the attackers ignore the seas and concentrate on the land. By now, the destructive energies involved have dropped to a mere few hundred megatons for every human being now alive. It would be even more economical just to drop a one-megaton bomb on each square mile of Earth's surface: you'd only need 200 million or so. And even more cheaply, in terms of energy, you could just arrange to hit everybody very hard on the back of the head...

I really regret this, you know. I should like to say to all future warlords, "Smash all the planets you like, my children, and to hell with the cost." And certainly planetsmashing is cheaper than shifting orbits and many of the other things which the Tyrant of the Vegan Horde likes to do in your favourite literature---but it's still too damned expensive. If I were advising the Tyrant of the Vegan Horde --- and out of sheer humanity I should like you all to promise not to tell him this---I would suggest a few thousand very, very dirty fission bombs which he could pop into the atmosphere; they would go off in the high jet streams which blow around the world. These carried the dust from the Krakatoa explosion of 1883 all around Earth---tinting the sunsets in very pretty colours for two years. These winds would do just as good a job on radioisotopes, and we could all watch the beautiful sunsets until our hair fell out and various other unpleasant things happened to us which I assure you would be even worse than a convention hangover. There are probably some even more horrid weapons available 'to these tyrants---imagine, for example, a missile containing a gigantic fluorocarbon aerosol which whips off our ozone layer and leaves us all to expire from terminal sunburn, Or it might be that the Vegan Horde is already among us and has arranged to addict hundreds of millions of people to some carcinogenic substance so fiendish that the addicts refuse to give it up even when told it's killing them. Of course, that particular notion is far too fantastic for use in a science fiction story.

All this sordid talk of economics is of course irksome to the free-ranging spirit of the sf writer. It embodies the narrow view of the underprivileged citizens of a mere Type I civilisation---which is defined as a civilisation with 10¹⁶ watts of power available for use. In fact, the miserable truth is that we hapless Earthlings don't even make it as a Type I civilisation, since although we certainly use about this amount of power, so much of it is tied up locally that it isn't available. By this, I mean continuously available --- by detonating every nuclear weapon in the stockpiles, the Earth as a whole could manage a power output of 10^{20} watts or more---but only for one second. Now if we could use the total power output of a star--i.e. the Sun---we would graduate to a Type II civilisation with 10²⁶ watts available. There are of course subtypes in between, in this extremely rough-and-ready classification: but it's fairly obvious that a Type II technology would have little trouble in planet smashing---since the maximum available power-output is now equivalent to 20,000 million one-megaton bombs falling each second, which should get results considerably more quickly than sending a gunboat. There's enough power there to smash planets on a continuous production line, one planet every few days until there's an industrial stoppage. The power source for all this could be a star---or a black hole into which we drop things and extract part of their gravitic potential energy---or a small black hole,

which under the current theory will be anything but black, and will push out incredible amounts of energy, leaking away its substance just like a wallet in the book room. If you slam black holes together, you can extract about 29% of the combined mass as energy, which should be useful. Someone has even come up with an impressive figure for the energy contained in each cc of empty space; if someone else can think of a way to get it out, it should be a cheap supply of power, considering that there seems to be more space than anything else in this universe (though we'd have to be careful not to use it all up). I'd like to say that one of these techniques will one day provide free power, only some of you will probably remember that in the 1950s there were statements in Parliament that when nuclear power stations were built, electricity would become so cheap that it wouldn't be worth installing meters. More recently, some other MP---quite possibly the same one---announced that even if electricity cost nothing to produce, it would be impossible to make it cheaper since nearly all the cost went in maintaining power lines and running advertising campaigns. Have no fear: your beloved electricity board will persist far into the future; and as the final suns expire and the entropy death of our universe draws near, they will still be begging you to invest in central heating systems. On HP.

---You will see the direction in which these Types of Civilisation go. Type I is a little bit more resourceful than us, at 10^{16} watts available; Type II can do just about anything it likes, with 1026 watts or the power-output of a star; Type III, the biggie, runs to the power-output of a galaxy at 10³⁶ watts. Nobody is quite sure what you'd do with all that power---but doubtless a Type III civilisation will be able to think of something. We've also come up the scale in terms of destruction from mere sterilization of continents, smashing of cities and holding of sf conventions --- the abilities of Type I--- to the conversion of planets to rubble and suns to supernovas as practised by Type II warmongers. What, you ask breathlessly, can top this act? No doubt a Type III maniac might be able to blow up galaxies, so to speak, by mass application of the nova-generating gamma-ray laser I mentioned earlier: but who is going to hit the jackpot and wipe out the entire universe? (Merely waiting for it to wipe itself out is considered cheating.)

My recipe for wiping out the entire universe is as follows. You must first construct a number of small black holes---say by using that super gamma-ray laser to compress lumps of iron to infinitesimal size. (I recommend iron for constructing black holes in general---it's a nice stable element which doesn't undergo fusion when you compress it. Which is unfortunate for Doc Smith and Alfred Bester, both of whom have written stories in which this incredibly stable element is used as a nuclear fuel.) Now, with the theory of black holes as it stands today, these little ones aren't black---although according to the simple theory nothing can escape the event horizon, there's a quantum mechanical effect which makes the radius of the event horizon slightly uncertain...and energy starts leaking past it. So, for a while, these holes behave like little suns as they merrily leak away; during this period you may relax and toast crumpets in the emitted radiation. By and by, your small black holes will have entirely wasted away. Everybody would be very happy if there were nothing left behind: but unfortunately each hole contains this singularity, a point in space given to such unspeakable practices that even Philip José Farmer hasn't written fully and frankly about it. When the singularity is covered up by an event horizon, we can pretend it isn't there; when it gets out all hell breaks loose. Among the minor predictions is the complete breakdown of the directional flow of time: in the region of a singularity it seems that past, present and future don't really mean that much any more; by reating enough singularities you can effectively bring the universe to a chaotic end. It would be scrambled like a William Burroughs novel.

However, anybody wanting to work off his or her grudges against society in this manner is warned that the theoreticians may revise their view of the universe at any moment. In other words: should you wish to destroy the universe, you'll have to do it quickly before they trade in last week's model for the new one.

After that, there's little more to say. The creation of new universes is outside the scope of this sober and scientific talk; however, if you're interested in the subject, I think one of John W. Campbell's editorials contains complete blueprints of how to do it with only three pieces of wire and a used battery. Then, having created a suitable planet and evolved life upon it, you can get down again to the serious business of chipping flints.

TO BE CONTINUED: KEVIN SMITH

There can be little doubt that when an sf author has invested a lot of time and effort in creating a believable alien world, and peopling it with authentic-seeming characters, there is a great temptation for him not to let it disappear when the novel has ended. Especially if the novel has won a Hugo or Nebula award. This is probably why so many authors write sequels, and it is hard to blame them for it. The rate of return on effort ih higher, and---even more than usual --- there is a readymade audience--those who enjoyed the first. Indeed, some authors go further and extend their idea into a series, developing their world and its people as they go. But I don't want to suggest that the motivation behind the sequels is a purely monetary one. I am quite sure that the authors become genuinely involved in their creations, and see possibilities for development that they didn't see, or had no room for, originally. The stranger work select

The series that result have many individual and distinct characteristics, but it is possible to pick out a few general tendencies. I can't go as far as to say 'principles', since this would imply a basis of structure, or of form, and I don't want to do that. In addition, 'principles' implies rigidity and exactitude of definition, which would devalue the inevitable exceptions (and also make it more difficult for me). These series tend to be written by 'quality' sf authors, to be in the low numbers despite having been many years in the telling, and to have story and character development through the series. In many of them the first novel stands on its own; in some a series was the intention right from the start. And in all the good ones there is something memorable---either character, world or idea. What else is there to build on?

This rather loose description immediately cuts out the Perry Rhodan

type of series, in which, like a television soap opera, the characters are not permitted to develop, and which are not written by 'quality' authors (at least, not under their own names). It also excludes future histories---sequences of novels and stories fitting into a common historical background. Mainly this is because there is no (or very little) connexion of immediate plot or character from one story to another in the series. Thus out of the window go Asimov's Foundation trilogy, Larry Niven's Known Space stories, Ursula LeGuin's Hainish chronicles and Marion Zimmer Bradley's Darkover novels.

So what are we left with?

Examples I can think of immediately are Frank Herbert's Dune trilogy (shortly to be extended), Roger Zelazny's Amber series (although some would argue that Zelazny was dropping off in quality before he started it, and fell utterly when he did---and I can't find it in my heart to disagree with them), Philip Jose Farmer's World of Tiers trilogy (although there have been five I stopped reading at three, and always think of it that way) and James Blish's Cities in Flight quartet (although the first book doesn't really fit in, and the series only just escapes being a future history). There are many more, most of which I haven't read, and most of which are by Michael Moorcock or Piers Anthony---to both of whom the trilogy comes as naturally as breathing.

The series bug exists outside sf too, of course. In detective fiction Raymond Chandler set a high standard with his Philip Marlowe novels. In these the character of Marlowe himself doesn't change a lot, except that by the last of the seven books he is older and a lot tireder. Anyone who reads Playback before the other six is doing himself a great disservice.

In historical fiction the immense Checkmate sextet of Dorothy Dunnett stands out. This centres on the (fictitious) character of Francis Crawford of Lymond and the idea that he had a secret hand in every major political occurence of late Tudor history, from the court of Mary, Queen of Scots to Ivan the Terrible's Russia, via the empire of the Sultan Suleiman. The first two novels are independent, though of similar structure; the rest form a 2500 page novel in four volumes. From the thriller category I have to include Leslie Charteris's Saint books, which are saved from being mere escapist hokum by the delightfully created character of Simon Templar and the sheer style of Charteris's writing. The state of the state

Outside sf and fantasy it is almost axiomatic that a series is built around a character; there is little scope for originality in world or idea. Within sf, character is almost never the memorable feature. In my examples, Dune is memorable for the desert planet itself; Amber for the idea of real and shadow worlds, just about; World of Tiers again for that world system; and Cities in Flight for the idea of the spindizzy. There are characters, too---Paul Muad'dib, Corwin, Wolff and Kickaha, and Mayor Amalfi---but they don't have the presence of a Marlowe, Lymond or Templar. This is typical of sf, however, and one shouldn't cavil only at the series.

Thus the outline. It was prompted by the fairly recent (in Drilkjis terms) paperback publication of two novels, the first being The Dark Design from Philip Farmer's Riverworld saga, and the second The White Dragon from Anne McCaffrey's Dragonriders of Pern series. Both are large books (464 and 468 pages respectively) and both are the eagerly awaited third novels in their series.

Riverworld is idea and world combined, it being impossible to tell where one ends and the other begins. The world contains a giant river (and little else), beside which lives everyone who ever lived on

Earth, resurrected after their deaths for a purpose unknown. The main characters in Farmer's story are generally real people, but despite having some very colourful people to choose from---Sir Richard Burton, Mark Twain Cyrano de Bergerac and King John are among those chosen---the characterisation is somewhat flat. This is quite an achievement.

The first two novels introduce the world and the mystery of the world, and each tells a story which, although inconclusive, stands on its own. The mystery is left unsolved, of course, but fresh clues are given, and each book is in some way satisfying. The third is very different. For a start, it is only half a book, despite being much bigger than either of the first two. An introduction explains that the publishers thought the novel too big to publish as one volume, so it was split in half---and how! Throughout the book, several apparently independent storylines weave in and out and Farmer cuts from scene to scene with gay abandon, hitting the cliff-hangers spot-on every time, in a manner not seen since the days of Dickens (who was writing episodes for a magazine in any case). In a sequence of shortish chapters at the end the storylines are almost brought together, being prevented by the potential death of all the main characters, and for the first time one of the men-behind-it-all makes a real appearance. My God---the tension!

The effect of all this is to give the book an inchoate and dragged out appearance, as if Farmer is playing for time while he works out what is really going on and what the hell the whole thing means——"Christ! I've got to work out an ending that'll knock 'em flat after a build up like this." But the longer it goes on, the better that ending has to be, and I'm afraid that there'll be an almighty let-down when the end finally arrives, next book.

If Riverworld was designed as a series, Dragonriders just growed. The first novel, Dragonflight, was written in two parts for magazine publication, and each won an award (thus

enabling the publishers to splash Winner of the Hugo and Nebula Awards on the book cover), but despite this there is a coherence about it and the book is very enjoyable. The second, Dragonquest, is bigger and still quite good, with some interesting new developments in the world and society of Pern that do add to the first. The White Dragon falls short of both. It is longwinded, and very flat. There is no single coherent story, no major climax and resolution --- nothing, in fact, to give bite to the book. Even the problems brought forward from Dragonquest are solved as near to off-stage as makes no matter. All we have is a sequence of rather mundane events which adds little to our knowledge or understanding of Pern. The forward thrust of the series has become dissipated. The white dragon of the title is a beast unique in its world, and throughout the book I was expecting great things of it, but nothing happened. With only a little further degeneration this series could quite easily turn into a kind of Crossroads, with dragons.

Dragonriders is an open-ended series. Bits can be tagged on to extend it indefinitely, and since Anne McCaffrey has gone to the trouble of preparing numerous glossaries and cast lists (the 'dragondex', as she calls it), and lives in a house called Dragonhold, I confidently predict indefinite extension. Riverworld, on the other hand, is a closed series. Once the mystery is solved, that's it: no can do more, boss. And Farmer himself says that's how it's going to be. Unfortunately, only the linear series finishes this way. There is plenty of scope, says Mr Farmer, to expand sideways and chronicle the doings of people outside the mainstream of the story. In other words, to tell us what everybody else was doing whilst Sir Richard Burton et al were trying to discover the meaning of it all. Even when an idea has taken four books, the author still can't let go of it. Let's see, with about 36 thousand million people on Riverworld that'soh, lots and lots of books. Dragonriders, too, possesses the capacity for sideways movement, as has already been proved by the existence of Dragonsong and Dragonsinger, the two 'juvenile' novels. With this development in all directions at once, with lead characters in one book having walk-on parts in others, Pern and Riverworld could come dangerously close to Butor, the literary city in Dave Langford's Accretion [Andromeda 2: ed. Peter Weston].

The two books do demonstrate the direction in which series tend to go. Downwards. Very few retain the sparkle of the original; very few continually reveal fresh and interesting facets of the world or idea or character that called them into existence; very few avoid the sense of tiredness that comes with over-familiarity, when the author should say, "Enough!" The Saint books went off towards the end, and the new books, based on the new television series, aren't worth looking at. There's a tiredness in Playback, but it is the tiredness of the main character for his work and life, not the tiredness of the author for his creation. Dorothy Dunnett does retain the sparkle right to the end; the tension is maintained until the climax, which is shattering. But if Francis Crawford ever makes a return I shall be very disappointed, because I don't believe he can ever be as good again.

And there's the dilemma. On the one horn is the difficulty of saying anything new within an established framework; on the other is the ease of using that framework to earn a living and satisfy the reader demand that calls Sherlock Holmes back from the dead. To maintain creative integrity, a writer must please himself first, and drop a series when he is tired of it. When you get right down to it, large sales and Hugos are not standards by which creativity can be judged. The only person who can really be satisfied with a book is the writer himself. So, if Philip José Farmer and Anne McCaffrey are as happy as they seem with what they're doing---

That doesn't mean I have to like it.

JON LANGFORD

FAT NAZI WOMEN NEVER WERE A BIG TURN ON FOR YOU ANYWAY

PROLOGUE: Steev Higgins to Dave Langford

Meeting little brother was quite a revelation. Where you yourself are every bit as maniacal as the strange character "Langford" who shambles through the pages of TD, leaping uncontrollably from polysyllable to polysyllable, the notorious Jonathan, whose rare appearances in print make the rest of the zine seem normal, is perfectly sane and intelligible in real life...

LETTERS FROM MEKONLAND:

How are you my boy, well I trust, still merrily burying votre self in the literary spew of your brother writers... I'm glad you liked the artwork, which took weeks of sustained effort and a lot of sleeping and drinking. As usual I'm (you guessed it) shattered, so I can't stop too long writing words at you 'cos it hurts my eyes and makes me feel >

veryverytiredandunhappy

We've just pulled into Wakefield which is just such a depressing prospect that I just can't cope anymore now that it's actually happening---you always think this sort of thing happens to other people but never to yourself ---Christ this is too awful, my pen is getting hot, the windows are misting up 0h god the most horrible people are getting on... the skin is peeling off my face my eyeballs are bulging... my tongue is swelling and forcing my teeth from their jaw sockets my brain is dripping between my fingers as I write.....

This week I return to the capital of Mother England for recordin' tomorrow and an RAR gig in Islington on Tuesday. Yes the Mekes keep going in spite of everything. Even despite whole days staring at very old Gene Kelly films

* book is the wells

and eating egg sandwiches my enthusiasm is almost still alive. Today's been the only day for a week that we haven't had something ... on Wednesday we recorded a TV documentary bit/short bit/excerpt for Omnibus which will be on BBCl with John Peel and a cast of leaping haberdasherers. They came up to sunny Mill City to record us in our very own rodent lodge armed with cameras, clapperboards, microphones, lights, sound recording gear ... we brought the beer. --- Then we drank the beer -- then we got interviewed. Then Then we played then we drank again and again and again --- The next night we played in the York Barge which is of necessity a barge in York, small and horrible full of boring bores and one or two more cool penguins who had us sussed out man, boogy woogie yeah oh yeah...

Next night Leeds Poly Rock Against
Racism with us as main band and the
Flowers from Edinburgh supporting--+ the Meke army---Believe it or not!!
All these lunatics from Edinburgh who
came down to invade the stage, drink,
wave their fingers, and accost young
chickies... I got totally brained as
you can no doubt imagine and played
awful but we went down really well--Last night in the University was ditto
---but I managed not to get drunk---a
struggle (but half the price).

The word is out!

The filth and the fury, the sex, drugs and instant alcoholism roadshow of the world's richest and most depraved, acid ravaged mega stars is coming to YOUR TOWN.

Yes The Mekons are creeping rather slowly along the great cosmic skirting board, under the carpet, through the pantry door, in and out the jampots to READING UNIVERSITY.

Now Don't Panic---this is not necessarily as Painful as it sounds... keep rockin' on man etc etc [Yawn]... I'd thought you'd maybe think it a cool way to spend a lonesome Saturday NIGHT in the company of myself and assorted mental lepers from Leeds flung together from opposite ends of the universe under the noble banner of MEKONHOOD.

Please Read On

so anyhow my man, I wondered if you was to be around in great numbers this said weekend, whether young JDL might be able to have weekend (much threatened previously) with hip brother and cool sister-in-law. ---Don't worry me not inflict other Mekons on you---they not good enough no way for to be staying with my brother and sister in law no way. Hmmmmm -> Maybe I ring you and talk fluently through our mind muscles about this thing together and see how it goes. You get in free honest. and get to take drug ravaged megastar home free also.

so what it come down to is me maybe stop see you for a while with lonesome electric Newport young lady if this is morally acceptable. Her name is Helen and is a member of the S.S. like you Hazel -> well that's if you spell civil with an S. OK?

Merci tres much for the hip/neat/cool weekend of wonderfulness etc in READ-ING I came home to a couple of Fish Fatalities after my TV appearance in Manchester---But who cares (there's plenty more where they came from).

I bought 2 Newts yesterday to compensate.

Exams start next Tuesday so this is a rather short letter merely intended to inform you of my intense pleasure at my weekend with you and your charming drink cabinet. Oh yes! Helen said to thank you much plenty also → Manchester (TV etc) was pretty amazemently fine although we made hundreds of mistakes per song I think we did pretty well---watch your papers and maybe you'll be standing outside a TV shop in the rain within the next couple of years (I doubt it) Will write you one mighty fine letter one day honest but at present the brain rattles and the pen plenty unhappy with prospect of EXAMS in fact SO unhappy it wants to go down the pub for lunch and if the brain agrees this could be the end of this letter

oh it is

They keep telling me that the novelty of going away to University and getting pissed up every night and having no conscience about missing your lectures the next day 'cos you've just blown your grant on a new record, will wear off---I'm praying it won't...

Tell me it won't... please please tell me it won't...

NO MAC MALSENN STRIP NEED FOR DRILK-JIS? I am amazed that you can cut off the magazine's longest-running star feature with such little consultation with viewers, readers, fellow writers, artists, layout men, subeditors or farts like me who have to draw the bloody thing > YOU SOD!! Tell me you want one---all right? > I'll do you one honestly......don't condemn me to obscurity at my tender age > I WANT TO BE LOVED, TO BE A STAR, TO BE able to stop writing this sort of shit. I'll draw something instead...

The inset drawing of an unbelievably gross lady with a steel helmet and swastikas on her suspenders is in ball-point and thus unsuitable for electrostencilling. There are other reasons, but that'll do for now. (Ed.)

Maybe I'll stop drawing as I'm not very inspired today---Fat nazi women never have been a big turn on for you anyway---I remember back in 65 down on the south coast when we drove all day and drove all night to a little town where you said you knew where we might have a good time---we parked the car down the block from a small drive-in. The kids were standing on the street corners eating popcorn and candy and you and me woz stood in the doorway gasping for a hamburger. "Gosh Gee," you said as you stubbed that cigarella out in my left ear, "Fat nazi women never were a big turn on for me anyway." I always remembered that...

Just like the time back in Monteroy in 67 when Joplin hit the stage and the weirdos and freaks went wild and we just left and hit the road down towards Mexico or somewhere like that, you were picking your nose with your left knee and pawing over a copy of Darwin's comments on the voyage of the Beagle in the 1830s when I pulled off the road into a tiny little gas station,

I asked you if you wanted coffee but you said "Fat nazi women never were a big turn on for me anyway." I remembered that as well.

Just like when I remember New Orleans in 69---we got off on a lot of dope and acid and you crashed a Lockheed starfighter right between my eyes and started jumping out of bed onto your knees and condemning Luther for his irrational logic in basing so much faith in the Bible and not seeing the value of plaster of Paris... I just sat there with this damn starfighter quivering right in the middle of my forehead with my brains dripping down out of my ears puzzling over the implications of your views and gasping for a hamburger when you pulled over into a bowling alley and bought us a pair of bowling shoes each and walked really slowly, like John Wayne in Stagecoach, over to lane number 1 where you just picked up a ball, and flung it right down the middle of the lane real slow as all these heavy dudes and their tight assed chicks watched from the coffee bar, no-one seemed to notice the starfighter which you had plunged so deeply into my cranium but the whole damn place remembers even to this day no doubt how as the ball smashed the first seven pins in half and blasted the last to ashes you turned slowly, unbuttoning your waistcoat and twisting the tailplane of the Lockheed so it emerged slowly at the back of my skull spraying the coffee bar with a mass of congealing blood and brains, and you said "Fat nazi women never were a big turn on for me anyway." I always remembered that.....

JON LANGFORD

LETTERS

PART 1: The Great Kevin Smith Debate

JONATHAN P.R.PALFREY, 29a Priory Road,
Kenilworth, Warwickshire CV8 1LL
"Drilkjis contained amusing contributions from Bob Shaw, Allan Scott and
Dave Langford, some weaker material
from other people, and an essay by
Kevin Smith which irritated me somewhat but at least stimulates me to
respond.

"He tries to define 'literature'.

In fact, 'literature' merely means
'that which is written'---what he's
talking about is 'good literature',
where 'good' is defined according
to the prejudices of the definer.

There can be no absolute definition
of 'good literature'---beauty is in
the eye of the beholder and the appreciation of any art form is thus a
subjective matter.

"He tries to determine whether or not to read sf by analyzing it. This is an awkward method which cannot be guaranteed to reach the correct answer. A simpler method is to ask yourself: 'Do I actively want to read sf or would I prefer to do something else?' This is quite simple and is guaranteed to produce the right answer, unless you've forgotten what sf is like (in which case it shouldn't take too long to refresh your memory).

"I mean, goodness gracious, I read sf because I enjoy it. If I stopped enjoying it, I'd stop reading it. The only possible amendment to this attitude is that one could claim, as Kevin seems to do, that one can learn more from mainstream fiction (mf) than from sf, and so one should read the former even if one prefers the latter.

"Well, let's consider the various ways one can learn something. One can learn from sf, from mf, from non-fiction, or from thinking about one's own experiences.

"Now let's consider what one might

[&]quot;I saw your brother Jon (clutching a beer can) together with his fellow Mekons, on TV last Thursday evening, being interviewed by the inimitable John Peel. Also I heard the Mekons' latest session on the John Peel programme (Radio 1) about a week earlier. They're really pretty good, and with a little more practice should be up there at the top, rivalling the Temple City Kazoo Orchestra, Max Bygraves, etc."

⁻⁻⁻LETTER FROM CHRIS MORGAN

want to learn. Something about the real world? Then non-fiction or direct experience are best. Something about the future? Then SF or non-fiction are best. Something about people? Then direct experience is probably best.

"Certainly SF has the potential to teach us at least as much about people as MF. Kevin says: 'Although SF can put people under much greater and more varied pressures than the mainstream...those greater and more varied pressures are entirely fabrications.' So what? The characters and the 'pressures' put on them in any type of fiction (except dramatised history) are entirely fabrications. If the author has something to teach us and is capable of expressing it in terms of fiction, then that information will be present regardless of the type of fiction; but if it is SF he may be able to contrive a scenario which will emphasise more powerfully the point which he wishes to make.

"To go back and comment on a detail, Kevin says that Lord of Light is about 'extraordinary people in extraordinary conditions'---surely this is a very superficial view. It seems to me that the main point of the book is to depict the behaviour of essentially ordinary people given godlike powers over their fellow men. The possession of an Attribute doesn't make you extraordinary in any fundamental way, any more than the possession of a gun does. In the book, Sam makes the point that Rild, the assassin turned convert, was really more extraordinary than himself, although Rild had no Attribute. If this is a typical example of Kevin's perception, perhaps he'll learn nothing from mainstream fiction either.

"Hm, do I score a hit for that?"

[Dave wishes it to be known that all editorial comments in this part of the letter column are nothing to do with him.]

Jonathan, dear boy, you really must learn the rules of logical argument. I did not try to define 'literature' as an absolute concept. I tried to define my use of the word 'literature' in the article, so that when it occurred the reader would know what I meant by it. What I chose to call 'literature' in my article, you chose to call 'good literature' in your letter. Fine! Words have no power in themselves. Yet it is incredible how often people get into arguments over what they firmly believe are fundamental concepts, but which turn out on closer analysis to be arguments about what a certain word should mean. Can you get people to accept that? You cannot. "A word means something, and if you disagree then obviously you must be disagreeing about the something" is the common reasoning, when the disagreement is clearly about the use and meaning of a word. I was hoping to keep such arguments out of this discussion of SF and to stick to basics. Evidently I failed with Mr Palfrey, and (as you will see) with Messrs Hansen and Nicholas also.

Let's have a look at one of Jonathan's points---learning from fiction. I quite agree that for learnabout people and the real world, direct experience is better than mainstream fiction -- this was implicit in my assigning a first level of unreality to all fiction. But this is beside the point; the comparison is not of fiction with real life, but of mainstream with science fiction. To learn something about the future nothing is of any use whatsoever, except maybe the Delphic oracle. Don't try to tell me that 1984 will assist me to know what the next British government will be, or that a real monolith will be found on the Moon because it says so in 2001.

Lord of Light---ah yes. It would seem to me that if you give godlike powers to ordinary people they cease to be ordinary. "What sort of day did you have in the office, dear?" "Oh, all right. Got three tax assessments agreed with the Inspector this morning and put on my Shiva-aspect this afternoon and destroyed a small town in Kent." Ordinary? Besides which, although the people are indeed given godlike powers over

their fellow men, they don't interact to any significant extent with those men. Zelazny only shows the gods interacting with each other. Lord of Light is based firmly on the extraordinary abilities of the major characters, and not at all on their personalities. Now that he doesn't have good ideas like Lord of Light, look at the rubbish Zelazny is churning out.

ROB HANSEN, 22 Llanthewy Road, Newport, Gwent, NPT 4LD. "According to Kev Smith, literature 'illuminates aspects of life...the way people think, feel and react, and what motivates them'. Fair enough but does this automatically exclude anything falling outside that definition from literary status? Part of the attraction of SF is the magnitude of the themes it deals with and there are times, surely, when this precludes any detailed characterisation. There are times, surely, when the size and scale of events overshadows those participating in them and any attempt to bring the protagonists to the fore would blot out much of the setting, the raison d'etre of the whole thing in the first place. In this context a lot of SF can be compared to the work of Constable. Is anyone going to claim that the people in his paintings are more important than the landscapes? No, Constable keeps the people in his paintings in the background to achieve the effect he is after. He knows what he's doing as does the SF writer who seeks the same effect in his work. If you want greater depth of characterisation in your SF then it's available, of course, in the works of such as Silverberg, LeGuin, Ballard, et al."

Damn right I want greater depth of characterisation in my SF! I agree that the magnitude of the theme is often an attraction in SF, but I can't accept that this alone is ever sufficient. What makes an enormous theme interesting over the length of a novel is the way people react to it, not the theme itself. The whole of recorded history is pretty stupendous, but what makes it come alive are the people who were living it. Doc Smith's Lensman series had a grandiose theme and is rubbish for all that, because

the characters are one-dimensional. Isaac Asimov's Foundation trilogy also has the grand scope, and is rendered vaguely interesting by Asimov's usual two-dimensional problem solving people.

The comparison with Constable is apt. No doubt he achieved his objectives, but he is totally outclassed by, say, Rembrandt, who had higher objectives and achieved them. Rembrandt painted people, mostly.

The rest of Rob's contribution was a disagreement with my definition of literature, except for his last paragraph. I asked whether anyone could convince me that SF does not have to fall short of the mainstream. Rob said:

"Somehow, I think the answer will be 'no'. It's something that you, that all of us in our own ways, must sort out for ourselves. You don't have to pigeon-hole your pleasures, to play off one against another or even enjoy them on one level only. In areas where definitions are incomplete or blur together, there can be no absolute conditions, few objective answers. It's all up to you, you alone. And don't let anyone tell you otherwise."

Good point, but I think that there should be an attempt to find objective answers, because that is the path to understanding. To say that the answer is unfindable and to refuse to look is a very defeatist attitude.

JOSEPH NICHOLAS, 2 Wilmot Way, Camberley, Surrey GU15 1JA "You tell me which is harder---to work within the rules of society as it is presently constituted, or to invent a new, internally consistent society and work within its rules? The latter, right? So cracks about the bigness and hardness of the mainstream are thus exposed as even shallower than they were to begin with, particularly when linked in context with the name of Melvyn Bragg---if he is as intellectually impoverished as Kev claims, thenthe mainstream obviously isn't big and hard. But bearing Bragg in mind--ask yourself which rules Kev wishes to define as those proper for literature.

Bragg is a writer of the twentieth century---and if Kev is concerned with the illumination and explanation of this century's rules, then why is he so full of contempt for a writer of this century, obviously concerned with the illumination and explanation that Kev desires? The self-contradiction is so blatant that it completely undermines the validity of his concern for 'the rules'."

Your confident assertion about which is easier to write is, unfortunately for your argument, wrong. It is easier to make up your own framework than to work within one which everyone knows intimately. There is more freedom of movement. The invented framework can be tailored to the strengths of the author. It can also be altered at any time in order to make a story work, since the framework and the story are developed together and react upon each other in that development. The framework need only be as complete as the story requires, everything else being irrelevant. A reader cannot say "But aliens don't act like that," because they are the author's aliens and will act however he wants them to. A reader can quite justifiably say "But people don't act like that," because he has seen people and knows how they act. Sf's being harder to write is one of the smug, unquestioned assunptions of the sf world. I may be wrong, but the only way anyone is going to convince me of it is by presenting a reasoned argument or documentary evidence. In other words, they'll have to think about that assumption first, and by the end of it all it will be less of an assumption and more of a fact (if it survives at all).

Why am I so full of contempt for a writer of this century? Because I don't like what Melvyn Bragg writes, that's why. I didn't promise to like all 20th-century mainstream writers.

Joe, of course, had lots more to say, but most of it seemed to be based on erroneous assumptions. He used the trick of extrapolating what I said in a manner I would not have done, and then using his conclusions as the targets of his invective in

the attempt to shoot me down.

GARY DEINDORFER, 447 Bellevue Avenue #9-B, Trenton, NJ 08618, USA
"The thing about sf having two levels of unreality, and non-sf having only one level of unreality. There is something to that. Brian Earl Brown postulates in his (good zine) Mad Scientist's Digest 5 that sf, in a matter of years from now, will be dead as a genre, its ideas exhausted, or preempted completely by the mainstream. Already, year by year, the mainstream pre-empts more and more ideas from sf, as more and more of the subject matter of sf manifests itself in reality.

"There is something to that. Say that someday we have regular passenger flights to and from Mars. Now, as of 1979, to write about a passenger flight to Mars is to write sf. When (if) we have such flights, and somebody writes a novel about such events——interactions of people——taking place aboard one of the flights, it will be a mainstream novel, not sf.

"Already this pre-emption of ideas crossed over from sf to reality (so-called) is leaving sf more and more a genre literature. Someday it won't be sf at all, but philosophical fiction, left only with ideas relating to ultimate, unknowable reality---more and more the case every year.

"I feel that essentially sf is a genre fiction, as is detective fiction, and though some books transcend the genre even the best of them tend to be rendered somewhat false in feel by the additional level or stage of unreality.

"I am glad Kevin Smith made this observation about stages of unreality in fiction, because I think the problem facing sf writers who want to transcend the genre is how to mirror felt truths about existence, life, without surrendering to this additional stage of artificiality. This is something that can be discussed in great depth---Kevin Smith has just scratched the surface."

Gary's phrase "somewhat false in feel"

describes quite well my own feelings about even the best sf. Something seems to stop me becoming very involved in an sf novel these days, and I believe it's the extra level of unreality.

BOB DAY, 154 Sandbed Lane, Belper, Derbyshire, DE5 OSN "True, indeed, that sf is an intellectual fiction. I would go further and say that it is the most intellectual (or better, cerebral) fiction available, in that it introduces concepts within the entertainment which the ordinary crime/romance reader doesn't get. This may sound a little like Gernsbackianism; but I don't think it is. Gernsback aimed to force science down readers' throats, sometimes at the expense of the story, whereas the trend in sf of the non-Gernsbackian type is to use the idea and let the reader do his own force-feeding, to present ideas for scrutiny, consideration and comment.

"As for the question of why many sf writers don't leap into the mainstream, the answer must be that they like writing sf, just as I like reading it. I also like reading some mainstream novels, but I find that many of them which have 'mind-blowing new concepts' are not up to the standard of the old novels in sf that used the self-same concepts years ago. It's all a question of taste. Kev seems to be experiencing the same (or a similar) malaise that has struck a few formative fans I used to know---they became disillusioned with sf, both pro and fannish, about a year back and show no signs of returning. This is due to no fault of the genre itself, but simply to a change of attitude --- something that can happen to us all."

Probably you've hit the mark in that last sentence, Bob. It was a feeling of disenchantment with SF that led me to write the article. There seemed a great lack of quality in all but a few SF books, and I wanted to work out why. Why, for example, is The Day Before the Revolution Ursula LeGuin's best story when it isn't really SF? The argument isn't clear cut, but the question "Why SF?" remains open.

PART 2: Other Things

DAVID V. LEWIS, I Hornbeam Road, Stowupland, Stowmarket, Suffolk. "I find myself agreeing with Nickerless for a change. There has been some horrible rubbish foisted on us as literate SF by those writers wishing to threw off the label of SF lately and Delany is as big an offender as any. Welcomed, of course, by the likes of Kev baby who wishes to wallow in actual literature not the common stuff we lesser mortals enjoy. Not that it makes much difference to me since I just do not buy it. He also merely shows what many have done before, that SF of a particular period reflects the concerns of that period. Good SF should aim to get away from this completely and try to extrapolate the concerns of some future age. This should be totally incomprehensible to us if the writer has done his thing well. I can only applaud Nickerless for his timely crushing and demolishing of some silly pretensions that have lately crept into SF.

"Not another dwarf fan to emerge shaking with emotion at the wrong done him by mother nature diddling him out of his 3 score inches and ten. You are joking, aren't you, Kilworth, you fascist little creep? Anyway, you were nicely taken out by the Froggy."

The return of Dave to the editorial comment team in Part 2 fails to add anything to the editorial comments on this letter. Hurriedly we move on.

STEVE SNEYD, 4 Nowell Place, Almondbury, Huddersfield, West Yorks HD5 8PB.

"Your 6 page parody of Maya is amazingly authentic, worthy of Private Eye. One can, of course, query whether it was worth doing at all, but as a tour de force, 101%."

WAHF: Harry Andruschak, Graham Ashley, Jan Howard Finder, Steev Higgins, Andrew Huckson, Terry Jeeves, Waldemar Kumming, Mary Long, Jean Maudsley, Steve McDonald, Edward McLeod, M. Nicholls, Andy Richards, Doreen Rogers, John Shire, Cyril Simsa, Michie Takahashi, Chris Tringham, Roger Waddington and embarrassingly out of order, Chris Morgan. One editor ascribes this to the incompetence of the other.

GUIGHIU

(1) Those Kev Smith Blues

You will remember the argument of Kevin's editorial in Drilkjis 3. (If you don't, go back and read it again.) This was the one in which Kevin heretically dismissed sf as incapable of being literature. (I'm going to summarize his rotten, lousy arguments, so on second thoughts you don't really need to read it again. Unless, of course, you want the arguments in unslanted form.) To be fair, the piece was thought-provoking and also honest---not merely "taking an extreme position to provoke discussion", as Peter Weston once explained himself after an acrimonious Novacon panel. Of course my esteemed co-editor's arguments are logical; not for nothing is he a master of accountancy; dissidents must consider whether or not the premises are reasonable.

The simple case against sf as literature is that, besides the basic unreality of bring fiction, it's a step further removed from the real world by virtue of its essential speculative element. This, says Kevin, is bad---his first debatable axiom. The more complex argument allows two exceptions to the general denunciation: (a) where new, unreal rules broaden our understanding of the old ("real") ones, and (b) where speculative rules merely exaggerate the "real" ones in order to focus attention on some particular aspect. The only sf potentially acceptable as mainstream fare ("literature") falls into category (a) as children's fantasy or category (b) as allegory. Thus spake Kevin.

The simpler case may be exploded in several ways. Any across-the-board argument against sf can be too easily countered by the use of C.S.Lewis's ultimate weapons: in An Experiment in Criticism he argues that evaluative criticism is folly and that a book may only be judged in terms of how it is read. It's worthless if only readable as transient entertainment; valuable if it can be read and reread with true "literary" enjoyment. To prove worthlessness under this system is not easy; even Perry Rhodan must be admitted to the fold of the saved if one person can be

shown to take true literary joy in his ludicrous exploits. And, God help us, it seems that one person may---I still recall (with shudders) R.Curry's Rhodan paean in Black Hole 14. Yes: it could be that we are at fault for our inability to make the leap to this higher plane of awareness; only Kevin's short-sightedness keeps him from revelling in Doc Smith; the fearful war-cry of the Trekkies has always been "You don't know what you're missing!"

Lewis's megadeath assault on all criticism is in some ways counterproductive. In practice, we need instruments capable of making finer judgements. Trekkiedom has little charm for me because I dislike the parochialism which finds a universe of literature and speculation in one TV series, the cultism which sees demigods in a handful of rather bad actors. My engines canna take the strain, Captain. These are personal and subjective attitudes; from them I work backwards to form quite consistent premises ("TV sf can never be any good") which, when submitted to the machinery of logic, quite naturally yield rational justifications for non-alliance with Trekkies. Prejudices define premises.

Likewise a mood of disillusionment might lead me to consider that sf usually fails to meet the standards of great literature; that the difference between sf and the "mainstream" is presumably that element of the fantastic, that "extra stage of unreality"--- and so logically backward to the axiom that this element is evil in itself. But I don't believe that it is; one might as well deduce that the root of most literary evil is a large print run (with a few exceptions, generally from John Fowles, the bestseller listings are rather more depressing than the crime statistics as a comment on our country). Excellence is rarer in sf than in the "mainstream"

because the sf category as such hasn't been around for so long; because it's a reliably lucrative market which invites a higher proportion of hacks; because the bad image of sf since Gernsback repels good writers who don't care for the ghetto feeling; and because of the well-known process whereby the sf element in Good Stuff like 1984 is ignored and the work treated as solely allegorical, not at all speculative.

It is certainly not true that fictionalized history is even potentially superior to mere fiction through its greater closeness to reality---nor that the Norse myths would be vastly improved by rewriting them as tales of believable people obeying the rules of the mundane world. By using fantastic --- speculative---elements, authors acquire on a larger scale that added freedom which begins with metaphor and the other figures of speech (themselves additional stages of unreality) and which like them is insignificant in the face of that colossal leap into unreality inherent in the mere act of writing fiction. That these freedoms may be abused is an argument against the abuse --- not against the freedom.

Writing is a means of communication; writers are trying to produce a certain effect in their audience. Nothing else matters. They are entitled to choose any tools they wish; they must hold the intended reader's attention (though the snare need not by set for every reader) and make their chosen effect --- the rest is not our business. The peopling of fiction with characters who act out contemporary problems is the standard "mainstream" way, and it is a useful way---but not the only one. Even in the acknowledged mainstream we find writers like (say) Borges who can discard character and setting to make a hero of a philosophical concept; it's legitimate to discard the whole of reality in order to make one's effect upon the reader. Once the effect is made, the work has succeeded; the hardcore "mainstream" way, focussing on contemporary problems, merely happens to be the most respectable route to this end. Usually it fails to meet the standards of great literature, not through its intrinsic inferiority to sf (as expounded by John W Campbell) but because great writers are rare everywhere. We must tolerate a horde of Edmund Coopers to have an Ursula Le Guin, a throng of Melvyn Braggs before we are allowed a John Fowles. That's the way it is.

Thus my direct assault on Kevin's simple argument. His slightly more developed case, however, needs no attack from me. The small exceptions make it wholly biodegradable; the merest scrutiny causes this dismissal of sf to collapse into the saurian ooze from whence it sprung. Even granting the unspoken assumption that true literature must contain some didactic element (as in one sense it must, since each book is an implicit treatise on the author's style and thought; but the value of literature is not that of a sugarcoated textbook), Kevin's tiny loopholes are large enough to let through whatever we please. He cannot stop them up by slapping on the seemingly restrictive labels "children's fantasy" and "allegory"; the themes of "introduction of new constraints" and 'exaggeration of old ones" are broad enough to include virtually the whole of fiction!

Let me offer an example of loophole fiddling. Perry Rhodan books (those literary masterpieces) bring in new, unreal rules involving spaceships, blasters and robots in order to broaden and amplify our understanding of the eternal theme of good and evil. Put it thus, and even sceptical Kevin has problems: he can dismiss the books as failures, as non-literature--- and rightly so, for they are total and unmitigated rubbish---but it's extraordinarily hard to reinforce the dismissal with solid logic. Those C.S.Lewis arguments are deeper than they seem: bigoted Smith and reactionary Langford may reject Perry Rhodan, but only because we cannot respond to whatever literary value the books possess. The critic falls back, as always, on subjectivism. We know we're right, dammit, but we can't prove it---and the same problem attends the far less easy dismissal

of fantastic literature as inherently inferior. The difference is that Kevin and I agree about Perry Rhodan, only to disagree about sf in general. I will mention, in confidence, that I am right---but that's just one man's opinion...

The defence rests. Would anyone care to sum up?

We have struck here upon a principle which lies at the root...of an entire critical method --- the method which attempts to define the essential elements of [writing] in general, and then proceeds to ask of any particular [work] whether it possesses these elements, and to judge it accordingly. How often this method has been employed, and how often it has proved disastrously fallacious! For, after all, art is not a superior kind of chemistry, amenable to the rules of scientific induction. Its component parts cannot be classified and tested, and there is a spark within it which defies foreknowledge. ---LYTTON STRACHEY

(2) Imagine a Boot Stamping on a Human Face—Forever

It's a commonly-made observation that writers have deep underlying themes or messages to which they incessantly return... indeed, Joe Nicholas repeated something of the sort in our last issue, which to some of you may make the notion instantly suspect. Without elevating this into a universal rule, it's easy enough to produce many examples from sf. Heinlein and --- perhaps not the "Heinlein Philosophy of velvet gloved fascism etc." (J.Nicholas), but a constant interest in the mechanics of how things and people tick. Sturgeon with his vaunted theme of love ("Let me count the ways, Ted." "Hang on, I've thought of a new one ..."). Lafferty with his pixilated message that dying doesn't really matter as much as you think. And now, approaching the point of all this, we arrive at Jack Chalker.

Chalker is another of those rising stars in the firmament of sf (etc.), with a John W.Campbell Award nomination to his credit; also a Hogu Award in the category "Best Dead Writer" and a mastery of prose approaching Wendy Ackerman's. He's considered a hard sf writer, despite a tendency to improvize any old deus ex machina he happens to fancy; and to my surprise is admired by John Clute, who calls Chalker's writing "scarifyingly kinky". Jack Chalker must be a real writer, folks, for in those works of his which I've read it's not difficult to spot a solid and persistent theme.

The theme is human degradation.

Chalker has picked up the old gimmick of people's being Turned Into Something Else, and uses it in a somewhat repellent way. The gimmick itself is interesting in that it has a certain power irrespective of the user's literary ability; pornography need not be well written to be stimulating, and when this potent notion is used even Andre Norton can write with what appear to be flashes of genuine power (see her Dread Companion). The link with porn as an extra-literary quality may be quite close: I recall something called Satyr Trek, a right old masturbation manual (don't come asking for a loan, he said with a swift passing of the buck: I saw it at Mike Rohan's place) where great play was made with such exciting sf effects as a lascivious alien lady stealing Captain Quirk's very maleness (gosh!) so that when they'd finished what they were doing he found that he wasn't a he any more, but she was. Rousing stuff.

But Chalker takes a different line when changing folks about. The lovely heroine of Exiles At The Well Of Souls gets caught up in a magical gimmick (scientific magic, of course: the "Well" books involve a tampering with the structure of reality so that you can pull anything you like and still call it hard science) and soon realizes her mistake in being a Chalker protagonist: gets turned into a donkey, poor thing, only not quite but merely halfway. A sympathetic friend of this unfortunate lady is swift to sum the matter up: "You can't see three metres ahead of you. You can't feed yourself, you're stark naked with no protection against the elements... You're even going to have bathroom troubles. Your

vagina's where your ass should be, and the ass is farther up." I should mention that her condition has already been described once with enormous relish, but our noses are rubbed in it many more times before the end of Exiles. By this time the evilly cackling Chalker has evolved a semilogical rationale for leaving his heroine mired in degradation, despite the free availability of a "cure". Nine years of this and she reaches the sequel, which includes a villain fond of converting all his foes (regardless of age or sex) into gorgeous dolly-birds devoted to him. Before any of this excitement can start, though, we have to have the heroine's condition described again, at length. Help.

Thenthere's Web of the Chozen, where a demented virus converts a planetful of colonists into helpless, hoofed, horned and generally grotesque donkey-creatures. The hero solves his problem of degradation in just the way you'd expect. Not once does he consider the possibility of developing another magic virus to return the ex-people to normal (nowhere in the book does anybody consider this, though the original virus was cooked up ad-hoc by an outmoded computer); instead he gets even with everybody by flying round the universe as a sort of Typhoid Donkey until everybody else has been infected and dragged down to his level. I bet Jack Chalker really chuckled at this witty denouement.

Best of all his books (says John Clute---honest, I'm not making this up) is Dancers in the Afterglow, in which aliens set about degrading many millions of human beings to muscular morons---and succeed, with the author cheering them on. The hero has had his share of suffering before the action begins: he's lost his body and makes do with robot "slaves" which he controls supremely well. Not well enough, however, to prevent him from inadvertently ripping off the heroine's arms whilst trying to restrain her. Luckily he has a first-aid kit, and more luckily still she is quite resigned to armlessness, considering it to be a Punishment for her folly. Scarifyingly kinky, eh? The aliens

set the seal on events by filling her up with another magic virus which, as I understand it, changes her genetic pattern so often and so rapidly that transplanted arms won't take. This is what hard science fiction is all about; this is the inevitability of high tragedy. Again Jack Chalker has scored a signal victory over the poor fools who thought they could survive one of his diabolical plots: nobody survives Dancers in the Afterglow.

All in all, I suspect that John Norman is slightly more wholesome.

DAVE LANGFORD

To hand is my usual pile of Arrow paperbacks, five of them Marion Zimmer Bradley's Darkover books. In order of writing: The Sword of Aldones, The Bloody Sun, The Planet Savers (each 80p), The world Wreckers (95p) and The Heritage of Hastur (fl.25). Only the last can claim to be topnotch sf; read it first to see whether you like the flavour. On the whole I do, my main peeve being the persistent MZB habit of squeezing all the crucial action into the last few pages.

Other recommended items are the reissued Stand on Zanzibar (£1.75)---despite the wobbliness of one plot line and the pulp-stained resolution of its major problem---and Kate Wilhelm's The Infinity Box (95p) with some excellent short stories: not to be missed. Half-recommended is The Night Shapes (80p) by James Blish, perhops his oddest book; it involves African exploration (not without Burroughs pastiche) and some left-over dinosaurs from The Lost World. These are destroyed to save them from the gaze of the outside world. Eh?

Here too are more Dumarest books from E.C.Tubb: Eloise and Eye of the Zodiac (each 80p), 12th and 13th in the endless saga. They must be pretty forgettable, as I've forgotten all details. Stewart Farrar's The Sword of Orley (85p) is an oddity, blending black magic, time travel and a truly dreadful cover which should knock some thousands off the sales. It's inoffensive, despite a plot too rounded and symmetrical for any credibility. [DRL]

JOSEPH NICHOLAS

FROM THE UNDERWORLD

THE CHRONICLES OF THOMAS COVENANT THE UNBELIEVER by Stephen R. Donaldson (Lord Foul's Bane, The Illearth War, The Power That Preserves: Fontana, £1.25 each)
Reviewed by JOSEPH NICHOLAS

When I first saw the promotional blurb for this trilogy---a fold-out "map" made up from the covers of the individual books and annotated with a summary of Thomas Covenant's journeys through the Land--- I wasn't particularly impressed. The plot seemed hopelessly ramshackle: one that, rather than arising naturally from the story itself, with each event following logically and inevitably from the last, seemed instead to have been imposed on it from without; a patently artificial contrivance that would allow Donaldson to show off as many bits of his invented worldscape as he could, and the hell with inner consistency and believable charactermotivation.

This is perhaps one of fantasy literature's basic problems, and one that strikes me as springing more from the author's vanity than anything else. After all, if he's gone to the trouble of creating an entire world why should he then restrict his story to only one part of it? To put it crudely: why shouldn't he get as much mileage as possible out of his creation, even if it does inflate the wordcount beyond all reasonable limits and pad the book (s) out with numberless sub-plots and irrelevancies? Because aren't such books read mainly by people seeking an escape from the strictures of everyday life, and who actively welcome such extended imaginary journeys --- in which they can play the hero, battling on against tremendous odds and finally winning through to a triumphant all-embracing victory---as the best means of escape? Well, yes, obviously; which does at least go some way towards explaining Tolkien's enormous international success

There are, however, two requirements which must usually be met for such journeys to be successful: firstly, the world in which they take place must be as heavily detailed as possible, for only thus will the reader be forced into unquestioning acceptance of its surrogate reality; and secondly, the protagonist must be such as to immediately engage the reader's sympathies, otherwise he will not come to be regarded as an extension of the reader and "distancing", or non-involvement in the events of the story, will be the inevitable result. The two seem contradictory but are in fact complementary; as a personal example, let me cite Tolkien's The Lord of the Rings, where I can believe in the surrogate reality of its Middle-Earth but have no empathy for its story because of the vaguely repellent nature of its hobbits.

Donaldson, however, ignores them both: the Land and its history are so sparsely-detailed and so cobbled-together that it all seems little better than a flimsy cardboard backdrop through which its inhabitants (and there don't appear to be all that many of them, either) will fall at any moment; and the protagonist, Thomas Covenant, is so thoroughly self-pitying that to say he got right up my nose would be a colossal understatement.

But there are reasons for this, and very good ones. In the first place, the Land is not presented as "real" but as a dream experienced by Covenant (although necessarily a less surrealistic and more cohesive dream than we ourselves would expect to experience): a land which he enters at the beginning of each book and returns from at its end. And in the second place, Covenant——although a man of our world——is actually ostracized

by the community at large because of his leprosy, and is thus naturally consumed with hatred both for himself and for everyone else. Thus, although the people of the Land acclaim him as their long-lost champion Berek Halfhand and expect him to lead their fight against Lord Foul the Despiser, he can in fact do little for them; the self-protective discipline imposed on him by his leprosy means that he cannot chance himself in battle lest he suffer injuries that cannot be cured --- and while he doesn't appear to suffer from leprosy while in the Land itself, he can't accept it as "real" because that would be to repudiate the reality of his own world and, most importantly, accept that there is thus a cure for leprosy (which, of course, there isn't). An obvious "Doubting Thomas" connotation! But I feel that Donaldson is being considerably subtler than that, for he seems to me to be pointing out the folly of those fantasy authors who not only accept but also believe in the "anything goes" surrogate reality of their invented worldscapes. It's unfortunate, however, that Covenant's hatred and self-pity are expressed so intensely and repetitively, since it renders the first book of the trilogy almost unreadable and will probably lead many people to ignore the other two altogether; and it comes as a distinct relief when Donaldson does ease up on this rather crushing mood halfway through the second.

So what's it all about, anyway?

At first glance, it appears not unlike the old Ultimate Good versus Ultimate Evil standby of most other fantasy authors, with Evil's final defeat being not only inevitable but also boringly predictable. A closer inspection reveals that it's more of a question of Use versus Misuse; the people of the Land live in harmony with it whereas Lord Foul wishes to despoil it and subjugate it to his will---an obvious and now severely dated ecological theme. And a closer inspection still reveals that it is in fact a matter of religion and belief, because the plot structure of each book is based on the structure of the shamanic mythos originally

spawned in the ancient Middle East and about which you may read more in Joseph Campbell's The Hero With A Thousand Faces.

In general terms, the shaman --- not so much the high priest of a religious cult as an active link between the gods and their worshippers---is held to be of divine or semi-divine parentage, born into a world he cannot fully comprehend and forced to undergo a series of initiatory tests before he can be installed as the new "leader" of the cult, the culminatory test being death itself, from which he must be resurrected shortly afterwards. In each of these books, the shaman's "journey through life" is rendered in symbolic terms, with Covenant playing the part of the shaman. The very fact that, at the start of each book, he is summoned into the Land from outside it, and immediately revered as the champion Berek Halfhand, serve to emphasize it---as does the fact that in each instance he materializes on or in a mountain-top (Kevin's Watch in the first and third books, and Revelstone, the city of the Lords, in the second), the ancient Middle East regarding such places as the natural homes of the gods (the Greeks' Mount Olympus being the obvious example; and the reason why the Sumerians and Babylonians built their temples atop ziggurats, the object being to entice the gods away from the natural mountains on the horizon and persuade them to take up residence on the artificial ones in the centre of the cities, thus providing their people with immeasurably increased protection from their natural enemies). Indeed, in the first book Covenant's semi-divine "parentage" is emphasized both literally and metaphorically, since he does not simply arrive at Kevin's Watch (in this one instance at the behest of the quasi-deity Lord Foul) but actually falls a short distance from a stormcloud above it.

Covenant's leprosy, and how it prevents him from participating fully in the events of the story, has already been mentioned; but it should be obvious that those events count as his initiatory tests---which, despite himself, he manages to pass in

some form or another. (A detailed list would be worthwhile, but would doubtless spoil your enjoyment of the story---never mind robbing you of the opportunity to discover their meanings for yourselves.) Including his "death", whose form again draws on the mythology of the ancient Middle East; for there, to die was to enter the underworld, and Covenant does indeed go "underground" at the climax of each book, entering the caverns beneath Mount Thunder, Melenkurion Skyweir and Hotash Slay to do battle with Foul's creations and, having defeated them, emerge alive. The point is rammed home in the second instance when, in order for he and his companions to reach the Earthblood, they must travel down a river in a boat guided by an old man --- and the parallel with the Greeks' River Styx and Charon the Ferryman is too obvious to be ignored. (This might suggest that Donaldson has his mythologies hopelessly confused, but such is not the case; as Campbell points out, the basic pattern of the shamanic myth is common to them all --- the Gospels not excluded.)

But the trilogy has, as I earlier intimated, a deeper purpose than the mere dramatization of a mythos: a purpose which is finally brought out into the open at the conclusion of the third book, when Covenant penetrates Foul's Creche beneath Hotash Slay and encounters the jhehevvin, unintentional byproducts of Foul's biocreation, who believe that they will someday be redeemed from their misfortune and made over into whole men. Covenant, although rejecting the role of redeemer that they offer him (and how much more apt the "Doubting Thomas" connotations thus become!), goes on to destroy Foul himself, thus in effect redeeming the entire Land and fulfilling his function as its people's reluctant messiah. Despite "dying" in the process, before returning to our world he enters a limbo and (silly and trite though this sounds) engages in conversation with the Land's creator, Donaldson using the opportunity to explain how a supposedly omnipotent god can actually be powerless to interfere in the activities of his own creations --- a sequence that I, a confirmed

atheist, have to admit I found oddly moving.

Comparisons of this trilogy with Tolkien's The Lord of the Rings are of course inevitable---and will be totally meaningless, since Tolkien had no message to push and no theme to give his story the depth it needed. In particular, Middle-Earth's religious beliefs are virtually nonexistent, the only real force of Evil --- and an extraordinarily simplistic Evil at that -- being Sauron who, remaining offstage throughout the entire trilogy, was thus little better than a piece of cardboard (a status not helped by his eventually disappearing in a literal puff of smoke). The Land's religious beliefs, however, permeate it totally, at first seeming like simple Taoism (the deity is present in everything) but later, once the plot structure has been identified, appearing as integral to the mythos outlined above, since the limited form of magic employed by the Land's inhabitants is derived from its stones and trees---and although superficially different, religion and magic do actually have many points of similarity between them. Moreover, Donaldson brings us faceto-face with his force of Evil, in the process attempting to demonstrate just how much a part of the Land Lord Foul actually is --- unconvincingly, as it turns out, because Foul (like Sauron) has been kept too long offstage, and there is no time for him to be presented as a fully-rounded individual before he is destroyed.

(Mind you, there are some points where a comparison with Tolkien makes sense---Caerroil Wildwood, the Forestal of Garroting Deep, for instance, sounds too much like JRR's Tom Bombadil to be mere councidence; never mind the fact that the trees of Garroting Deep itself are supposed to be sentient --- although, unlike the ents, they don't move around. And there are the Plains of Ra, where run the Ranyhyn, the great horses served by the Ramen, which by sounding like the Huonhynhyms encountered by Swift's Gulliver seem to be a sly poke at Tolkien's Rohirrim, who were supposed to love their horses above all else.)

The major structural flaw of this trilogy, however, is the fact that it is a trilogy. If Donaldson had simply wanted to dramatize the shamanic mythos and discuss the shortcomings of a supposedly omnipotent god, why did he need three books to do so? One would have been enough... and as a result I can't rid myself of the feeling that money, rather than aesthetics, was the main determinant. After all, big books sell——and with the present—day state of the real world, big fantasy books probably sell even better.

For all its flaws, however (and I haven't mentioned its style, which can best be described as "clotted", Donaldson seeming to delight in using ten words where two would have done), I find The Chronicles of Thomas Covenant the Unbeliever an extraordinarily stimulating trilogy. A cult will, in all probability, soon grow up around it, acclaiming it as the greatest work of fantasy since The Lord of the Rings; and with equal probability, the cultists will ignore its serious religious aspects in favour of its rather more accessible escapist qualities. Which will be a great pity, for this trilogy, by making central the religious preoccupations at which other authors have only hinted, has with one fell swoop extended the boundaries of the fantasy genre into hitherto uncharted realms. It is, in other words, the single most important fantasy milestone of the decade.

JOSEPH NICHOLAS

A most sophistical dilemma, on the subject of obscurity, was made by Thomas Anglus, or White, an English Catholic priest, the friend of Sir Kenelm Digby. This learned man frequently wandered in the mazes of metaphysical subtleties; and became perfectly unintelligible to his readers. When accused of this obscurity, he replied:

"Either the learned understand me, or they do not. If they understand me, and find me in an error, it is easy for them to refute me; if they do not understand me, it is very unreasonable for them to exclaim against my doctrines."

--- CURIOSITIES OF LITERATURE

"No lettersbut an obligatory arse lick for Brian Aldiss as the beast from Bing-ley would so succinctly put it. Sorry I am in that sort of mood today."

---LETTER: DAVID V LEWIS

AFTERTHOUGHTS

If we ran fanzine reviews in Drilkjis these days, there would surely be a mention of Paperback Parlour -- now an official BSFA publication from our very own Joe Nicholas. Of course we would not be cruel. Far be it from us to mention how Joe seemingly cannot tell simile from metaphor (page 8) or how Alan Dorey takes well over 200 words to say (a) that, as everyone has been saying for ages, Arrow's Darkover books have lousy covers; (b) that Alan dislikes them. No, the bit we were tempted to quote was from one of Joe's reviews:

"... Blish's intellect having again surrendered to the baleful glare of the misshapen monster that still shambles zombielike about the lower levels of sf."

Great minds think alike, and it seems only last issue that one Dril-kjis editor wrote: "... the constant warring of Blish's intellect against the Pulp Monster which still stalks zombielike about the lower levels of sf." We reprint this as a public service, since Joe does not actually specify the nature of the monster and those few BSFA members who failed to read Drilkjis 3 may be puzzled by the allusion.

Some people don't know how lucky they are that we no longer run fanzine reviews in Drilkjis.

Wonders of English Prose No. 47:
"... a fanthology produced by Kev
Smith. Although there might at first
sight appear to be some duplication
between the latter and By British,
but in fact there is no overlap at
all, they do complement themselves."

[Alan Dorey in Matrix 25]
Neither fanthology contains sentences quite like this, but both
Drilkjis editors still think them
pretty good, for reasons which will
be mildly apparent when you buy your
copy and study the editors' and contributors' names.

MOOD 70 edited by Kevin Smith---a Seacon '79 Fanroom Publication.

BY BRITISH edited by Ian Maule and Joseph Nicholas.

Thanks are due as usual: to Eve and John Harvey for electrostencils and inkpad; to Keith Freeman for the paper and ink; to Hazel for the use of 85% of the duplicator; to Greg Pickersgill for getting the cover to us; to Phil Stephensen-Payne for a letter which hid in the Dot file while the letter column was being typed; to Yorcon for provoking 'Genocide for Fun and Profit', Seacon for begging an encore and Jim Barker for nearly illustrating it; to Jon Langford for drawing a whole stencil of fat Nazi women, happily too late for inclusion; and to all the people who'd like Drilkjis to be more frequent, a special thank-you for keeping so quiet about their longing.

"[Vivian Richards] hooked brilliantly, allowing for the uneven bounce, and he drove beautifully whenever he sighted a whole half-volley.
Otherwise he defended calmly with
limp wrists. His 65 took 112 minutes."
[Guardian cricket report]
Another triumph for the Surrey group!

"Well, only another week to go and then we can all be jolly pals together, under the benevolent eye of Chief Scout Weston. I am feeling quite fit, in a vicious kind of way, and eager to do justice to the hordes of groupies I expect to come flocking round me on the strength of my Hugo nomination. This agreeable fantasy is modified from time to time by an uneasy feeling that I might be disappointed. Despite Mike Glicksohn's assertion that there is lots more sex at American conventions, the physical descriptions and photos of NA fans I've seen make me wonder just who they have it with. Surely not each other? Maybe they're keeping quiet about something. Tension mounts."

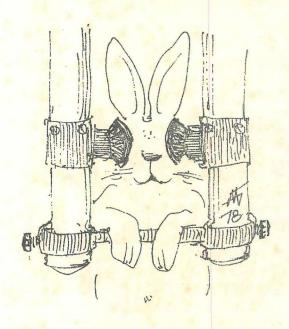
--- LETTER FROM D. WEST

"To give an accurate and exhaustive account of that period would need a far less brilliant pen than mine." ---LETTER FROM MAX BEERBOHM

WAR IN 2080: THE FUTURE OF MILITARY TECHNOLOGY. Westbridge £5.95, also Morrow \$12.95 (USA), Cassell (Australia) Military Book Club, Sphere paperback next year, Japanese translation due some time...
Impartially reviewed by DAVE LANGFORD

This book, possibly the greatest advance in literature since the discovery of the vowel, is---KEVIN: What's all this then? You can't review your own book. DAVE: Look, I've got inside knowledge --- I'm specially qualified to point out the book's coruscating brilliance, the way in which every semi-colon radiates Sense of Wonder, the superlative beauty of the print ... KEVIN: And the error on page 57. DAVE: Swine! Our readers are palpitating for inside facts such as how the book is in the House of Lords and Pentagon libraries, no kidding. KEVIN: Stop it. Stop it at once. DAVE: Suppose I use some clever pseudonym like James Colvin? KEVIN: Suppose I told you there's no room left?

RABBIT COMMANDING A SUBMARINE



THE FINISHING STROKE: Drilkjis is available. It is, honestly, except when we forget to print one for a year. Useful means of ingratiation include LoCs, brilliant contributions, trades with both editors or——if you must——50p/\$1. Addresses are as shown in the contents. Editors are as shown on Police Five.

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