1 FOUNDATION a review of science fiction

contents

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foreword

Education must necessarily be concerned with the future. Students in Polytechnics and Universities now will be at the height of their powers at the start of the twenty-first century, and the economic, environmental, sexual and literary climate (to name but some aspects of human life) will undoubtedly have changed in ways which are difficult if not impossible to foresee at the moment. The future is predictable only if it is uninteresting, as annual budgets of bottle-making factories show.

At the same time, there is serious and relevant criticism that it does not necessarily follow that the future is embedded in the past. The history of prediction, i.e. comparing past predictions with subsequent performance, reveals that some change is discontinuous. Quantum jumps in society occur, and so do such jumps in technology. The importance of science fiction is the freeing of the mind that occurs which makes many of its readers more willing to accept change .....discontinuous or not. And this type of adaptive response is just that which we in this Polytechnic believe is the best kind of mental set for our students.

I am happy to wish *Foundation* well, and hope that it will influence its many readers in a forward-looking and constructive way.

G.S. BROSAN
Director,
North East London Polytechnic

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introducing FOUNDATION

Foundation is the journal of The Science Fiction Foundation, which has been established in association with the Department of Applied Philosophy in the Faculty of Arts of the North East London Polytechnic.

The establishing of such an organization within the Polytechnic seems appropriate because science fiction:

1 Is an important branch of modern literature, widely read by students, and worthy of the kind of study in depth which one would expect to find in the Arts Faculty of a new Polytechnic.
2 Provides a valuable commentary on our technological society, thereby having a special relevance to the Polytechnic.
3 In the long term, it has potential within the academic curriculum.

The aims and objectives of The Science Fiction Foundation may be summarized as follows:

1 To gather in one place of academic repute various bibliographies and private libraries, and to collect original papers. The intention is that this valuable source material should be collated and be available to scholars and others of good standing. Serious studies of science fiction, selected new texts, and some audio-visual material will also be collected.
2 To encourage the holding of seminars, visiting lecturers, and research projects, and publishing generally. These activities would be of considerable inter-disciplinary value.

3 To link these endeavours with parallel ones overseas.
4 To investigate the possible integration of a science fiction element into an appropriate diploma or degree course of the Polytechnic.

With this issue, *Foundation* the journal of The Science Fiction Foundation, which was inaugurated by, and is part of the North East London Polytechnic, blasts off. One of the objects of The Science Fiction Foundation is the critical study of science fiction, therefore, we expect readers of *Foundation* to be critical of what is printed in the journal. However, criticism of it would have little value unless something is known of the purpose behind the publication of Foundation.

Basically, *Foundation* exists to promote the best in science fiction. Paradoxically, fiction will contribute only roughly half of the contents of the journal. The remainder will consist of a non-fiction section: reviews, critical examination of texts, articles about science fiction, biographical studies of writers, sf as an academic subject, applications of sf in modern society - the host of subjects that legitimately form the parameters within which sf functions.

In the fiction section, we intend to devote space both to the encouragement of new material, whether from established sf writers or from sf fledglings of all ages and from every walk of life who think they have something to contribute to this literary genre. On the other hand, we shall present classic sf material that is worthy of reprint, particularly material that is not readily available in this country.

We hope to be cosmopolitan and to attract contributions from writers of every country. This is a tall order, but we are convinced that there are such writers who have for long been looking for such a journal as *Foundation* as the vehicle in which to put their ideas into writing and circulation. For we know of no other journal that exactly duplicates the function that we have set ourselves. True, there have been many sf journals and magazines. There have been many editions of new writing in sf, both here in England and in many other countries. But we are not aware of a publication that combines science fiction and an academic appreciation and criticism of the subject.

This emphasis on the scholarly nature of *Foundation* is important. We know of the considerable interest that many teachers and scholars, both amateur and professional, have in this literary form. We recognize that many teachers and lecturers include some elements of the whole range of science fiction subjects within their teaching programmes. But we are also acutely aware that such people are in the minority, that a great number of educationalists throughout the entire spectrum of primary, secondary and tertiary education dismiss the subject out-of-hand, and that many are apathetic, whilst a few are downright hostile. The young scholar who could not get his own college to accept a critical appraisal of the works of Olaf Stapledon as a fit topic for a submission for a master's degree, but had to travel to London from his native Canada in order to find a supervisor willing to accept him as a candidate, might have a great deal to say about the need for science fiction to be considered academically respectable.

This is where *Foundation* should serve a useful purpose. The Science Fiction Foundation wants to engage in sf readership surveys, wants to know where sf is taught, who teaches it, what is taught, at what level it is taught, wants to establish definitive bibliographies, has a host of projects that can only be furthered by the help of the academic community. Details of these projects will appear in subsequent editions of *Foundation*, and help will be solicited.

It is not suggested that the non-academic community will not also be involved.

We intend to cast our net wide and obtain assistance from afficianados wherever they may be found. After all, one of the most eminent of all astronomers started his working-life as a milkman. The road to the Milky Way is just as easily approached from a milk-float as from an ivory tower.

There is a danger into which we hope that *Foundation* will not fall. The danger is that, in making a critical study of science fiction, the critic could well separate form from content. This has been one of the major irritations of literature throughout the ages. Writers have written their messages, and the form of the writing is part of the message. But analysts have looked at the form, subjected it to the minutest of scrutinies, to the most erudite of criticism, and have overlooked entirely the content of the work. In this respect, science fiction, too, has suffered.

Nor is science fiction as yet an academic discipline in the way that science, mathematics and English literature are. But educational establishments once barred their doors to the social sciences, only to open them when sociology became the 'in' subject. There is ample precedent, then, for giving academic respectability to a subject that has sometimes been called the maverick of literature.

If this accolade is allowed, then science fiction will spill into all walks of life. Blake could see eternity in a grain of sand. A science fiction writer could well see a civilization in the building bricks that make up the fundamental parts of the atom, and write an ingenious science fiction novel that could be used as a text-book by a learned sub-particle physicist. For the science fiction writer of stature has much in common with the genius in every walk of life: he sees the logical in the illogical, the bridge between irreconcilables, the acausal development of life in a time continuum in which he is privileged to serve a brief apprenticeship.

Foundation, then, can foster the inter-relationship between technology and society, can explore the scientific, social and ethical problems of the future. It would be a very drab society, a very limited technology, that did not take imaginative leaps into the future, that did not take inspired looks at its antecedents, that did not inspect critically its unfolding present. This we shall do in fiction and in non-fiction. If in so doing we change once individual's notion that science fiction is about bug-eyed monsters in space and gory pulp-magazine monstrosities in print: if we help a single Blish or Heinlein to find his first platform: if we help the introduction of a B.A. or a C.S.E. in Science Fiction - then we will have served our purpose.

Of course, we cannot fulfil any of our objectives unless we have a readership and contributors. At first, we are aiming at the academic readership and to those who are already committed to the sf stream of literature. Eventually, we hope to reach and perhaps educate a wider public. But a start is a start is a start, and in this connection we pay tribute to S. Chomet and his colleagues of Transcripta Books. Without them, *Foundation* would not have been launched so shortly after the birth of The Science Fiction Foundation. With their enthusiastic and expert help, we think that the foundations of *Foundation* have been well and truly laid. Time alone will tell if this is a reality or is merely a fiction of the imagination.

CHARLES BARREN
Editor-in-Chief

"And how did a nice man like you come to be writing science fiction?" In this, the first of a series, John Brunner answers an oft-heard question.

the development of a science fiction writer

by John Brunner

The first contribution I can recall making to the SF field was when, at the age of about six and a half, I drew Martian fighting-machines all over the end-papers of my late grandfather's Heinemann first edition of 'The War of the Worlds' . . . which I still possess, and am holding on to in the vague hope that one day the drawings will add to rather than detract from its bibliographical interest.

No doubt it was very foolish of whoever it was who left that valuable book in my nursery; however, it set in motion a process which culminated in my choice of a career. During my childhood I could never find enough SF. Once the bug had established itself in my mind, I was hooked. I read all of Wells's work that I could lay hands on (discovering to my dismay that he wrote other novels apart from SF and that I didn't like these), and naturally I read Verne's books, and anything that even remotely smelt of SF was an excuse for me to abandon all other interests. How many people now, I wonder, recall a novel entitled 'The Devil's Highway', about a mad scientist - Dr Munsker - who had discovered a new force called "ethericity" with which he planned to take over the world? I was rather on his side, as a matter of fact, he was deformed, and had been mocked and persecuted as a child . . .

Some time around 1942 I remember seeing a copy of what I think must have been 'Amazing Stories' belonging to the GI boy-friend of one of my father's land-girls - we were living on a farm at the time. I've never recognised that particular issue again, but I recall that its lead story concerned a robot who became human enough to fall in love. I remember also a copy of 'Marvel Tales' in which the lead story was about a lost race of people with wings instead of arms; I believe the title was 'Angel from Hell'. Similarly I began for the first time ever to buy comics of the D. C. Thomson type when a serial began in 'The Wizard' about "Force 21", a pseudo-gravitational force being employed to pull the Earth out of its regular orbit and avoid collision with a rogue planet, but long before that I'd discovered two instalments of a story about a group of survivors fleeing a ruined Earth and cruising the galaxy in a ship modelled on Cavor's (but I hadn't at that time read 'The First Men in the Moon') in search of a new home. Those I rescued from a pile of waste paper in a shop in Worcester, and dedicatedly read and re-read . . . I assume they also were in a D. C. Thomson comic, but long before I chanced on them the story was over, and it was no use buying the current issues.

One way and another I did manage to get hold of a lot of SF, and when that failed I could always turn to non-fiction of the kind which held for me a corresponding magic. Jeans's 'Through Space and Time', issues of Mee's 'Children's Encyclopedia' containing pictures of Flammarion's grandiose futuristic projects such as a tunnel straight through the Earth, books by Eddington and other far less famous popularisers, some of whose titles I can recall - 'A New Model of the Universe' was one that fascinated me, though I scarcely understood

two pages together, and 'A Night Raid Into Space' first gave me a hint of the scale of the galaxy and the span of universal time, although it was so out of date it did not even mention the discovery of Pluto.

By the age of nine I was a confirmed addict. It was then that, despairing of ever finding enough SF to glut my appetite, I attempted my first original story. I can remember nothing about it bar two facts: it featured a Martian called Gloop, and I couldn't think how to put an ending on it.

Still, at least it served one important function in my life. I had more or less decided by then that I did not after all want to be a fighter pilot, and I was at a loss to know what I should be instead. (Problems of that order can become major obsessions at that age.) All of a sudden, I knew. I was going to be a writer.

The event which converted this belief from a childish fantasy into a firm commitment occurred early in 1947, when my father pointed to an item on a bookshop counter in Wallingford, where I was intending to spend my pocket money, and said, "That looks like fun."

He was right. It was the April 1947 British reprint of 'Astounding'. It contained Hal Clement's 'Cold Front', van Vogt's 'Film Library', Murray Leinster's 'Rain Check', Philip Latham's 'The Blindness'.

It was from the publishers of that British reprint that I received my first rejection slip, informing me that they did not buy original stories but only made selections from the American edition. I was thirteen.

Now I did not only hope to be a writer. I was 'determined' to be a writer.

Welcoming my obvious interest in science, my parents had concluded otherwise; I was to go into the family business, as it were (Brunner Mond was one of the big chemical companies which were incorporated into ICI), for the sake of security and an assured future. However, curiously, they sent me at the age of nine and a half to a prep school where no science was taught at all — unless you count "nature study", which I do not! I discovered a gift for languages. When I was transferred at thirteen to Cheltenham College, I was told politely but firmly by the senior science master that owing to my extraordinary ineptitude in mathematics he would far prefer me to stay on the languages side. This is how it came about that I, a so-called science fiction writer, have never had a science lesson in my life.

As for this question of being a writer . . . At the commencement of each winter term at Cheltenham boys were required to complete a questionnaire about themselves, including a section asking what they intended to do when they left. The first time I duly, and honestly, entered: "Author". I was lectured by my housemaster and my form-master on the patent foolishness of such an ambition, warned of the insecurity I would risk and of the utter improbability of my ever making a living that way. On the remaining occasions when I had to fill in the form I boxed clever and put down: "Broadcasting."

That was okay.

Pressure upon me to relinquish my ambitions remained so intense, in fact, that even when during my last term at school (I had just passed my seventeenth birthday) I sold my first paperback novel - thanks, I may say, to the assistance of H. J. Campbell, then editor of 'Authentic SF', and the influential Irish SF fan, Walter Willis, who had put my first-ever 'printed' short-short story into his amateur magazine 'Slant' - I did not especially care that it was re-titled by the publisher and issued under a house pseudonym. What counted was that I received enough money to buy a typewriter of my own instead of borrowing one all the

time.

Using that as leverage, together with a generally bloody-minded attitude, I succeeded in escaping from school (I choose my terms with care), and during the months that elapsed before I was conscripted into the RAF wrote and sold not only another short novel, this time to the American magazine 'Two Complete Science Adventure Books', but also a novelette entitled 'THOU GOOD AND FAITHFUL' . . . which John Campbell accorded the lead position, and the cover illustration, in 'Astounding'. Not bad for a boy of seventeen, I thought – although I was still under that old pressure to abandon my dreams, and it bore the pen-name of "John Loxmith".

My two years of Air Force service were the most futile, empty, and in general wasted period of my life. I was bored by the routine; I was disgusted by the company of professional killers; and I drew from it perhaps only one advantage, a conviction which endures to this day that the military mind constitutes the single greatest handicap under which the human race is condemned to labour, inasmuch as these people without imagination or compassion have been given the power to destroy our species. My detestation of them increases with every passing year, a fact which I suspect could easily be deduced from a study of my writing, as could my distrust of politicians who sacrifice honesty to the exercise of personal power and my loathing of those so-called Christians who bless weapons of war and condone such abominations as the use of atom bombs, the napalming of Vietnamese children and the sectarian hatreds afflicting Ulster.

On reflection, however, I ought possibly to add a second benefit derived from those otherwise wasted years. It was seeing the reality underlying the claims of glory which finally soured me sufficiently on the Establishment for me to gather my courage and resolve once and for all that I would never have any truck with it. Without that I might easily have lacked the guts to do as I did when I received a letter from a wealthy uncle informing me that ICI would pay for me to go through university provided I read the subjects they chose (I had a state scholarship and a place at Oxford waiting for me). I wrote politely back, to him and to the Ministry of Education, saying that they should offer this chance to someone who wanted it. I was heartily sick of being told what I ought to learn. I had a sneaking suspicion that there were other and more important things from which my attention was meant to be diverted.

I've never regretted reaching that conclusion. I've now spent almost twenty years trying to mortar up the gaps in my formal education, and I am still discovering that I was told lies or offered half-truths or a distorted version of the facts from start to finish of my schooling.

Of course the most important lacuna in my knowledge was a total absence of contact with the real world. From nine to seventeen I'd been in boys-only boarding schools; thereafter I'd been trapped in the artificial world of the services, and in between I'd been isolated by the fact that my parents had almost literally no friends, never entertained, never held parties and never took me anywhere on holiday. At the time when I moved to London with the intention of supporting myself by writing I had scarcely anything to talk about. I could juggle with the standard SF themes of alien beings, robots, time-travel and the like, when it came to exotic passages of description I could lay on the adjectives with the best of them. But as to life-experience . . . Well, I'd been to Lausanne for four weeks to practise my spoken French.

Moreover at that time my chief market was the Nova group of magazines,

'New Worlds' and 'Science Fantasy', and even if I was hitting them so often that in at least one issue I appeared under three different names, the going rate was two guineas per thousand words. The inevitable happened. I went broke.

In the nick of time C. S. Youd ("John Christopher") told me he was looking for someone to stand in at his office while he did the boss's job during the latter's convalescence from a serious illness. I found myself hired as a technical abstractor on the 'Bulletin of Industrial Diamond Applications". It amused me that my first job was a technical one, in view of my aforementioned ignorance of formal science. However, it was adequately paid and not so demanding that I couldn't write at weekends and in the evenings. Besides it introduced me to that invaluable institution, the Patent Office Library.

After half a year there I went to work as an editorial dogsbody in the Books for Pleasure group, where I was soon joined by John F. Burke whom I'd previously known as a friend of Sam Youd and Ted Carnell and other members of the London SF Circle (I was and am a regular attender). I cannot say that I invested my entire attention in that job: the atmosphere of the company was so whole-heartedly commercial that on one occasion I recall hunting in vain for a copy of a book entitled 'Prehistoric Animals' in which I'd written elaborate directions to the printers concerned essential corrections - the paintings were marvellous but the text was hopelessly obsolete, so I'd gone to some trouble to revise it for a new edition . . . and it transpired that it had been sent out by the sales department along with a batch of mint ones. We only got it back because the woman in (I think) Nottingham who had bought it complained about the way it had been scribbled on.

Again, I derived one useful advantage from this two-year stint. I learned to read and correct proof to a high standard. I had to proof-read books on a range of subjects I'd never studied, like cookery, and since I'm blessed with a memory like a fly-paper a mishmash of random data accumulated in my subconscious, on which I still often draw when I need to. But I paid dearly for it: my reading-speed went down from over 1000 words a minute to about 300, and I've never completely made good the deficiency.

In the meantime, however, I had met my wife Marjorie - far and away my most successful convert to SF. She had been convinced that it involved nothing but BEM's and other horror-comic trappings. By judicious selection I was able to persuade her otherwise (I recall that 'Earth Abides' was particularly helpful), and she stood by me, encouraged me, and to a large extent supported us financially, when I took another crazy decision and resigned from my job - I was in a hospital bed at the time - on the strength of having sold a novel to Ace Books. This was my first American book sale.

For a long time it was touch and go whether I would keep afloat. Now, however, I've been a freelance for nearly thirteen years (at time of writing), and thanks to the fact that I was able at one stage to churn out an astonishing amount of wordage per year I've established a solid readership for my work. I acknowledge, as do many SF writers, a debt to the Ace Doubles, where a beginning author like myself could "ride on the back" of a better-known personality - I shared sales in my early days with Poul Anderson, A.E. van Vogt, and other famous names - and then in turn serve as a prop to launch further novices. Thanks to this system, I was able to earn my bread-and-butter comfortably by about the age of 25 or 26.

At approximately the same time I began to conceive more ambitious plans. The depressing shallowness of much SF became apparent to me. The time of sheer

wonderment at the infinite possibilities of applied technology was, in my view, over; the substantial theme which remained, and was primarily the prerogative of SF although being increasingly used in the so-called "main stream", consisted in the examination of the impact of technological change on the human personality. I had already begun to experiment with stylistic devices to accentuate the implications of a plot (e.g. FAIR, 1956), now I wanted to move on from the relatively conventional narrative and stock SF situations that had characterised my first American novels (THRESHOLD OF ETERNITY, 1959; THE WORLD SWAPPERS, 1959) to something possessing more contemporary relevance and impact.

The project I settled on was one which had preoccupied many earlier writers, that of the conversion of a chess-game, move for move, into a story that would stand on its own merits. The result was THE SQUARES OF THE CITY, which I completed in May 1960 and which was then and for some time afterwards both my longest and my most ambitious novel (apart from a mainstream item which was never published). Regrettably, it failed to find a publisher until Ballantine bought it in 1965 for what I thought then and still do think was a derisory advance, lower than I was by that time receiving for routine SF novels inferior to it both in literary quality and in thematic scope . . . but I was almost resigned to it never being published and was glad that someone had finally taken it on.

It was a great success. It ran second in the "Hugo" poll for best SF novel of the year. And I'm still wondering how my career would have changed if it had appeared in the year I wrote it instead of five years later. However, speculation about parallel worlds, while tempting to an SF writer, is an inherently unfruitful pastime. (Incidentally, nine and a half years went by before it was first published in Britain.)

Ever since, I have found it necessary to regard my writing as being divided into two categories: "ambitious" and "fun-type". There is in fact no discontinuity between the two in my own mind; I can often get as much enjoyment out of something light but amusing (e.g. TIMESCOOP, 1969) as out of something substantial and demanding (e.g. THE JAGGED ORBIT, 1969). However, it would please me enormously if I could afford to restrict my output of "fun-type" books to the occasions when I genuinely felt in the mood for this kind of writing - as, I'm told, Graham Greene labels his works "novels" or "entertainments", in accordance with the degree of ambition involved in their production.

This happy state of affairs has so far eluded me. I was under the confident misapprehension that it was about to occur in 1966, when my London agent obtained for me a two-book contract with a world-famous paperback company. I thought in high delight, "Now's my chance to write as well as I know how!" I submitted three possible ideas, they selected two, and during 1966-67 I wrote them. One was QUICKSAND (1967) which turned out to be the best-seller of the 24 science fiction books Doubleday published in that year; the other was STAND ON ZANZIBAR (1968) which won both the "Hugo" award and the British SF Award.

The publisher who had commissioned them turned them both down - in the former case, after sitting on the MS for longer than it had taken me to write the bloody thing. It is for this reason that I don't expect the two of them together to have paid me a full year's income before about Christmas 1971 - five years later.

Given that situations of this kind are likely to crop up without warning, just

at the moment when one imagines all is going smoothly, it is immensely difficult to develop one's talent in the SF field according to a deliberate plan. For years at a time I have constantly found myself faced with the necessity of going back on my own tracks, tackling a novel which in the ultimate analysis is superfluous, and certainly does not represent an advance on what I have previously achieved . . . but which can be relied on, where a "difficult" or "unusual" book cannot, to put a little money in the bank in the immediate future. The unpleasant fall back to routine space-opera which followed the initial rejections of THE SQUARES OF THE CITY has been paralleled in many later cases, although once I'd had it happen to me I was a trifle more resilient in my reaction the second time.

Meanwhile, my subconscious development has not corresponded to what might be deduced from a study of a chronological bibliography. More and more I have become concerned with what might be called borderline SF, that is to say fiction which, while incorporating some element of the standard SF canon, is nonetheless primarily of the present and relates very closely to discernible current trends. In some cases this has led me completely out of the field (tenuous though its frontier may be), as in THE GAUDY SHADOWS (1970) which appeared as a murder mystery although its plot revolves around the discovery of a group of so far nonexistent hallucinogenic drugs. Contrastingly, I feel that some of my recent output may be said to have extended SF, rather than trespassed over its edge; the use in such novels as QUICKSAND and THE PRODUCTIONS OF TIME (1967) of science-fiction elements in an otherwise wholly contemporary novel constitutes for me a kind of topological inversion that - like the image in a mirror - does not alter the thing perceived, but leads to a new appreciation of it.

Furthermore, I've been greatly concerned to interpret in fictional form some of my personal opinions. It has been rightly said that nobody wants utopias any more; however, the dystopia or "awful warning" story is a great temptation, and given one crucial element can often succeed extremely well - the element in question being, of course, a dramatisation of the theme which escapes the risk of being didactic and involves the reader in the fate of the characters to the point where he cares what becomes of them.

From my own recent work the most significant example is the complex and committed novel THE SHEEP LOOK UP (forthcoming, 1972), in which it is assumed that, owing to public apathy and the conviction of politicians that concern for the environment was just another fad which by next year will have faded away, pollution does in fact exceed our ability to reverse the destruction process we have set in train. It belongs, I suspect, in the same galere with Bernard Wolfe's "Limbo 90' or Pat Frank's 'Alas Babylon', rather than in the tradition of "hard core SF".

Throughout my writing career, it seems to me, one definite trend does recur and is continuing. Despite what I have said above about "going back on my tracks", once I have made a significant breakthrough to what Damon Knight terms "a plateau of achievement" previously unattained, a subsequent novel will often reflect an increased concern with the subjective feelings of the characters rather than the external devices of the plot. My entire adult life has been, and still is, a voyage of discovery, and the mystery into which I am conducting this lengthy inquiry concerns the nature of myself and of my fellow-humans.

Thus, for example, although THE MARTIAN SPHINX (1965; as by "Keith Woodcott") employs many stock trappings of old-time space-opera - a strange alien artefact on Mars, hostile BEM's, and so forth - it does reflect that change

which took place in my mind during the writing of its immediate predecessor, TELEPATHIST (1965; US title THE WHOLE MAN), and which I can neatly define. Much earlier, in 1958 to be exact, I had hit on what I thought was an excellent formula for generating an endless series of sword-and-sorcery adventure stories, all taking place in the mind of a master telepathic psychiatrist who himself was a crippled dwarf, forever subject to the temptation of letting go and accepting an imaginary world in which he could be a huge-thewed giant. (Some comparisons, it strikes me, might be drawn with certain of Michael Moorcock's stories.)

However, having written one of these fantasy adventures, I found when I sat down to tackle another that I was far more interested in the personality of this mind-reading dwarf than I could ever be in the machinations of some artificially-contrived villain of the subconscious, and instead of going on with the projected series I wrote his biography, and the two novelettes ultimately combined, with much new material, to form TELEPATHIST.

As a direct consequence of this, the character of Jason Lombard in THE MARTIAN SPHINX is more solidly delineated than is any protagonist in my earlier SF adventures - though I retain great affection for Don Miguel Navarro of the Society of Time, in TIMES WITHOUT NUMBER (1962, revised and re-issued 1969).

Indeed I would not disown any of my published work, with the single exception of that very first sale I made while still at school; I hope and trust that none of the people who apart from myself recall the title and house-name behind which it was disguised will ever unveil my identity in that connection. Economic considerations have often compelled me to wrap and mail a half-good book, when what I should have done was put it on the shelf for a month and then rewrite it end to end. Unfortunately the payment one receives in one's early writing career seldom justifies perfectionism - would that it had done so for me! Instead of saying that out of my sixty-odd published books there are at least a dozen I feel extremely proud of, I might be saying that I felt proud of everything I'd ever published. On the other hand, I certainly would not have explored the range of subject matter or the variety of literary styles which I have employed, so on balance perhaps things have turned out better for me as they are.

And what next?

Of one thing I can be sure: no more conventional SF. (Oh, I may occasionally find that an amusing idea has sprung full-blown into my mind, and I have time on my hands enough to devote 60,000 words to playing with it in order to produce a lightweight item similar to DOUBLE, DOUBLE (1967), which was undertaken purely in order to prove to myself that I could write an up-dated monster story . . . but that's a different matter!).

But I don't 'believe' in the colonisation of Mars any more. I don't 'believe' in the Galactic Federation. I don't 'believe' in the imminent advent of the time-machine. And no matter how hard I try I can't suspend my disbelief long enough to utilise these shopworn gimmicks in the creation of a story that satisfies my present critical standards. At best they come handy now and then if I hit on a plot where some pseudo scientific device can be used as a form of narrative short-hand to compress and dramatise the clash between the characters. (See for instance THE EASY WAY OUT, in 'If', June 1971.)

On the other hand I do believe very firmly indeed that we ought all to be concerned about the future because that is where we shall spend the rest of our

lives . . .

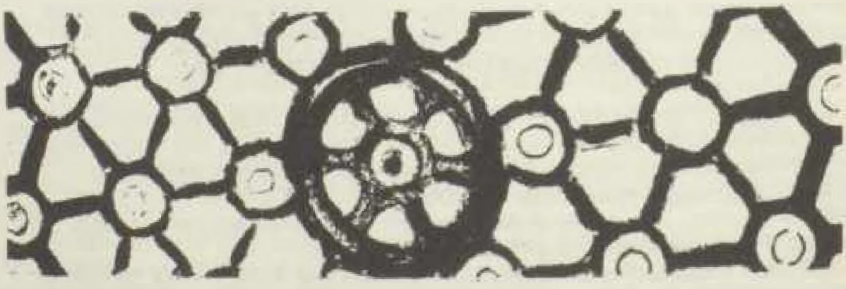
This paradoxical predicament must, I think, be what's driven me more and more into other fields recently. I now give public readings of my poetry fairly often; last year a first printed collection appeared under the Poets' Trust imprint (LIFE IN AN EXPLOSIVE FORMING PRESS, 1970), and this year another collection, TRIP, will be published by the Keepsake Press. I've done a science fiction film script, and am actively seeking the chance for another such assignment. I want to write a panoramic historical novel with strong contemporary relevance. I want to continue my exploration of a subject I broached in THE DEVIL'S WORK (1970) - what constitutes conscious evil in this post-religious, post-Freudian age? I have plots on hand for two non-SF novels which treat of that.

Does it therefore follow that a science fiction writer with pretensions must inevitably be squeezed out of the field?

I doubt it. On the contrary, my suspicion is that long ago science and its applied counterpart, technology, have so deeply affected our attitudes and our patterns of social behaviour that you can't go anywhere and escape them. For a brief while, SF became isolated in what Dr Dale Mullen has called a "ghetto". But this was an anomaly. There was no wall dividing the readership of 'The War of the Worlds' from that of 'Tono-Bungay', nor that of 'The Sign of Four' from that of 'The Lost World', nor that of 'Brave New World' from that of 'Antic Hay'. Equally, today, an admirer of Anthony Burgess accepts without question that this talented author should now and then hit on a science fiction theme and treat it with the same seriousness and conviction as his other novels.

It makes, in the upshot, no difference from which direction one approaches the central question of our time: will we, or will we not, survive the consequences of our own ingenuity? Both alternatives remain open. Having explored each quite extensively over the past several years, I find I can imagine either coming to pass. So, plainly, can a great many of my colleagues on both sides of the SF fence.

Here we are, then. And tomorrow is another day.



Sidgewick & Jackson have announced that the first in their *Sf Classic* series, published in collaboration with the Science Fiction Foundation, is to be *The Best of John W. Campbell*, introduced by James Blish. It is to appear in May of this year, price £2.25.

As part of the *Aspects of Cinema* series, Dr. Chris Evans will deliver a lecture/film show at National Film Theatre 2, 8.30 pm on 30 June 1972. This event has been arranged under the auspices of the Science Fiction Foundation.

Any field of literature gathers watchdogs unto itself, willy-nilly. But who watches the watchdogs? We await the response to Kathryn Buckley's strictures with some interest.

how do we evaluate a work of science fiction

by Kathryn Buckley

The last decade has seen tremendous changes in the public attitude towards science fiction. The Science Fiction Foundation and the appearance of this Journal itself are evidence that science fiction is beginning to come of age and is being accepted as a viable genre for academic study.

At this particular point in time, the lack of a body of informed scholarly critical analysis has become very apparent. Specialist science fiction readers of course evaluate science fiction each time they read a book. Each reader has his own private set of criteria by which he assesses whether the book is good or bad, and he is entitled to make this judgment. But when he makes this judgment, it is more likely to be an intuitive one and he is probably not even aware of the set of criteria he uses for evaluation.

I would like to suggest that it is time that the science fiction field as a whole codified a set of criteria of evaluation so that we can sort out the subjective from the objective judgment and, what is far more important, spell out for the reader the criteria which good critics ought to be applying so that their work too may be subject to scrutiny.

The critical criteria which are normally applied to mainstream fiction can be used as a foundation for the assessment of science fiction. To apply them without certain important modifications and changes of emphasis is to deny that there is any significant difference between mainstream fiction and science fiction. Mainstream is set within the framework of a known and experienced world. Science fiction almost invariably is not. This is not the place to investigate these differences but the important point to bear in mind is that the intention of the science fiction writer and the fact that it is science fiction should be borne in mind by the critic, for though a book might very well be a good novel, it might be very poor science fiction.

But why, you may ask, do we need criticism? Why can't the reader simply pass his judgment on an author by either buying or not buying his work? The answer is that things are just not that simple. A reader is subjected to all kinds of influences, as are authors and publishers. The reader's choice, for instance, is influenced by what the publisher publishes: an evaluation has already been made before the reader gets a look in. The publisher will then try to persuade readers that his choice is a good one by means of his advertising, or paradoxically his lack of it, and the blurb and jacket - the packaging of his commodity. Unfortunately for science fiction, looking at some of the abominations which have masqueraded in the past as book jackets and covers, one is bound to wonder whether the publishers' intention is - again paradoxically - to persuade the public not to buy the book.

I would like to suggest four justifications for the existence of a body of informed criticism in a field of fiction, and especially in the field of science

fiction. Firstly, each writer makes a particular contribution to his own age and is influenced by it. Science fiction has been around now long enough in a popular form for the present day writer to be influenced by the traditions of his own field whether he likes it or not. He may claim to be a rebel writer uncontaminated by, for example, the pulp influence, which cannot be denied; but that very rebellion itself is evidence of influence. Just as good criticism seeks to discriminate between experiences and evaluate them, it can also recognise and codify significant trends.

Secondly, criticism is a continuing dialogue between writer and reader. This dialogue undoubtedly exists in the science fiction field, perhaps to a larger extent than elsewhere, at least in our time. But is it a useful dialogue to either side? The science fiction addict is by and large more involved than the average reader; he wants to meet other readers and to share his reading experience, whether it be good or bad. This greater need for communication with other readers is of course partly attributable to the 'ghetto' in which science fiction has resided for so long and its lack of public respectability. Of course there is really no such person as an average reader, but this particularly is true of the science fiction reader. He may vary from the PhD, the scientist, the BSc, or other technically qualified man, the BA or artistically qualified man, to the reader with highly specialised knowledge in a particular field, to the housewife, or starry-eyed youngster whose judgments are just beginning to take shape.

This dialogue or discussion can be a valuable thing. Disagreement within the field can make a contribution, but whether this contribution is constructive or destructive depends on the form it takes. This discussion is unique in the science fiction field in the extent to which it goes on all the time between readers, writers, publishers and editors. Whilst the average science fiction reader is intelligent and articulate, either in person or on paper, he is by definition untrained in making objective assessments. Of course there is no reason why the average reader should be trained in this way, nor am I holding this up as a virtue, but in view of the vociferous nature of the science fiction reader it is an aspect which must be taken into account. On the positive side it can contribute a freshness of perception and an uninhibited and sincere response. But it is informed and objective analysis which can assist a writer to assess how far he is succeeding in doing what he set out to do. The extent to which the experience a writer arouses in others agrees with the experience the artist intended to convey is a measure of the success of his work. The writer can only recognise criticism as a barometer of his work if it is of a high standard. He does not have to agree with the criticism but can use it to sharpen his own critical faculties. The critic therefore must have a degree of intellectual discipline if his contribution is to be of any use to writer or reader, and as a measure of compensation for his unavoidable lack of specialised knowledge in every field touched on by the writer. Obviously the complexity of our society precludes either reader or critic having this specialised knowledge.

Thirdly, I have said that publishers influence the reader by their choice of book. I would like to suggest that publishers need a body of informed judgment to which they can apply when selecting their lists. I am not suggesting that critics should be publishers' readers, but that publishers' readers should have some set of criteria of evaluation which they can apply when making their selection. Even despite the improved standards of recent years it is still patently

obvious that no such criteria are being applied. Without a body of criticism the yardstick of success is sales, and only sales.

Fourthly, the prime object of reading is enjoyment: good analytical criticism can help to enhance this enjoyment for the reader by sharpening his awareness. The best science fiction requires more than casual attention from the reader. Like good wine, it can be for some people an acquired taste. If the reader demands a high quality, and he can indicate this by his response, then the quality of science fiction books will go up.

Having justified the need for criticism, let me briefly list the criteria which I think should be applied. There is not sufficient space here to explore these in great detail but my aim is to set up an area for informed discussion. I have deliberately used the term 'we' in the title of this article because I do not think that I, or any critic, has the right to be dogmatic about a section of fiction which is so multifaceted.

These criteria are: readability, language, structure, content and meaning.

It may seem strange that I should put readability first. But I return to a point already made and which I think cannot be over-emphasised. The prime object of reading is enjoyment. Individual readers will have different ideas of what constitutes enjoyment but it can be divided broadly into three areas; entertainment, such as the escape fast-paced adventure story, emotional, such as provided by books concerned primarily with the exploration of feelings, whether human or not, and intellectual which challenges the reasoning powers of the reader. Not many books fall exclusively into any one of these categories. In practice writers blend all or some of these ingredients together. Even the light entertainment book must have some substance and the profoundest book must entertain.

The only fair way of analysing a writer's work is to try to isolate the kind of enjoyment the writer is aiming to give, in other words the kind of book he is writing, and then try to decide whether he is successful or not. It is downright immoral to condemn an adventure story because it is not a profound philosophical tome. Both have their place and their own particular kind of excellence. If a writer aims to provide light entertainment and succeeds, then his lack of profoundity is irrelevant. On the other hand if he intended to provide a profound work and only succeeds in providing light entertainment, then he has failed.

Within the science fiction field it is often more difficult to categorise the kind of enjoyment a book is intended to give. The extent to which science fiction writers are successful in blending all or some of these categories of enjoyment can enhance or impair readability and certainly complicates the task of the science fiction critic. There is not space here to explore this aspect further but I think one point is worth stressing. I submit that once the science fiction field has accorded its accolade to a writer then established critical criteria should be applied vigorously. You cannot say 'This writer is one of the very best in the field' and then deny the application of the very highest standards to his work. (The case for the prosecution is wide open.) To do so is to admit that the standards by which we assess what is best are not of the highest and it follows from this that the verdict is highly questionable.

One of the most important indications of the quality and tone of a book is the way the author handles language. Critics and reviewers speak blithely of a book being 'well-written' or 'badly written'. In the space available it is

virtually impossible for me or anyone else to give a definition of what is meant by 'good style'. However, I will attempt to focus on one or two of the essential basic components of good style which the critic should look for when assessing the quality of the prose of a particular book.

Style is not only as important, it is more important to the science fiction writer than it is to the mainstream writer. The science fiction writer has an extra dimension to convey to his readers and he cannot therefore afford to waste a single word. I would put this failure to recognise the power of language as the major deficiency in the bulk of science fiction.

Style basically is the unique way that each unique individual expresses himself or herself, therefore the first ingredient is honesty. For example, if I were to attempt to impress my readers by writing in the style of say, Brian Aldiss, James Blish or John Brunner the result would be bad style, because I would be hiding behind someone else's voice. Of course, if my object were to demonstrate my powers of parody or imitation - assuming I possessed those powers - the result could be good because I would be giving you 'my perception' of what those three erudite gentlemen do. If a writer tries to write in what he believes to be a 'literary style', to be profound about a subject he does not understand, or to be sincere about a subject which he finds trivial, then you can be sure his style will find him out. The reader may not be aware precisely why that writer irritates him, but without this kind of sincerity or personal integrity, good style cannot exist. Sincerity does not necessarily mean a writer should believe in the ideas he is putting forward, but he ought at least to have the belief inherent in a mental 'Once upon a time' placard, permanently resident in the mind and heart of every good storyteller.

The other ingredients essential to good style are lucidity, fluidity and freshness. Lucidity is a matter not so much of saying a thing so that it will be clearly understood, as saying it so that it will not be misunderstood. The key to fluidity and lucidity often lies in good grammar. In the following examples, the key has been lost.

'The rear wheels were sunken up to their hubcaps...'

'Our parents had tried to discipline him in the past, I knew, never very successfully.'

'I had walked these streets before, however, that I knew or ones very much like them.'

'All the surviving brothers, we princes of Amber, I am sure, felt it much better, each in his own simple way, personally to achieve this status and thereafter let the Shadows fall where they might.'

'Caine would find some, for it was probable, were I to depart, the fleet could not sail the Shadow seas with me, and would be left as sitting ducks upon the real waters here.'

Clearly the author of these sentences shows no respect for the structure of the language. They are clumsy and awkward and though they do make sense the reader must make an unnecessary effort to grasp it. They are liable to give the reader mental hiccups trying to disentangle their meaning. This is, I submit, a discourtesy to the reader.

Dogmatic adherence to grammar can be stultifying. The codifying of grammar is of comparatively recent origin and the important thing to remember is that language is a living thing and is constantly changing with usage. Grammatical rules come about largely through usage and it would be wrong to condemn a

writer because he splits the odd infinitive. Jane Austen often splits infinitives and her language has a silky fluidity. There's also the vexed question of dangling propositions. One of the finest sentences in the English language is attributed to Francis Bacon. 'Houses were made to live in, not to look on.' Expressed another way that sentence would lose much of its succinctness, and neatness.

Attempts at making new patterns with language may be a perfectly valid device for the science fiction writer, but it is important to draw a distinction between such original grammatical structures and mistaken, misleading or confusing grammar. Meaning should never be sacrificed for gimmicky or sloppy writing.

Another quality to look for as an indication of good style, is freshness and liveliness. Modern science fiction's sojourn in the pulp magazines has left it peculiarly prone to cliché and over writing. Clichés were originally precise and vivid images; now they're dead but they won't lie down, they're simply pensioned off. 'Heavy with child', 'tensions gnawed at his stomach', 'He groaned', 'He gasped', 'He thought, quick as a flash'.

However, there are worse things than clichés. The mere absence of cliché does not make a good writer. The mere presence of good grammar does not make a good writer. There is a certain kind of baroque richness which is attractive because of the enthusiasm of the writer to tell his story - the born storyteller - a certain gusto and inventive ingenuity which I personally prefer to pretentious dead obscurity. This is 'The good BAD book'.

The danger here is that writers in attempting to avoid cliché and over-writing may eschew adjectives, any words with strong connotative meanings and that wonderful device, metaphor. Any writer who is really aware of the power of language will realise that the simplest of words have acquired an enormous connotative charge. Words like light, dark, cold, ice, chastity, virginity, communism, propaganda, Auschwitz. The fewer the adjectives the heavier the weight they may carry and the writer must recognise this if he is to be aware of the effect he is creating.

The power of metaphor lies in the invitation to the reader to make a selective comparison between two unlike things. It combines an idea and a feeling so that it can convey more meaning than the non-metaphorical phrase. At its best metaphor is extremely effective and is often the element which gives life to style. How does one arrive at good metaphor? We're back to sincerity again - plus perception. To use metaphor the writer has to see with fresh eyes - as if he had always been blind and could now see for the first time.

Some writers adopt a different technique and this is to build 'scenes' by cataloguing minute details. The danger here is that the reader may mistake these scenes as having a symbolic significance the writer did not intend. If the writer paints a certain picture with considerable precision the reader is entitled to assume he is being invited to examine it with the same precision - that it has some special meaning. The inference is often that the particular scene is symbolic and forms part of a central symbolic tone to the entire work. If this is so then the next question to ask is 'What is it symbolic of?' To say that a work is symbolic is only half a statement. A symbol is broadly something which stands for something else. Beware the critic who says 'Ah, but you see it's all symbolic' leaving the poor reader feeling he must be too obtuse to understand the thing. If neither critic nor reader can make some sort of sense of the symbolism then the reader is entitled to assume it may well be the

writer who is at fault.

Inevitably I have now drifted across from discussing style to content. To be pedantic, they are indivisible but for purposes of analysis we divide the two roughly into what is being said and how it is being said. To sum up on style; the total overall effect is what counts, blemishes are important in relation to the frequency with which they occur and whether they occur at a centrally important point, and the key question to ask is 'Why is the writer using or breaking a particular stylistic convention?' If he is doing it to enhance meaning, to convey something beyond our experience and succeeds in this, then it is valid. If he is doing it to sound literary or profound and the result is obscure and awkward, then it is not.

No viable evaluation can be arrived at without a consideration of the structure of a book. I am not here referring to the mastery of basic dramatic formulae such as is the subject of so many 'How to write Novels' books, though such knowledge is essential to any writer. I think a great deal of harm has been done to many writers by the influence of these 'How to' schools - particularly in America. We should bear in mind the difference between talent and genius - the science fiction field is bursting with talent but I would hesitate to name a single genius. The influences which may not harm a genius may well harm a talented artist. This is not of course confined to science fiction, but it does give a kind of lazy rule of thumb guide to publishers, and their readers and writers are inevitably influenced by what they can sell.

An example is the dictum that 'Author intrusion is bad'. The truth is author intrusion is not bad - unless it is handled badly. Some of the subtlest effects can be achieved by author intrusion, where only on examination is it apparent that the author is behind the book adding another dimension. There is no space to explore this fascinating technique of distancing, but the critic should be aware of its subtleties and not make wild over simplifications.

Another dictum which must inhibit many writers is 'Never tell - always show' Again, many of the finest writers have achieved their effects by telling - though they usually proceed to show as well, thus achieving a greater effect than by either telling or showing. The point here is that a writer should merely be guided by rules, not put in a straitjacket by them. Equally the critic should be aware of this and not condemn the writer simply because he uses author intrusion or sometimes tells the reader in addition to showing - again the important thing is whether the writer is achieving the effect he sets out to achieve.

In the structure of a book, pace is very important. The way an author handles the release and tightening of tension will determine how putdownable that book is. Here what is most disastrous is lack of variety in pace, leading to stylistic flatness.

But in a science fiction book there are two forms of structure to consider. The basic form I have briefly outlined and the special one of the structure of the world the author is creating. A science fiction book should have its own internal logic, that is it must be believable within its own terms even though it may not be in terms of our world. If this quality of consistency is not maintained the writer may fail to retain the suspension of disbelief of his reader. Some authors may, of course, aim to portray inconsistencies - they may be deliberately ambiguous - but the point where the reader forgets the story and remembers the book with an irritated ejaculation of 'nonsense' is a point of failure.

Much of the old science fiction possessed a quality of inventive ingenuity which gave it a liveliness and vigour lacking in much present day work. This is a quality many under-rated writers possess. There is much to be said for the honest rollicking roller-coaster ride, which I personally prefer to the pretentiously profound tome. The issue here is again the author's sincerity. Many writers feel they must try to be profound and meaningful, perhaps because they do not recognise their own particular forté, they have been persuaded that the adventure yarn is somehow very inferior.

Every book should have some meaning, if it does not it would be meaningless. This is not to say that it should have a message, but if the author is patently setting out to propagandise, to write a work of contemporary social relevance, then he must accept that this aspect of his work is open to critical analysis.

One of the most difficult aspects of criticising science fiction where the idea is frequently the hero, is the evaluation of content and meaning. The basic theme of the book may rely heavily on philosophy, theology, sociology, psychology, mythology - in effect the only limits to subject matter are the author's interests and editorial taboos. Obviously no critic can be an expert in all these fields - but neither can the reader. The critic should assess how specialised the treatment of the book is, whether it will only be intelligible to an expert in that particular area; whether it can elucidate for the reader who has a special, but not an expert knowledge: and whether it is intelligible to the reader who is ignorant in that area. Too often a science fiction novel is dubbed 'profound' because it deals with a profound subject. To be really profound, it should add something to the reader's awareness which was absent before, or should leave him questioning what he had previously accepted. In other words it should make an impact on his thinking.

Some attempt should be made to assess the idea behind the story. An extrapolation from known scientific data or of social trends will carry more impact if the known science is accurate, and the perception and insight of the author into the workings of society and the behaviour of the individual is acute and sensitive. When dealing with mythology, a fascinating area of science fiction, which it is hoped will be investigated fully at a later date, the author should be aware of the appeal, impact and power of myth. A distinction should be made between the 'retelling' and the 're-experiencing' of myth. The successful writer of fantasy must feel an innate response to the profounder aspects of life, for embedded within good fantasy the basic elements of the meaning of life are contained.

The critical evaluation of any book poses a number of problems to the critic. To begin with it is impossible to be entirely objective. Every individual begins to be affected by the socialisation of his environment from an early age and acquires political, social, moral and ideological opinions. The critic who professes himself purely objective is either trying to fool himself or the reader. The honest critic, who values his professional self-respect, will try to make his prejudices and preconceptions clear so that the reader can discount them if he wishes. He can and must avoid being 'entirely subjective', but to eliminate value judgments from science fiction is to eliminate the subject itself since it is based even if fictitiously on our own lives. Such objectivity presupposes the ability to be aware of his own prejudices and to declare his own subjective reaction. The critic must try to stand back from his reading experience and recollect the moment when his attention wandered to the cracks in the ceiling and ask 'why?' When reading a

book he should read primarily for enjoyment but have more patience, more flexibility, more receptiveness and a lower threshold of boredom than the average reader. He should read closely, but avoid careless 'intuitive reading' and prosaic over-literal reading. The threshold of boredom is important because it is linked with a receptive mind, a mind which is prepared to give a writer a chance. The reader who says bluntly 'I only like space opera' should not set himself up as a critic, except perhaps within his specialist interest, which he should declare so that his readership may judge his analysis accordingly.

A good analysis must rely firmly on the text. There are of course occasions when reviewers and critics have to discuss anything but the text as a diplomatic smokescreen, but if their reputation is soundly based this expediency will be recognised by the perceptive reader. As a general rule, though, he should stick to analysing the book in hand and not the book he wishes the author had written. This is not to be confused with an assessment which says the book would have been much better if handled differently, and gives valid reasons for such an assessment.

The critic himself should have an awareness of and delight in the power of language and a genuine liking and feeling for science fiction. His own work should be perceptive: his style interesting, lively and lucid. The critical analysis should stand as an essay in its own right to be enjoyed by its readers. He should be prepared to acknowledge his ignorance on a given subject, to research when necessary, and take this necessity into account in his assessment, and accept his own fallibility, to admit and acknowledge a mistaken judgment if he makes one.

Lastly, the critic should be aware of his responsibilities. To lavish praise where it is not merited is a disservice to a writer, the effect of which may not become apparent for some time. To give a writer an inflated view of his work by irresponsible overpraise too early may well hamper his advancement. Therefore the critic must be 'honest'. In such an incestuous field as science fiction critical honesty is often very difficult and requires the exercise of great tact and diplomacy.

The canvas for this article has been very wide and many of the topics have necessarily been dealt with in an abstract and generalised manner. My aim has been to create an area of informed discussion so that a body of criticism can be encouraged to flourish in accordance with accepted critical criteria. The technical aspects of the craft of science fiction have been very ably analysed by such writers as Damon Knight and James Blish, but much criticism has been painfully reminiscent of a trailer for a Hollywood movie. The award of a Nebula or a Hugo or simple popularity has often been enough for a writer to acquire the stamp of excellence,which is equally often assumed to be beyond dispute. If science fiction is to establish itself as more than pulp fiction, then it must be prepared to stand up to rigorous critical analysis, which must deal with the wider, deeper and subtler aspects of a book in addition to its technical craftsmanship.

The following article is reprinted from Mr. Pierce's periodical, 'Renaissance'. Mr. Pierce, who stands at the opposite end of the spectrum from, say, S. Delaney or Michael Moorcock, has produced a number of articles of real critical worth, in particular, a very detailed study of Cordwainer Smith. What he has to say here may well be disputed; it can hardly be ignored.

the new eschatology

by John J. Pierce

Eschatology used to be the province of religion (and indeed, many dictionaries still so define it), a branch of theology dealing with such matters as salvation and immortality and God's ultimate plans for the universe. And poets such as Dante and Milton gave artistic expression to the Churchman's eschatology.

Now we have learned that God is Dead, and hardly anyone takes the Churchman's eschatology seriously anymore. The Churches, putting their theological differences aside, survive primarily as institutions devoted to the solution of immediate social problems. A new generation of mystics seeks 'religious' meaning in psychedelic experience.

Literature too, worships at the altar of the Great God Now. One can read rival interpretations of the political scene from the likes of Allen Drury and Arthur Schlesinger, or absorb the Truth about Relevant matters, such as the Generation Gap, Poverty in Appalachia, Alienation in Everytown, Corruption in Big Business, the Breakdown of Middle-Class Morality, Violence in a Sick Society, and even Homosexuality among Lower Slobbovians.

Science Fiction alone seems to have achieved 'relevance' beyond that of the passing moment, and if the genre is to have a future it can come only through a continued concern with such relevance. Yet little critical recognition seems to be given eschatological significance in science fiction.

The late C. S. Lewis coined the term "eschatological fiction" to cover a "subspecies" of science fiction concerned with "speculations about the ultimate destiny of our species," and cites obvious examples as Olaf Stapledon's 'Last and First Men' and Arthur C. Clarke's 'Childhood's End'.

But, in a broader sense, most serious science fiction inevitably has eschatological significance. The mere future setting of the events implies a certain 'kind' of future world, and often a judgement (whether intentional or accidental) about the meaning of such a world.

Furthermore, in imagining many different kinds of futures, science fiction cannot help but invite contrast and comparison. . . we are, so to speak, 'trying on futures.'

Finally, science fiction is itself influencing the future. Clarke and others argue quite seriously that the genre literally created the Space Age. The mere possibility that science fiction can have an impact so decisive should give critics cause to take eschatological questions seriously.

That they usually don't is a reflection of a culture that has come to consider eschatological questions meaningless and irrelevant. The churchman's eschatology was based on the " exteriorization of meaning" . . the idea that neither life nor history could have any purpose unless it were imposed from without. It was God or Nothing . . and with the Death of God, Nothing is assumed to be the winner.

The marxists attempted to substitute the Dialectic of History for God, but even that seems to have broken down now. Other attempts at ersatz religions have been less successful.

The evolution – or perhaps, devolution – of modern literature is in large part an expression of the collapse of the churchman's eschatology. The "optimistic" writer, like Henryk Sienkiewicz, usually took it for granted that mankind would be "saved" by religion. But in the novels of Fyodor Doestoevsky, humanity is caught between God and Nothing - and try as he would, Doestoevesky was never able to truely resolve the conflict in God's favor. Now we have Samuel Beckett 'Waiting for Godot', nor is anyone surprised when Godot doesn't show up.

And the same process has been re enacted on a smaller scale in the Soviet Union, where the saccharinely optimistic Socialist Realism has been succeeded by the protest writings of Aleksandr L. Solzhenitsyn and others as the Utipia promised by the Dialectic has turned into a cruel joke.

Both the Churchmen and the Utopian sought refuge from Uncertainty. Christianity promised Armageddon and the eternal reign of Christ, and Marxism the Great Revolution and the eternal Utopia. Significantly, they both sought to abolish the future as something infinite and indeterminate. They promised ultimately to freeze History in an Eternal Present. The Churchman and the Utopian were, to revise an old catchphrase, Stasis Seekers. Only in a static, determinate universe could there be values or "meaning".

Science fiction's approach has been diametrically opposed to this view. Meaning is seen as an outgrowth of the evolution of consciousness, of an interaction of intelligent beings with each other and with their environment. The infinite and the indeterminate are seen as a challenge, instead of a threat.

"Either life goes forward, or it goes back. That is the law of life." Oswald Cabal answers Theotcopolos as the latter tries to stop History in its tracks with an assault on the Space Gun in H. G. Wells 'Things to Come'. And Wells had voiced the same philosophy in the 'Food of the Gods' decades earlier through Cossar's children: "We fight not for ourselves but for growth, growth that goes on forever."

The temptation to fall back on the exteriorization of meaning" is a great one. Stapledon, vivid as his imagination was in 'The Star Maker' despaired of finding any meaning in the patern of the future, ending up eventually as an all out Theist. Lewis sought refuge from the apparent nihilism of "modern thought" in the Christian eschatology he imposed on his Silent Planet trilogy, which is thus robbed of appeal beyond that of the travel tale.

But serious science fiction thinks of eschatological questions in terms of the "spiritual" consequences of the responses of intelligent beings to the challanges of the future. What the Churchman and Utopian alike thought necessary for "salvation" has either been ignored, or rejected outright.

Historical stasis, even of the utopian sort, was denounced by Clarke in 'Against the Fall of Night', Isaac Asimov in 'The End of Eternity' and Cordwainer Smith in 'Under Old Earth'. Science fiction writers have even been distrustful of personal immortality, the Churchman's most glittering promise, as leading to racial degeneration: examples include Lester Del Rey's 'The Dwindling Years', Poul Anderson's 'The Star Beast' and Alan E. Nourse's 'The Martyr'. James H. Schmitz s 'The Demon Breed' pits a deliberately "imperfect" human society against an alien one that has all the trappings of "perfection", including immortality.

The only sort of speculative fiction that is really accepted by the "mainstream" is that which Asimov places in a separate category social satire; Utopias like Edward Bellamy's 'Looking Backword'; warning stories of social criticism like Adolus Huxley's 'Brave New World', after the bomb falls novels like Nevil Shute's 'On The Beach', etc. Occasionally, a bit of "tomorrow fiction" like 'The Andromeda Strain' manages to sneak through by exploiting headline news. But "acceptable" speculative fiction always lack eschatological significance.

Science fiction accepts an uncertain future. Where the churchman and the Utopian saw a straight line of development, the science fiction writer sees a tree with many branches representing the answers to such questions as whether Mankind is the final product of evolution here on earth, whether there are alien intelligent races . . and if so, what kind, whether it will ever be possible to travel faster than light. And each of the branches has its sub-branches, representing the different responses we may make to a given situation. Each branch and sub-branch offers a different patern of events, an alternate eschatology.

Thus Asimov's Galactic Empire novels, Clifford D. Simak's 'Way Station', Robert A. Heinlein's 'Starship Troopers' and Clarke's 'The Songs of Distant Earth' offer radically different ideas about the kind of future that lies ahead . . yet any one of them might come true. Frederick Pohl and the late C. M. Kornbluth, in 'Search the Sky', suggested the possible consequences of two different kinds of interstellar travel, and Fritz Lieber, in 'The Big Time', even explored the eschatological implications of time travel.

Science fiction's approach has been generally mis-understood by the "mainstream" critics and their followers within the genre. The concern with long-range issues and consequences, rather than immediate events, is looked upon as "irrelevent" and "escapist". Science fiction, too, is damned as either too "optimistic" for lacking enough atom-doom plots and similarly disasterous projections, or as to "pessimistic" for not producing ideal socialistic Utopias as models for the future. The common assumption seems to be that only what's happening right now matters at all, and that the only question about the future we need ask is whether we shall blow ourselves up or have Love and Togetherness.

"Mainstream" literature has been traditionally ranked by its social significance and psychological insights. But serious science fiction must be ranked by its eschatological significance. Fiction that fails to come to grips with eschatological questions cannot be considered serious science fiction, no matter how well it deals with present day social and psychological issues (though, in the best cases, it can sometimes do both.)

Science fiction should be a form of Romanticism, but neither the pure "escape" of conventional adventure writing nor the "Romantic Realism" advocated by some do deal with "current" experience. Rather, it should be an Eschatological Romanticism, a form of dealing with the questions of values and meanings associated with future developments. Science fiction must not simply look at experience from a new angle, it must look at new kinds of experience.

It might help to supplement standard literary criticism of science fiction with an eschatological criticism. Such an approach would reveal how Shaw spoiled 'The Palace of Eternity' by resorting to a discredited religion as an "exteriorization of meaning", instead of a real attack on the question of whether an intelligent species has a life span, and if so, why. It would contrast Cordwainer Smith's best works, in which the meaning grows out of the patern of events, with his worst, which rely on tacked on religious symbols. It could show how Silverberg,

in 'Nightwings', failed to intergarte his redemption theme with his plot. It could expose the sterility of Jack Williamson's 'Bright New Universe' for aliens as deus-ex-machina.

If Clarke is right, science fiction is not only speculating about the future, but helping to create it. This places an awesome responsibility on science fiction writers and science fiction critics. They must pay attention to "real" problems . . . but not just the ones in the headlines that everyone already knows about, or which can be handled by contemporary fiction with no difficulty. And they must deal with problems, not just state them.

Science fiction can never become serious literature by conceding the "irrelevance" of eschatological questions and disguising itself as a mirror of the present. The genre must justify itself by tackling the questions which the mainstream, by its very nature, cannot approach, or even recognize.

twenty years on

by George Hay

The aliens that I recall
Are aliens indeed today.
Endearing in their evil mode,
Vintage models, you might say

All one-pointed and intense
Bombs and blasts and beams and thrall,
Sinister in clean-cut black,
Homing on us, above all

From OUT THERE . . . that vasty haven
Of menance unfailing, you'd allow,
For those who did, naive, believe
OUT was THERE. We know better now.

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If contemporary science fiction is more likely to produce dystopias than utopias, this is a sign that today's writer is indeed 'with it'. We recommend that you read Miss Weinkauf's analysis with today's headlines in mind . . . .

the god motif in dystopian fiction

by Mary Weinkauf

In most of the finest dystopian novels there looms one huge, overpowering figure who dominates the society and serves as a rallying point for loyalty. Usually he personifies all the ideals of the perverted, anti-utopian society and has been invested with all its authority. Rather than being merely a paternalistic chief of state like Lincoln, a national hero like DeGaulle, or a wise man like Solomon, the dystopian central figure is, for practical purposes, a deliberate parody of the Judeo-Christian God. In this paper I would like to outline how the God-surrogates (to adapt a Huxlean phrase) are characterized in some of the best-known dystopian novels.

A government's setting up one figure as a god is a practical step since man seems to be able to accept suffering and deprivation so long as he feels that it has a purpose of some sort. And so, like D-503 of 'We', Professor Burden of 'One', or Winston Smith of '1984', he desperately seeks assurance that all misery is for the greater good. Only for the sake of a greater being more enduring than himself will man subjugate or even efface himself. None of the novels examined here exhibit any belief in a creator god similar to that of 'Utopia', 'Christianopolis', 'The New Atlantis', or 'City of the Sun', although some have a sort of religious obligation owed to the dystopian god. In David Karp's 'One' a universal religion of self-denial that encourages thoughts of complete equality and avoidance of the personal pronoun is fostered by the state to keep the people under control. 'Ape and Essence's' devil worship is promulgated by the priests of Belial who preach a doctrine of man's humiliation. To win approval of the citizens the surrogates are created with the qualities attributed to God, and are to be loved and worshipped in organized rituals. Thus in dystopian novels religion is intentionally used to control man.

The traditional characteristics of deity – immensity, omniprescence, immortality, immutability, incorruptibility, omnipotence, omniscience, incomprehensibility [2] – are also the qualities used by dystopian novelists to characterize the god-figures. Big Brother's pictures are immense, a face a meter wide staring out at his people all over Oceana. He knows no bounds of space. Although he is circumscribed by his public appearances and private audiences, the Well-Doer is also described as a gigantic form associated with the powerful machines of the United State, much as the Old Testament God appeared as a manifestation of natural phenomena like the burning bush or the whirlwind.

Of course, President Raleigh of Comus (short for Communications, U.S., but ironically the name of the ancient god of revelry) is a plain human being who began his reign within popular memory. Although the people actually think of him as a god, he makes no pretense to eternal life. Darling Dictator, The Well-Doer, Big Brother, Belial, and Our Ford, however, have been in control for as long as most people remember. In the case of Big Brother – through the process

of Doublethink – those who remember before 1914 recall that he was in control then too. Similarly, Darling Dictator's people have only vague memories of being brought out from the horrible underground to which they will be returned for serious infractions of the law. And the new supreme beings, Belial and Our Ford, have long replaced any previous concept of God, whose name has been forgotten even for purpose of profanity. The name of Oceana's number one enemy is Immanuel Goldstein, suggesting an international fostering of hatred for the defunct Judeo Christian tradition. In most cases, then, the god figures are carefully designed to give the illusion of immortality.

Since immutability is assumed of most gods, Winston Smith's department sees to it that although rations are lowered instead of raised and war is with Eastasia instead of Eurasia, the records still show Big Brother's unchangingness. Changing written records to correct earlier predictions and to reconcile past policies with present contradictory ones, Big Brother is the god of time and history. The past is destroyed, and those inconvenient persons who disagree with the state are not only killed, but become "unpersons," never having existed. Most of the dystopian gods have assumed control after cataclysmic events and have altered history to suit their own needs.

The incorruptibility of these gods is also an illusion. Propagandists do their best to convince everyone that everything is done for the greater good of all, using solidarity services, two minute hate periods, annual sacrifices of mutant babies, periodic wearing of sackcloth, and various other rites adapted from previous religious ceremonies to keep people so emotionally stirred up that they will not uncover the basic evils of society. The actual corruption of Rohan's wife and of Comus is an obvious motif throughout 'Doomsday Morning'. Rohan clings to the belief in Miranda's and Comus's goodness, finally realizing that both, while efficient, beautiful, and hypnotic, are totally corrupt. Yet, particularly in the case of Big Brother and the Well-Doer, this type of god will endure in spite of its evil nature. This corruption at the centre of society is what makes dystopian novels so horrifying.

Each dystopia perpetuates the myth of omniscience and omnipotence by figures and devices such as guardians, inspectors, thought police, youth groups, telescreens, glass apartments, pontifical voices issuing from central places, and vast computer systems to keep records on each citizen. One of the most striking parallels of dystopian gods to the general concept of God is that "Big Brother is watching you" at all times and knows your every movement.

Now, a believer in God feels that He knows each man's innermost thoughts: "Can any hide himself in secret places that I shall not see him? saith the Lord. Do I not fill heaven and earth? saith the Lord" (Jeremiah 23:24). It may well be that the dystopian novelists intentionally remind the reader of the Christian symbol for omniscience, a large eye staring out from a triangle with a circle. The Psalmist describes God's omniscience thus:

> O Lord, Thou has searched me, Thou knowest my downsitting and mine uprising, Thou understandest my thought afar off. Thou compassest my path and my lying down and art acquainted with all my ways. For there is not a word on my tongue but, lo, O Lord, Thou knowest it altogether.
>
> (Psalms 139: 1-4)

To a Christian, however, this is less terrifying than it might be to a dystopian

citizen. President Raleigh, for example, earned his reputation as a "god" by establishing order after a state of anarchy struck the United States, and once he came to power his Comus agents knew everything that went on in the nation. It is no coincidence that the term guardian is applied to those who are assigned to keep people out of trouble for their own good and the state's stability. Hidden cameras and microphones are everywhere in '1984's' world, and in 'We' even lovers are assigned so that no-one is too eccentric. In 'Facial Justice' Darling Dictator is commonly felt to be a "spirit" because she knows everything that goes on in her world. Throughout these novels there is a continual acceptance of the fact that eventually the non-conformist, whether in thought or deed, will be caught by the all-knowing dictator.

The dictator is also omnipotent, capable of capturing any "criminal" and of transforming him into a loving citizen. Big Brother has, as noted before, the power to change history and to wipe people out of existence. Less ominous, but just as powerful, Mustapha Mond quotes that "beautiful and inspired saying of Our Ford's' History is Bunk." Then he whisks away with his hand Thebes, Babylon, Athens, Rome, everything and everybody that ever existed ('Brave New World', 24). Big Brother's word is law and his law is forever. As O'Brien tells Winston, "If you want a picture of the future, imagine a boot stamping on a human face – forever" (Orwell, 118). The agency of Newspeak proposes to narrow man's whole thought process so he can only think the way the Inner Party wants him to. In short, the dystopian god controls men's minds. What greater power can any god have?

Reshaping men's thought processes makes it possible for the dictator to seem just. Even Plato's 'Republic', which is the answer as to how to ensure justice, is extremely regimented and requires a philosopher-king to facilitate its system. None of the dystopian gods, however, fits the philosopher-king category, and the best of them is an old lady approaching senility. Although Darling Dictator is the most just in so far as there is no deliberate torture in her world, she does, nevertheless break down people's egoes by giving them names of notorious criminals (except for the inspectors, who are named after angels) and by insisting that they wear sackcloth to remind them of their Patient and Delinquent status. Darling Dictator may be mild, but ordinarily the chief aspect of dystopian justice is its severity, much like that shown by the Old Testament God. In 'One' there is no justice or logic in the government's selecting every tenth envelope from a truckload of mail and giving its sender an inquisitorial examination. Instead of rewarding ability and initiative, it executes Professor Burden for heresy, that is, for realizing his superiority to others. The subtler tyranny of 'Brave New World' sends those who will not forget their discontent in feelies, sex, and soma to islands where only non-conformists (the most interesting people in the world, according to Mustapha Mond) live without interference. But once a citizen of a dystopian world is accused of any wrong doing, there is no legal redress. Nor is there mercy, one of God's greatest attributes.

Qualities such as mercy and compassion are unheard of except in the sentimental fashion of Darling Dictator, and unmerited favour and love in the theological sense are, again with the exception of 'Facial Justice's' kindly tyrant, non-existent. Interested only in the superficial well-being of society, the god-figure expects love, loyalty, and ritualized worship, and refers to his people as erring children. The dystopian god sends men to their deaths arbitrarily. Although he has been a model of fervid loyalty to the state all his life, Winston

Smith's neighbor, Mr. Parsons, is brought into the Ministry of Love for allegedly saying "Down with Big Brother" in his sleep. Proud of his son who betrayed him, he is happy to be sent to torture and death rather than live any longer to defile the name of Big Brother. His attitude is a parody of Paul's ". . . our old man is crucified with him, that the body of sin might be destroyed, that hence forth we should not serve sin" (Romans 6:6). This is dystopian grace. It is no accident that O'Brien's phrase "God is Power" replaces the discarded "God is Love."

All the dystopian god-figures are thought to be incomprehensible. Not for a moment does anyone expect Darling Dictator to be an old woman. D-503 is so vague about the Well-Doer that even after meeting him face-to-face he gives no very clear picture of him. He speaks as if he were Saint John before the throne of God. Even the most dedicated rebels have no clear concept about the figure-head of the government they oppose, not even knowing whether he is human. Naturally, this makes the god-figure a great deal less vulnerable than an easily-assassinated mortal ruler, and from this standpoint is another practical aspect of placing a god at the head of a bad government.

So it becomes clear that the dystopian dictators are dramatically conceived caricatures of the Judeo-Christian God traditionally accepted in the British, American, and Russian societies of the novels' audiences. With the disappearance of God in twentieth century society, men already have turned to seek new commitments to ideologies or science. Big Brother, the Well-Doer, Our Ford, and the rest are necessary for stability and sense of direction in an otherwise irrational society. In "The Book" of Immanuel Goldstein, Winston reads

> Big Brother is infallible and all-powerful. Every success, every achievement, every victory, every scientific discovery, all knowledge, all wisdom, all happiness, all virtues, are held to issue directly from his leadership and inspiration. Nobody has ever seen Big Brother. He is a face on the hoardings, a voice on the telescreen. We may be reasonably sure that he will never die, and there is already considerable uncertainty as to when he was born. Big Brother is the guise in which the Party chooses to exhibit itself to the world. His function is to act as a focussing point for love, fear, and reverence, emotions which are more easily felt toward an individual than toward an organization.
>
> (Orwell, 92)

Man can be just as humble under the inscrutable control of an evil tyrant as he can under the mysterious ways of God; the collar remains but the leash changes hands. Mustapha Mond believes that in all probability there is a God but that man is better off not to believe in Him and instead worship good times and Our Efficient Ford. In Anthony Burgess' dystopian novels God becomes Mr. Livedog, a comic-book character, in 'The Wanting Seed', and Bog in 'A Clockwork Orange'. The benediction of Evelyn Waugh's society in 'Love Among the Ruins' is "State Be With You." Naturally, "God" is out of use even for oaths in several dystopian novels, since a statement like "God Damn you" or "So help me, God" implies that God has immense power over every human being, including the temporal ruler, and thus is supreme. Since man honours God even in cursing, the state's or the dictator's name must be used instead. For the control and loyalty that would not come naturally to the inhabitants of a dystopian world, God must be replaced by a figure who can command the attention.

respect, and submission of the people and who can personify the wisdom and practicality of force.

Behind this technical device is a serious warning for today. Believing in God, or in government, makes men comfortable. So long as God or Big Brother controls the world men cling to the hope that meaning and coherence must exist. Thus there is less to worry about while the major ills of the world can be left to The Well-Doer or accepted as being for the best. The actual oppression and deadness of such a society cannot be conveyed in a book on political science or sociology or in a political party platform. In such masterpieces as 'We' and '1984' the writer gives abstract concepts emotional impact. Each dystopia is an explicit warning about what life will be like when man clings to an illusion of truth and allows his individuality to be sacrificed for security and deceptive happiness. The full horror of man's subservience to a politically created idol can be dramatized only through the vivid medium of speculative fiction.

References

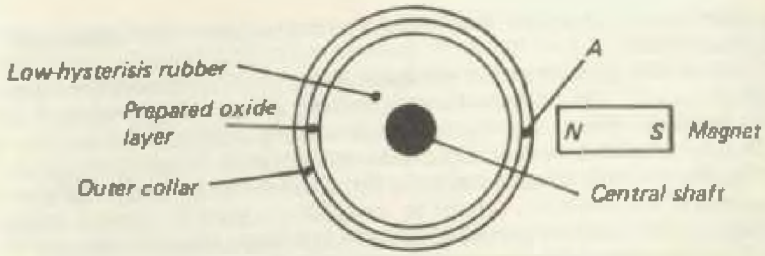
1. George Orwell, '1984' (New York, 1963); Eugene Zamiatin, 'We', Gregory Zilboorg, trans. (New York, 1929); Aldous Huxley, 'Brave New World' (New York, 1965); Aldous Huxley, 'Ape and Essense' (New York, 1948); L.P. Hartley, 'Facial Justice' (New York: Garden City, 1960); C.L. Moore, 'Doomsday Morning' (New York, 1957); David Karp, 'One' (New York, 1953). Other works cited are: Anthony Burgess, 'A Clockwork Orange' (New York, 1963); Anthony Burgess, 'The Wanting Seed' (New York, 1962); Evelyn Waugh, 'Love Among the Ruins' (London, 1962).
2. For these particular aspects of divinity see Luther's Small Catechism and Chapter II of 'De Doctrina Christiana' in 'The Works of John Milton', Columbia Edition, eds. James Holly Hanford and Waldo Hilary Dunn (New York, 1933), XIV, 25-81.

The name of the author of this document, and the manner in which it came into our hands, must alas! remain hidden from our readers. To refrain from making it available would, we feel, be in the nature of a grave disservice to humanity. It is with a sense of duty fulfilled, therefore, that we present

some proposals for the construction of a machine with which one may crank oneself into the sky, and hints on future possibilities

The central portion of the device consists of a shaft 1/4" in diameter carrying a cylinder of low hysterisis rubber. This cylinder is 1 3/8" diameter and is coated with a prepared oxide of lanthanum embedded in a matrix of the same rubber. To protect this surface it is enclosed in a collar, again of rubber, so that the working portion of the shaft, a length of 3", has a diameter of 1 5/8". Adjacent to the working portion is a small permanent magnet, the distance of which is adjusted to give a field of approximately 1,000 gauss. This magnet is not rotated with the shaft but secured to a bar running parallel with it.

Under the influence of the magnetic field, the prepared oxide becomes impermeable to the gravitational 'potential' field, so that on turning the shaft it will cause the cylinder to ascend or descend the local lines of the gravitational



'direction' field in accord with the direction of rotation. For the arrangement shown above, clockwise rotation will ensure ascent.

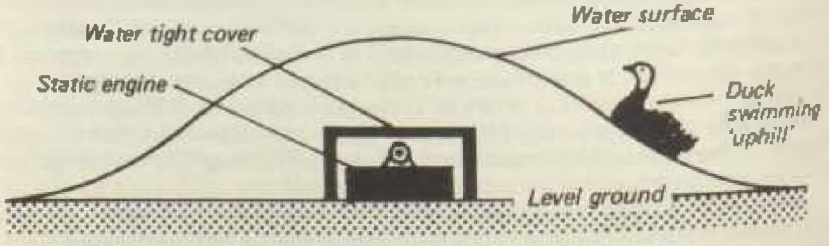
In a practical arrangement the shaft is mounted in ballraces set in pillars attached to a stout platform. A pair of crankhandles enables an operator standing on the platform to operate the device. Constructors should note that the centre of gravity of a practical arrangement should lie some distance 'below' the switched gravitational-potential-field permeability zone, 'A' in the above figure.

The degree of deformation of the gravitational potential field is not known. If there is no deformation, then the apparatus may be damaged if an attempt is made to 'crank into the ground'. If potential field deformation does take place, then it will be found that there is some loss of energy when travelling over water at low altitudes. In either case, the device will make an excellent static tidal engine, if secured to a massive foundation, with almost unlimited power output if no field deformation occurs. Field deformation is expected, however, but promises some interesting effects if the power flow of a static tidal engine is reversed, or if the working shaft is clamped during a change of tidal height. (Note: the machine is used on land for this purpose. The tidal effect being the rise and fall of the iso-gravitational potential surfaces under the influence of the sun, moon and the earth's rotation.)

Apart from minor gravitational anomalies generated while the device is 'in flight', it is expected that major interest will be focussed upon novel applications of the 'static' engine, in the event of gravitational potential surface deformation. An engine 'cranked into the ground' will so deform the local field that it will be possible to construct swimming pools of unconventional design.

If a swimmer gets into difficulties, it is only necessary for the attendant to operate a control releasing the static engine's shaft for the water to be distributed over a larger area.

Reverse deformation requires that the static engine be securely mounted on



'Rule': 'Water always finds its own iso-potential surface'.

pillars penetrating some distance into the earth. When the static engine is 'cranked up', iso-potential contours can be traced around the engine which will give the casual passer-by the sensation of having walked up and over a small hill, whilst all his visual clues will indicate a flat surface. Conversely, the machine may be mounted at the foot of a hollow so converting it into a 'gravitational plane', thus reducing its inconvenience to elderly persons. A larger machine sunk into the Red Sea would permit the re-enactment of a well-known biblical episode for the enlightenment and edification of the populace.

Considerable care must be exercised in the design of machines for operation in public places. Whilst it may not be inconvenient to discover that a civic tidal power station has broken from its foundations and is drifting slowly at a height of 500 feet, the loss of only 6" of iso-potential can be discomfitting, even more so a sudden gain.

This is a story about spaceflight. That is to say, it is a story about publishers – or about editors. Or, rather, perhaps, about critics. Or – the hell with it; you tell us.

the end of the ANTHOLOGY

by Ayre Hogge

Fantastic! Though I had long ago abandoned hope for myself, I still clung to the faint chance that there might be some way to pass on my story to the Readers, that they might scan, shudder, and be warned. It is weeks now since I came across the bloated body of Madel, the proofreader. This morning, taking an idle turn in the mens' washroom, I came on the still form of Edwards, the office-boy. At first I assumed him dead, and then I saw beside him the half-empty bottle of Martian Heart, that strange, sweetly addictive drug from the equatorial plains of the Red Planet.

His pulse was weak but steady: if my guess is right, he will sleep like a log for some days yet. Wonderful! Back on the bridge now, I am putting down this story as fast as my weary body will allow. Once finished, I shall secrete it about him, suit him up, and drop him out of the airlock, pointed in the direction of the Old Home Planet, his suit-radar locked-on and his jets at maximum blast. The power will run out soon enough, but there will be more than enough built-up velocity to get him there. The poor lad will be stone dead by then, of course, but what is an office-boy's life compared to the Fate of Man? Besides his personal habits were disgusting. If ill-luck does not intervene, the story of the ANTHOLOGY may yet come to light.

That is, if They do not....

1st. November

I had to break off this account last night. Even as I scribed the word 'They' I fancied hearing the sound of a distant throbbing from the press-room, and the light seemed to go strangely dim. It was only overwrought nerves–I hope. I cannot be sure. It is true there has been no signes of Them since I found Madel, and I had hoped they had fled the ship. But THEY are as cunning and patient as they are sadistic. They could dispose of me with one opening of their hideous

mouths at any time; if they have not, it may merely be that THEY are playing with me as a brokers' man plays with a pleading tenant.

No matter! I must scribe on, and take my chances: at any moment young Edwards may wake, and I would have to kill him before putting him outboard, which would be embarassing, and messy to boot.

This account begins with my first day aboard the offices of the ANTHOLOGY, a good two years ago. My signing-on had taken place a week earlier, in the palatial oak-lined boardroom of L. pN...yh House. As we sealed the contract with a drink of Venusian rotgut, the chairman's eyes wandered along the rows of editors' heads decorating the walls. 'We keep a taut ship here, Benson,' he barked 'always remember that. But there, I'm sure you will. We took our time selecting you, you know. It was your success with that last collection that decided us. What was it?... 'Tales of the Bar-Mizvah', I think?'

I muttered something about hoping I would fulfill his trust. 'I'm sure of it,' he boomed, then rose, extending a hand. I noted with interest that it was entirely of steel. He chuckled, catching my glance. 'A memento of old times- lost that one exchanging contracts with Beaverbrook Press. Ah, brave days, those.....'

My head a-whirl, I left the building lopsided with the weight of the contract in my pocket. When I started work the next week, I saw nothing but fame ahead of me. Poor fool! I had my first inkling the day I started out–

3rd November

It was necessary to skip a day in this record. Young Edwards had come to earlier than I had expected. Fortunately my ears, sharpened by weeks of listening for THEM had heard his footfall, and I turned from my desk in time to fend off the upraised adding-machine he was bringing down on my head. My laser-gun never leaves my belt; within seconds his brains were boiling in his skull. I could see them steaming out of his ears and condensing on his neck, an appalling sight.....

The strain of coming to a decision left me no more time for the log that day. Should I launch his body, or eat it? For hours I teetered on the verge of decision, now this way, now that. Finally, my mind was made up when I realised that he had not washed for weeks. Once a lower-deck man, always a lower-deck man, I suppose...At all events, though I am a fair cook, I have always objected to having to dress the meat myself. Anyway, he now lies in his suit beside the lock, ready for launching.

Back to my account of the first day in the office.

I had expected to be greeted by Mawson, the outgoing incumbent. References to him, however, were met by an uneasy silence on the part of the staff. Determined as I was, in the first flush of my enthusiasm, to clear up all possible doubtful points, I finally pinned old Barker, the accountant, in a corner, and insisted on an answer. He saw that further evasion was useless, and beckoned me to a window.

I froze, panic clawing at my guts. Sometime in the couple of hours since my entry we had TAKEN OFF. Gone Ludgate Hill, gone the proud cross of St. Paul's, gone the intolerable and beloved clamour of the Street. Outside, in the great dark, only the merciless rainbow shimmer of the uncounted stars.

Frantically, seeking some point of familiarity, I returned to my question. 'But Mawson..?' Barker shook his head impatiently, pointing outwards.

Again I looked. This time, following the direction of his finger closely, I detected a slowly cartwheeling figure outlined, an indeterminate distance away, against the backdust of stars. The figure was human in outline, yet strangely distorted. Peering more closely, I saw that 'something' enwrapped it. Here and there strange tentacles erupted, and, every few seconds, a hideous octopoid head raised itself for a moment, then plunged its muzzle deep into the hapless corpse of Mawson--for there could be no doubt that I was indeed beholding the fate of my predecessor.

It began to look as though there were something amiss.

I returned to my desk without further remark. There was no need now for me to question, as I had intended, the peculiar lengthy sweep of that desk, or the odd array of dials and controls built into it. Editor's room, forsooth! THIS WAS THE SHIP'S BRIDGE.

The hours passed. Gradually the panic in me ebbed, to be replaced by, not, I will say, courage or resolution, but a strange sort of resignation. When at last the tea-girl came in with her offering, I was even strong enough to make a faint pass at her.

Later still, I remembered the sealed instructions the Chairman had given me. Tearing open the envelope, I found a spool of tape. Threading it into the recorder before me, I awaited the worst.

There was a solemn drum-roll, followed by a voice fit for the ears of heroes. 'Operations HQ to Benson, Captain of S.S. ANTHOLOGY. Instructions follow. These are to be followed as closely as possible. In view of the nature of this mission, some latitude of interpretation may be allowed, but deviation must be kept to a minimum. Failure to follow orders will be considered even more serious than failure to achieve the overt object of the mission.'

Already my fears were forgotten. The blood throbbed in my ears. I made a mental note to see the M.O. about this.

'Mission is as follows. Fullstop Press are known to be operating a pirate edition of our book WHY JESUS WEPT, in the region of Alpha Centurai. ANTHOLOGY is to make contact with this ship, and inflict maximum possible damage, regardless of risk involved. The position in this area is critical, and loss of control here would have the most serious results along the whole battle-front. We count on your utmost effort.' A blare of trumpets followed these stirring words, carrying me away. Fortunately someone remembered me the next day. I was found curled fast asleep round the aft reactor, and brought back.

How shall I ---

It was NOT my imagination. THEY are aboard, here, with me, on this deserted Flying Dutchman of the Spaceways. I broke off just now when I heard sounds of movement forward.

Rushing to the airlock, I found Edward's body gone--I will not even venture a thought where. The suit now squatted awkwardly against one wall. My cap had been stuck rakishly on the helmet, and my spare autowriter stuck in its right hand. The empty face of the helmet leered mockingly up at me. A bowl containing a tarnished obol lay on the floor between the crumpled legs; on a card were the words--'Penny for the Guy. See you on the Fifth.'

Oh God--'I have only two days left.'

November 4th

Drunk.

LATER. Dead drunk

November 5th, 10 a.m.

Must make an effort ... ILLEGIBLE. THE PAPER IS HEAVILY STAINED AT THIS POINT WITH BROWN SMEARS. CHEMICAL ANALYSIS REVEALS THESE TO BE SPILLED NESCAF.

LATER. ILLEGIBLE ... Better. Little time left. I can hear Their feet padding on the upper deck; ever and again a hideous peal of laughter drifts down to me. But I think they are saving me till tonight, so must quickly get down what I can here, in the very faint chance that it gets to earth.

Earth! What memories the word conjures up! Happy hours spent idly waiting in the traffic-jams on the M84; visiting the Elvis Presley Shrine at the UN World Home of Rest at Bombay; winning a minor jackpot on the 'Thank Your Lucky Stars' programme world-relayed from Mount Wilson Observatory, and dialling black velvet all round at the Globe autobar; getting fired from Odham's for beating the computer at noughts and crosses--the machine sulked for a week, delivering incorrect invoices from Dartmouth to Delhi; my first visit to the John Betjeman Memorial at Slough; my--enough! Fool! the time for dreaming is past.

I had hoped to give a full account of our long voyage; of how we sought out the pirate edition, and left her split athwart from infinitive to colophon, after the grimmest of day-long battles. How proud we were, those of us who survived! how we looked forward to citations from the Chairman, and the buckram-bound first edition of our Memoirs.

The mockery of it all! So far had we fared that months would elapse before we could break out of hyper-space in the vicinity of old Sol. And in the very first day of the journey back, the hideous death of Mary Slagg signalled us that THEY were aboard.

There were six of us left; young Edwards, Paula Smith, Jill Cromarty, Petersham, Madel and myself. After we had dropped Mary's remains reverently into the incinerator, we armed ourselves heavily and started to comb the decks one by one, splitting up into two groups.

I was with Jill, advancing aft along the main corridor; the others were to advance towards us from the far end. Halfway along, I heard a shriek from somewhere ahead, and hurled myself forward.

It was a trick, of course--I realised that a moment too late, as a smothered cry reached me from behind. Wheeling, I saw the heel of Jill's shoe vanishing into a stateroom. Edwards crouched by the wall, white-faced and silent with shock.

The door was slammed and locked ere I could reach it. It took me minutes to burn through the lock; I shouldered my way in, expecting a blaster in my face at any second. But the room was empty, a jagged hole gaping in its far side.

What had once been Jill lay crumpled pathetically in a wastebin. Gone all that huggable flesh, gone all those curvaceous -er-charms; there was only a dry sack of skin huddled inside her clothes. Nearby was a piece of paper with the sneering message: 'This character is completely empty.'

Was I crestfallen! But I was not alone in my slip-up; when I joined the others amidships it was to find that they too had been tricked. Petersham had been lured into a side-corridor, where he now lay completely flattened as though under a press, no thicker than a piece of cardboard. The message pinned to his chest said: 'This man, as depicted, is merely two-dimensional.'

And so it went on over the days. We never set eyes on THEM, but Paula and Madel were taken from us as the days passed, with only a grisly message left to replace their friendly voices. Paula vanished altogether; a paper found on her berth portrayed a large ampersand, and the epitaph: "a mere cipher." Madel, whose body I found so bloated that it blocked a whole corridor, was described as 'overdone.'

Then only young Edwards and myself were left. No doubt they chose to spare him deliberately, knowing how he rasped on my nerves. Much must be forgiven to youth, but I found it hard to overlook his masturbating into my porridge.

Anyhow, you know--you, enviable, live, person, comfortably reading this account from the depths of your wing chair, you bastard--what happened to Edwards. Now I alone remain. What comes next?

8 p.m. I can hear THEM howling like demons aloft. They will be down for me soon. Will there be any further entry in this log?

9 p.m. (THE REMAINDER OF THIS LOG IS BARELY LEGIBLE). There will -- there is! You will recall that my spare autowriter had been left to mock me by my suit. Now, as they surround me, stuffing me into the armour, they have forgotten to remove it from my reach. The log-book is concealed in my waistband -- and now I withdraw my arm from the suiting, and, safely inside and unobserved, am scribing these last words.

Do they suspect? No; they are too busy now at some maniacal jest of their own, something at my expense, no doubt. I had expected to be dumped out of the ship at once, but for the moment they are all clustered round the duplicate screen and controls beside the airlock.

My mind reels at the sight of them. Many lifetimes now the legend of the Phantom Critics of Space has circulated among the vilest reading-dens of the spaceports, but never yet did human eye see them in the ghost, as I see them now. Death-pale, their faces yet glow with an indescribably hideous phosphorescence. From tale and picture of old I recognise them -- Amis, Connolly, Raven, Brophy, Toynbee--all the eldrich crew of the un-dead.

And now I can see the cause of their excitement. Somehow, by some evil art, culled from who knows what nameless nether hell, they have found out how to overpass even the great engines of our day. I have said that it should have been months before we reached Earth--yet even now Amis has broken us out of hyper-space, and Raven is guiding us down: in the screen I see the Smoke itself swinging up to meet us.

My last view of London by night! Something extraordinary is going on down there; the city is a sea of exploding lights, raining and blazing over spire, block and park, in colours rivalling the very stars I have watched for so long, and shall never see again. (Unless the Theosophists are right about Reincarnation. But this is no time for idle theorising). These lights--what can they be? Is it possible that--but, of course. 'Guy Fawkes' Night!'

Down we go. I can see those proud buildings, citadels of my own joy and youth, rising to meet us. Thomson House, the Daily Express Building, the Daily Mirror slab--the tears course down my cheeks. Am I never to pace your corridors again? (no - Editor)

And now THEY turn towards me, their fangs slavering in unholy joy.

My suited form is being hustled helplessly into the airlock.

Now the outer door slides open. London, a sea of exploding lights, lies below me. I . . . "

HISTORICAL NOTE. The above MSS was found in a badly mangled and spacesuited form, found on Ludgate Hill in the early hourse of November 6th last year.

It was at first though that the whole thing was a hoax, but the body has now been definitely identified as that of Captain Benson, whose ship, the ANTHOLOGY, was reported missing during the course of the recently-terminated Publishers' War.

We are reliably informed that the descendants of Messrs. Amis, Connoly, Raven, Brophy and Toynbee are filing suit against the Interstellar Publishers' League. In the meantime, Lieut-Colonel von Spoor of the Space Patrol has been specially commissioned by L...p N...yh Press to present the dramatic background behind the events depicted above, and the first portion of a serialised version of this book will appear in next week's SUNDAY TIMES.

Order it at your bookstall now!

Delusions have their own logic. They can, for example, be serial . . . .

strait-jacket

by Edward Ross Young

He put the book on the chair beside his bed and switched the light off. Then he lay back and closed his eyes.

How good it was to be in bed! How warm, how comfortable! All the troubles and pressures of the day dissolved as he lay back and experienced the supreme luxury of self-surrender. His body sank deep into the foam of the mattress, deeper and yet deeper as his conscious mind relaxed. No longer now did he feel himself sinking. He was floating on a leathery cloud high in the heavens, floating away from Earth, away from Earth's outer atmosphere, away from the known universe. He was travelling to a world where there are no physical laws save those which the dream imposes - where the dreamer can achieve the impossible simply by imagining it.

His eyes opened.

Damn! He had been so near to release, and then suddenly the thought had struck him. He had forgotten to tuck himself in! Really, it was too preposterous! A grown man like him, still unable to get to sleep without being tucked in!

But no, he told himself, that wasn't quite true - 'being tucked in'. No-one tucked him in, no-one but himself.

When he was little, his mother had tucked him into bed every night after he said his prayers. Later, when he had been in hospital, a nurse had ministered similarly to him. But they had neither of them been able to satisfy the one paramount desire that dominated his night-thoughts. Neither of them had been able to produce that secure sensation of tightness which was so essential to his well being.

He, and he alone, using one hand solely, had mastered the perplexing art of achieving that perfect self-contentment.

He opened his eyes once more. An irregular oblong of pale light lay transversely across part of one wall and the ceiling. Resting on one elbow, he streched an arm out and switched the light on once more. It was cold, and he shivered. But he always shivered when he switched that light on. There was something about having his bed by the light-switch which gave him a strange thrill - a thrill as of doing something forbidden.

He picked the book up and tried reading once more. Every now and then he found it necessary to adopt a new position, both because of the necessary awkwardness of his posture and because of the chill which constantly distracted his attention. It was no good! he decided at last. He lit a cigarette and lay back, his head propped only slightly by the pillow, and regarded the ceiling. It was a ceiling like any other ceiling, whitewashed and bare. For some minutes he amused himself by trying to distinguish any separate brushmarks which the decorator might have left as a testimony of his labours, but there were none - or at any rate, there were none that he could discern. The decorator had evidently been more accomplished than he had envisaged. Why was it, he wondered, that he possessed such an inordinate curiosity into the workings of things? Perhaps, he considered, it was the nature of his work, the necessity of examining seemingly trival details of information and discovering a significant pattern in them, which caused his mind to work overtime.

Sometimes he wondered if things might have been better if he had married. Marriage would perhaps have taken his mind off the peculiar abstractions which kept him from sleep. Moreover, he would have had a woman to look after those needs which so often called, unavailingly, for satisfaction.

And, ludicrous as the thought appeared, he would have someone to tuck the blankets into his bed as he liked it done.

But then he reflected, only he knew precisely how he liked it done. he alone could provide the comfort his body required.

And yet - and yet - this night he had completely forgotten to observe that necessary ritual. The blankets hung loose over the side of the bed, and he lay awake.

He stubbed the cigarette-butt out in the ash-tray and flicked the light out. Then, drawing the bedclothes close, he reached an arm out and tucked the blankets tight beneath him. At last! he thought. At last, sleep would come!

His body lay, close-wrapped cocoon-like beneath the bedclothes, in appearance a chrysalis from which the soul might depart, like a butterfly, into the realm of dreams.

Before falling asleep, he thought: please, God, don't let me have that nightmare again....

For the past month or so, his sleep had been ruined by the persistent recurrence of a nightmare from which he awoke, not sweating, not screaming, but frozen in cold, impotent terror.

The nightmare took this form.

He was lying in bed, warm and comfortable, and he wanted to turn over. He found he couldn't. At first, in his dream, he thought it was the tightness with which the bedclothes were secured that prevented him turning. But then he also discovered that he was unable to move his arms. An immediate panic seized him. He tried, desperately, to wake up, but the dream held him mercilessly in its spell.

As he struggled further a sense of total suffocation and paralysis filled every part of his being. With this atrophy of muscle and will a strange, almost alien idea became formulated in his mind. It seemed to him that he was no longer free. Sleep had deprived him of his free will, had robbed him of his peace of mind and enslaved him in a 'dream kingdom' without recall. He felt he was going mad, and that he was being constrained in a strait-jacket which, though it was not visible, was no less real for that. Every way he attempted to turn, the unseen force prevented him. He was totally powerless to act in accordance with his own volition, scarcely capable in effect, of even mentally framing such a volition.

And, tonight, the nightmare had returned.

Again, helpless, his body writhed in knots within the blankets upon the bed. Again the indescribable fury of frustration, again the agonised attempt to free himself from his predicament. Once more, sleep held him in a stranglehold which only the act of awakening could break: and, once more, the act remained independent of his resolution. It was, in a sense, as if fate, disconcerted or annoyed by his over-confident manipulations of events, had determined to show him beyond doubt or dispute, how impotent he really was.

In the dream, the strait-jacket tightened inexorably at his every movement. Still he gritted his teeth, still he struggled. I 'am' the master of my fate! his mind constantly re-iterated.

And meanwhile the jacket fastened tighter and tighter upon his every limb.

In the hospital demonstration room, the doctor and medical students gathered around the strait-jacketed patient. His exertions had now virtually ceased, and he lay prone and helpless, to one side of the floor in an untidy sprawl.

'This man', the doctor was saying, 'is as you are all doubtless aware by now, the victim of a fantastic delusion. During these periodic fits of insanity, he fully believes himself to be in the grip of an ordinary nightmare such as normal people experience during the time of sleep.'

'But how,' asked one of the first-year students slow to take the point, 'can he possibly imagine himself to be having a nightmare, when he is so obviously awake?'

The doctor gave him the brief, pitying look he reserved for use on such occasions.

'Do you wish me to give a lecture on the nature of imagination?' he asked. 'Or,' he added, with the faintest hint of deliberate irony, 'shall we ask our patient to elucidate?'

The question had its rhetorical effect. The student, clearly discomfited, blushed and offered no reply. The doctor looked around the assembly of students, a malicious gleam of triumph in his eye. With perfectly-conditioned conformity, they backed down before the challenge inherent in that gleam. None offered question or reply.

'Very well,' the doctor resumed. 'Since the meaning of this particular demonstration had not yet been assimilated to the degree I had hoped of all of you, permit me to remind you of certain basic, elementary facts which are essential to an understanding of the break-through which has been achieved in this case.

'The patient is a schizophrenic who is not responsible for his actions. He is not responsible for his actions, because he is not responsible for the thoughts which govern them. His thoughts, similarly, emanate from the condition of his mind, over which he patently has no control. Because his reason is impaired, he acts, as you will all be aware, irrationally, and to an extent where he constitutes a danger to himself and to others. His illness causes him constant hallucinations.

Consequently, while still awake - very much so! - in that strait-jacket, he is able to believe, beyond any question of doubt, from his own viewpoint at any rate, that he is at home in bed, and simply having a nightmare. Yet here is the interesting thing, the factor which, during the next few months, we intend to investigate more extensively than it has been investigated hitherto. His unconscious mind, which, of course, provides these protective fantasies, does not, or perhaps cannot - the question is one of interpretation - wholly reject contact with reality. And, so while he imagines he sleeps, the illusory nightmare he experiences features a strait-jacket which we know to be real.

'These are the simple facts, as we know them. But how, it may be asked, are these facts known? How is it possible to ascertain distinct realities when confronted with an unsifted, and apparently unsiftable, mass of fantasies and abstract speculations?

'It is in the answer to these questions that the magnitude of the breakthrough becomes apparent.

'Encephalography, of course, has long been established as an important, indeed integral function of medical science. But it has also long since been recognised - though it is a fact that tended to be obscured by the incapacity for vision of the medical authorities - that investigation of the brain-patterns, invaluable as it is for diagnosing and operating on a physical illness, is of strictly limited application. By this I mean, quite simply, that many, if not most, physical illnesses have an emotional origin; they are, in a word, psychosomatic. For an illness of this character, physical diagnosis and treatment is clearly inapposite. To treat an emotionally-induced ulcer with, for example, gastojejunostomy, is virtually analogeous to prescribing herbal remedies for lung cancer. The sole difference is that it works - or, rather, it appears to work. The fact is, of course, that a mere symptom has been removed. The real cause of the illness remains undiscovered. For some time the patient may indeed appear perfectly recovered. That is the illness's cunning: a danger signal has been received and, to avert the likelihood of detection, it decided to lie low. In time, the danger signal weakens and the illness, gained in caution, fixes on some other member of the body. All too often, the same depressing cycle continues without let or hindrance. Very often, of course, the ironic outcome is that the patient's constitution breaks down beneath the weight and number of the operations performed upon it and the patient dies of indirectly contributing physical causes.

'This situation was clearly unsatisfactory, to say the least.

'There was one solution which presented itself, but for many years it was regarded as belonging to the preserve of science fiction and fantasy writers rather than as having any connection with medical science. For serious scientific purposes it was wholly disregarded. That solution, gentlemen' - the doctor bowed his head the merest fraction as he spoke - 'is the drug whose effects upon our patient we have been witnessing these past few days. We shall go into its full composition and effect at some future date; for the present, to put it in its simplest terms, suffice it to say that the drug acts upon messages relayed between the higher and lower centres of the nervous system rather in the way that a prism acts upon a ray of sunlight. Just as the prism splits the single ray into broad bands of its component colours - the sunlight spectrum - so this drug breaks up messages to and from the brain into their constituent elements, differentiating physical and emotional elements in the process. A modified form of encephalograph translates these chemical processes into comprehensible symbols from

which the real nature of any supposedly physical illness may be diagnosed.

'As I have suggested, the actual 'modus operandi' of the drug - if you will forgive the expression - is considerably more complex than a brief explanation of its purpose and effect can hope to convey. Also, and I cannot emphasise this too strongly, it is fraught with peril. For, consider. The drug - and once more it will be appreciated that an over-simplification is inherent in the description - splits brain-messages into their constituent parts; yet, in so doing, it is incapable of determining precisely what is cause and what is effect, or, for that matter, what pertains to neither. Thus the possibility arises that a patient with a perfectly normal physical illness - and by 'normal', for the sake of clarification, I mean 'solely of physical causation' - may, under the influence of strong, if ephemeral, emotions, such as one might expect to meet in someone unaccustomed to hospital procedure and, consequently, unusually apprehensive of his personal welfare, be suspected of a neurotic condition which does not exist. I mean, of course, 'under the influence of strong emotions' and of the drug also. It is the drug which gives a direction to our theories, which invests our cabalistic encephalocalligraphy with four-dimensional meaning - the conscious interplay of mind and matter.

'But, as I have explained - sufficiently, I trust - the method of diagnosis which medical science has now evolved, although simple and, I would say, infallible, 'when employed by the trained expert', requires to be kept under strict control. We - by whom I mean the Hospital Management Board - have to ensure that adequate training facilities become available. For, unless a thorough groundwork in the use of the drug, the interpretation of its effects and the method of translating the symbols provided by the encephalocalligraph is instilled into those who are to do the initial research and, later, practise in this modern field of psychological medicine, the drug's properties may, inadvertently, be used for considerably more harm than good. That is all I have to say for now. The course proper commences next week.'

The doctor leading the way, the student body filed from the room, leaving the strait-jacketed patient still huddled in his foetal position on the floor.

In the control room the programmers scurried hither and thither under the anxious gaze of the project supervisor. It was his responsibility, after all, to ensure not only that the project was correctly handled at every stage, but also that the schedule was maintained. And this particular schedule had been severely disrupted. It was impossible, as yet, to ascertain precisely what had caused the disruption - or, rather, the disruptions, for there had been many. The usual stock reasons had been put forward, and the usual stock remedies which these suggested had been applied - but to no effect. If the fault lay in the computer, or in the manner in which the data had been programmed, then it was not apparent. This, the supervisor recognised, left only one possible solution. From the very beginning, he had entertained misgivings about the data which had been processed into the computer. It was, after all, one thing to feed the memory banks with information of a mathematical or technological nature and expect the computer to produce logically-determined answers to complex questions regarding that information. It was quite another to inject into those self-same banks a number of simulated quasi-human consciousnesses, all possessing, in addition to their false sense of personality, an illusion of physical bodies and features, of families, friends and colleagues, of a solid, tri-dimensional, ambient world, and to expect a logical outcome to ensue from these essentially unpredictable patterns. But if

those factors were self-evident to the supervisor, he well realised they would not be apparent to those responsible for the programme. It was a truism that boffins became so completely absorbed in their own pet projects they often neglected to consider the effects their work would have on other fields - the social implications of their experiments, for example. How he could tactfully - and successfully - indicate the shortcomings of the current programme, without attracting the hostility and scorn of his superiors on the project and, perhaps, jeopardising his prospects and his job, remained a nice problem.

Meanwhile, the programmers, unaware of the thoughts in the supervisor's mind - only too aware of the illogicality of the results which the computer persisted in producing, vaguely, yet strongly, conscious of the concern of the scientists whose concept was being so wantonly negatived - scurried about with all the pertinacity of stockbrokers' clerks hastening in constant pursuit of elusive bargains. The supervisor watched them intently, from time to time looking away to examine the schedule-sheet on the table beside him, all the while wondering what paradoxes the computer would produce next.

The computer, considering the year, was a large one; clearly, its size corresponded with the magnitude of the subject for whose elucidations it had been programmed. Within its coldly steel-cased interior, magnetic tapes revolved hypnotically upon their spindles and electronic hums and buzzes issued to the white-coated programmers outside, accompanied by a profusion of green, yellow and red lights and, most important of all, reams of result-sheets attesting to the tireless activity of the computer in producing whatever the data fed into it necessitated.

The supervisor loosened his tie and sat down on the bed, his forehead puckered in a frown of worry and bewilderment. For a week, at least, the computer had been throwing up results which admitted of no evident rational explanation. But the material it had produced that day had been startling beyond compare. The world of humanity and enlightenment which the computer had, ostensibly, been programmed to adduce had turned in upon itself. In its place, there remained an amorphous and anarchic world of seemingly-unrelated symbols and images which, perhaps, no fresh computer programme would be adequate to resolve.

Slowly, he undressed and got into bed. Using one hand only, he tucked in the bedclothes as tightly as possible. Now, save for one small area of doubt in a dark hinterland between the conscious and the subconscious mind, he felt comfortable and secure.

Stretching an arm out, he switched the light off and settled his head on the pillow, waiting without emotion to meet whatever the night might bring.

SCIENCE FICTION REVIEW was one of the best of the american sf fanzines; ironically, its very success obliged its editor, Richard Geis, to put an end to it before it ran away with him. From it we take John Boardman's valuable rundown on a set of stories of rare vintage.

the warlords of krishna

by John Boardman

My continuous interest in science-fiction began with the reading of the November 1949 issue of 'Astounding', now 'Analog' which some older readers may remember. This was a good issue with which to start.

About a year earlier a reader named Richard Hoen had written in to predict the contents of the November 1949 issue, naming both authors and their stories.

Editor John W. Campbell, now a minor figure in the Gobineau Revival, obliged Hoen by rounding up most of the predicted stories.

This made the issue an all star anthology, with fiction by Heinlein, Asimov, del Rey, Sturgeon, and van Vogt. But despite this competition the story that stuck in my mind as the most vividly told was a short story by L. Sprague de Camp entitled 'Finished.'

It related the adventures of two Earthmen in foiling the attempts by the natives of the planet with a 15th-century technology to smuggle scientific devices and texts through a technological blockade imposed by Earth.

I quickly sought out an earlier work in this series, de Camp's novel, 'The Queen of Zamba', which had been serialized in the August and September issues. (This later appeared as 'Cosmic Manhunt' in half of an Ace Double.)

The novel lived up to the promise of the short story, and described a planet full of feudal tyrants, six-legged monsters, beautiful princesses, and other opportunities for adventure.

In fact, de Camp had created not just a planet, but a complete ambiance. Inspired by the Burroughs stories set on 'Barsoom' (roughly, the Mars described in Percival Lowell's popularized writings on astronomy) he had created on which stray Earthmen could have adventures full of swordplay and other Barsoomian derring-do.

By analogy with our own planetary system, whose components have names from Greco-Roman mythology, Krishna is located in a solar system whose planets Earthmen have named after the Hindu gods. Krishna is Earth-like, while Vishnu is the steaming jungle that Venus was once imagined to be, and Ganesha resembles Mars.

'In The Queen of Zamba' these planets circle Alpha Centauri, but later de Camp moved them to Tau Ceti. This was a sensible choice. Alpha Centauri is a triple star system in which planets, if possible at all, would have weird orbits. Tau Ceti is a single orange star, about 12 light years from the Sun and with about 45% of its luminosity. The author further assumes that by the 22nd century, in which these stories take place, Earth will have a single planetary federal government and that Brazil will be the leading nation within it. As a consequence, Portuguese is a major world language, and most of the personnel of the publicly owned space travel corporation Viagens Interplanetarias happen to be Brazilians.

Other technologically sophisticated species are also exploring space. The dinosaurian Osirians, the androgynous monkey-rats of Thoth, and the elephantine Isidians come from planets of Procyon which have been named by Earthmen after Egyptian deities.

The most technologically advanced inhabitants of Krishna live around the Triple Seas region in their planets northern hemisphere. Unlike Earth, the surface of Krishna is mostly land, which means that it must be mostly desert.

The planet has a lighter gravity than Earth's, meaning that Earthmen are relatively stronger and more agile here than at home. The lighter gravity also maked the natives taller and rangier.

The Krishnans are so nearly human that Earthmen can disguise themselves and go travelling 'incognito'. Krishnans have green hair, and a slightly greenish cast to their skins, though their blood is brown. Olfactory antennas rise from their brows, and their ears are pointed. Like all the four-limbed mammals of their planet, they are oviparous. There are also numerous six-limbed creatures which give live birth; these range from the equine aya which serves as the most common means of transportation, to such fearsome carnivores as the yeki (a mink the size of a tiger), the reptilian shan, and the shan's polar cousin the pudamel. Some of the six-leggers have modified one pair of legs into wings, and occupy the ecological niche that belongs here to birds.

When the Earthmen contact Krishna and establish an enclave at Novorecife, they and the other space-travelling species realize that precipatating Krishna from the Dark Age to the Space Age will not only drastically upset the planet's social and economic structure but will also turn loose in space a species with the outlook of a gang of medieval knights and mercenaries. They therefore establish and rigorously enforce a technological blockade, letting into Krishna only such innovations as printing. A few missionaries get through, too — spreading such post-World War III faiths as Cosmotheism and Ecumenical Monotheism as well as Christianity and its offshoots. (In one story appears briefly a Krishnan devotee of a cult of Earthly origin called 'Krishnan Science'.)

The technological blockade neatly answers a question which de Camp must have posed to himself upon beginning his pastiche of Barsoom. Insofar as Burroughs thought seriously about science, he seems to have been anti-scientific, but de Camp's background as an engineer rules this out.

(De Camp, virtually alone among science-fiction authors, has never written a story in which anybody travels faster than light. Space travellers' life-spans are extended in strict conformity with the Lorenz transformation and the Fitzgerald effect.)

So, since travel to Krishna in a trance state is also ruled out, how else do you get somebody to a distant planet by space ship and then have him leave space age technology behind, arm himself with a sword, and go out on aya-back in a medieval culture?

Not only is Krishna technologically consistent, it is sociologically reasonable. Many science-fiction authors feel that their responsibility to the 'science' half of the genre's name is satisfied if they explain along proper scientific lines how the spaceship or the mutation operates. But 'science' also includes the social sciences.

The author who shows chattel slavery existing in an atomic-powered civilization, or gives radium-powered rifles to Tharks and then has them fight their foes with swords, makes as gross a blunder as his colleague who introduces flying

monsters in blatant violation of the square-cube law.

But the societies of the Varasto-speaking peoples around Novorecife are consistent with a late-medieval technology. To the North lies the Empire of Gozashtand, with appropriate feudal subdivisions and internal tensions.

On the southern side of the Pichide River is the Republic of Mikardand, ruled by the knightly Order of Qarar — and here de Camp avenges the millions of students who have been required to study the sophistries of Plato and act as if they represented great philosophy. For the Order of Qarar is nothing but the Guardians of Plato's Republic, and Mikardand staggers along about as one might expect, once it is brought out of the pages of philosophy and into the realm of real people.

Other forms of government are also examined with the cynical eye of a man who has seen and been unmoved by all the fine new experiments in government which have characterized our century.

Madjbur, which is probably where the author would settle down if he had to live on his own planet, is a mercantile Free City like Venice or Novgorod.

Qirib is a matriarchy with customs straight out of 'The Golden Bough' — until a wandering Earthman meets up with the heiress apparent in 'The Hand of Zei'.

Balhib has even stranger marriage customs: a union exists until terminated by mutual agreement, but a woman lives not with her mate but with her brother, who brings up her children. (Something of the sort has been observed in the South Pacific.)

As with government, so with religion. Gozashtand's state religion is astrology — until the Earthmen upset things by informing the Krishnans what the planets really are.

The Qiribuma, of course, worship a mother goddess, while the mercantile Majburuma and the warlike folk of Balhib have appropriate tutelary deities.

Further off, the Krishnans of the ice-bound south polar regions worship geometrical figures.

Earthly sects are also active; the Dour of Suria and the Kamuran of Dhaukla are converted to different branches of Christianity, force their people to do likewise, and wind up in a holy war that eventually leads to the conquest of both nations by a third power that remains in blissful paganism.

De Camp has created detailed and consistent societies against which his Earthmen can act and react.

And he brings a most diverse lot of Earthmen to Krishna — detectives in search of stolen girls or guns ('The Queen of Zamba'), or confidence men out to swindle the Platonic Guardians of Mikardand ("Perpetual Motion", 'Future', August 1950 & the anthology 'The Continent Makers'), the technological blockade ("Finished"), or the warrior race of Balhib ('The Tower of Zanid'), or even explorers on legitimate business ('The Hand of Zei').

Most of these tales (four novels, two novellas, and nine short stories) have been published two or even three times. In the course of these appearances, a few things have been changed in a curious fashion.

For example, 'The Queen of Zamba' has two detectives working in tandem Victor Hasselborg, searching for the missing daughter of a Syrian industrialist, and Chuen Ligo-dz, looking for some stolen guns with which the daughter's partner in crime hopes to conquer Gozashtand. By the time Ace got to the book, Chuen Ligo-dz of Gwailin becomes K. Yano of Nafa, Okinawa — probably because China and things Chinese had been rendered less than popular by the

outbreak of the Korean War.

Other emendations have been made to cut out expressions of the author's erudition, which editors may have considered unnecessary to the plots and boring to the readers.

Things cropped for these reasons include explanations of Qiribo philology, the glorious military history of Balhib, and scandalous episodes out of the past of Anthony Fallon, a remittance man on Krishna who hatched 'The Queen of Zamba' scheme and was then thriftily employed by de Camp some years later as the protagonist of 'The Tower of Zanid'.

This last novel has suffered most seriously from cutting, and the reader is strongly urged to seek out the original magazine publication of the serial rather than read the gutted book versions of the tale.

Some publishers still seem to believe that science fiction is a chiefly juvenile market. This means that, while authors may describe in great detail sword-fights, battles, tortures, or how to run a grift, sexual activity gets a blue pencil.

In the Tower of Zanid which gives its name to the last Krishna novel, a slave-girl is first raped and then tortured to death as part of a religious rite. The rite is censored in the book version so that the sex is left out, but the torture is apparently still considered appropriate for young minds. (Also, in the magazine serial the ceremony was called a 'Mass.' That went, too.)

Although 'The Rogue Queen' was the greater critical and financial success, I prefer 'The Hand of Zei'. Though thoroughly justifying the use of the term 'science-fiction', this novel was a blood-and-thunder adventure in the grand tradition. Since nothing like the mythical 'Sargasso Sea' exists on Earth, de Camp has located this tangle of seaweed in Krishna's largest ocean, peopled its derelict ships with pirates and drug-runners, and then obligates an Earthman of shy and retiring disposition to enter it, rescue a compatriot, stop the drug racket, and get 50,000 meters of film depicting all this while using a camera disguised as a ring to get around the purpose of the technological blockade. The hero, a writer named Barnevelt, not only accomplishes these wonders but also solves most of his own psychological problems including a difficulty in dealing with women.

As for the women — well, there are frequent liaisons between Earthmen and Krishnan women, and even one of the opposite pairing in 'The Virgin of Zesh'. But, unlike Burroughs, de Camp knows enough biology to keep from introducing hybrids into the stories.

At this point one might cavil about the possibility of mutually pleasurable sexual activity between the genera 'Homo' and 'Krishnanthropus'.

The Krishnans lay eggs.

This means that their young cannot possibly be as well-developed on hatching as earthly young are at birth, since anything in an egg is limited to the contents of the egg for nourishment. Also, since the egg is less flexible than a human fetus at term, the passage through which it emerges would have to be larger. I should think that any sexual commerce between Earthmen and Krishnan women would give rise to unflattering remarks about toothpicks, feathers, or matchsticks.

In an article in Normal Metcalf's now-defunct fanzine, 'New Frontiers' (Dec. 1959), de Camp discusses the background of the 'Viagens Interplanetarias' stories. (The article includes a map of Krishna, which will shortly be published in the anthology of fantasy maps which J.B. Post is now compiling.) In this article, the author states that further adventures on Krishna are unlikely. Though he

enjoyed doing them, and pure adventure science-fiction is now more popular than it was when they were written, magazine rates for this kind of fiction are too low to make it worthwhile.

Table I. INHABITED PLANETS OF THE 'VIAGENS INTERPLANETARIAS' STORIES

PRIMARY	PLANET	INHABITANTS
Sun	Earth	Earthmen
	Mars	Insect-like beings mentioned only peripherally in VI stories.
Tau Ceti	Vishnu	Romeli—six-legged ape-like tribesmen. Dzleri—centauroid tribesmen at almost continual war with Romeli.
	Krishna	Krishnans as described; also more primitive long-tailed and short-tailed species in remote or inhospitable regions.
	Ganesha	No native sentient beings mentioned.
	Indra	No native sentient beings mentioned.
Procyon	Osiris	Sha'akhla — intelligent tyrannosaur-like beings some 7 feet tall with high-strung emotions, reptilian powers of pseudo-hypnosis, and a capitalist economy that would warm Ayn Rand's heart.
	Thoth	Small, agile 7-fingered 'monkey-rats' with well-deserved reputations as sharp dealers. Since Thoth is mostly ocean, they are superb swimmers.
	Isis	Elephant-like beings with trunks but no hands.
Sirius	Sirius IX	Ant-like creatures with a communistic economy.
not named, unless perhaps Epsilon Eridani	Thor	'Ostrich-men' with foghorn voices One continent was colonized by Earthmen, a source of much Thorian annoyance.
Lalande 21185	Ormazd	Avtini—tall, pink-skinned humanoids who mature sexually only on a meat diet. Arshuul—a species closely related to the Avtini and at war with them.

Table II. 'VIAGENS INTERPLANETARIAS' STORIES CLASSIFIED BY PLANET OF LOCATION

PLANET	TITLE & MAGAZINE PUBLICATION (if any)	BOOK PUBLICATION (if any)	FICTIVE DATE(S)
Earth	'The Inspector's Teeth', 'Astounding', Apr. 1950	'The Continent Makers' (Twayne, 1953)	2054–88
	'The Colorful Character', 'Thrilling Wonder', Dec. 1949	'Spraque de Camp's New Anthology' (Hamilton)	2117
	'The Continent Makers', 'Thrilling Wonder', Apr. 1951	'The Continent Makers'	2153
Krishna	'Finished', 'Astounding', Nov. 1949	'The Continent Makers'	2114-40
	'Getaway on Krishna,' 'Ten Story Fantasy' Spring, 1951	(as 'Calories') 'Sprague de Camp's New Anthology'	2122
	'Perpetual Motion', 'Future', Aug. 1950	'The Continent Makers'	2137
	'The Queen of Zamba', 'Astounding', Aug.-Sept. 1949	(as 'Cosmic Manhunt') Ace, 1954)	2138
	'The Hand of Zei', 'Astounding', Oct. 1950 Jan. 1951	(as 'The Search for Zei and The Hand of Zei', Bouregy, & Ace 1962 & 1963)	2143
	'The Virgin of Zesh,' 'Thrilling Wonder', Feb. 1953		2150
	'The Tower of Zanid', 'Science Fiction Stories', May-Aug. 1958	'The Tower of Zanid' (Bouregy, 1958, & Airmont, 1963)	2168
Vishnu	'The Galton Whistle', 'Future', July 1951	'The Continent Makers'	2117
	'The Animal Cracker Plot', 'Astounding', July 1949	'The Continent Makers'	2120
Osiris	'Summer Wear', 'Startling', May 1950	'The Continent Makers'	2115
	'Git Along' 'Astounding', Aug. 1950	'The Continent Makers'	2147
Ormazd		'The Rogue Queen' (Doubleday, 1951; Dell, 1951)	?

Larry 'Ringworld' Niven is known, not only for the hard-line nature of his stories and novels, but also for the intricacy of his plots. You might perhaps have thought this was due to some natural perversity on his part. If so, you would do well to read with care this account of what happens when a writer becomes the effect of his own causation. It is reprinted from the one and only SPECULATION, Britain's leading sf fan magazine.

my world, and welcome to it

by Larry Niven

Why do Outsiders follow starseeds? Nobody knows, though I heard some brilliantly unlikely answers during a 'Mitsfs' dinner in Boston. There was a recognised psi power called Plateau Eyes, held by some of the descendants of Matt Keller of 'A Gift From Earth'. Never used. There's a lost slowboat full of lost colonists in frozen sleep, a ship falling well beyond Sirius at well below lightspeed. I never got them rescued. There are the tnuctipun. It's hard to believe that anything that vicious could have been wiped out by anything as stupid as the Slavers.

The problem of the puppeteer world almost joined that group. I figured out where the puppeteer world was and is (two different answers), years ago. I couldn't work up a story around it; which was unfair, because I 'had' raised the problem. Luckily I was able to use it in 'Ringworld'.

Which brings us back to the restrictions.

Second place for the most restrictive assumption in the series, goes to the Slaver stasis field in 'World of Ptavvs'. The stasis field is a closed region, bounded by a conducting surface, in which time passes very slowly or not at all. Simple, right?

And useful! Tom Digby has suggested that a research station can be set up on the airless antimatter planet Swoosh, starting with a metal floor enclosed by a stasis field, and building on that. If a wire can carry a stasis field, then an arbitrarily thin wire can be infinitely rigid.

From a writer's viewpoint, the stasis field is 'too' useful. For every story to be set subsequent to the year 2106, I must consider whether the basic problem can be solved by using a Slaver stasis field. If it can, I don't have a story. Most of my stories have a problem-solution framework.

Even here, it's possible to use the restriction. A spherical stasis field would look just like a small sphere of Neutronium to most instruments. But if a ship pulls alongside a ten foot sphere of Neutronium to pick it up, that ship will be flattened into a thin film. See 'There is a Tide. . . .'

Now, look where we are by 2809 AD, at the start of 'Ringworld'.

We have 'two' kinds of unreasonably strong, unreasonably durable engineering materials: metals protected by a stasis field, and the General Products hulls. My characters have to waste time considering both possibilities as being used for the framework of the Ringworld. But asteroid punctures will form part of the plot, so I must introduce a 'third' unreasonably strong material.

We have an assumed origin of humanity. Life started on Earth because the oceans were seeded with edible yeast by the Slavers. (World of Ptavvs). But humanity evolved from the breeder stage of the Pak species, which originated in

the galactic core, as shown in 'The Adults'. So where did the Ringworld humans come from?

They could have evolved separately, but it seems unlikely.

Probably they evolved the same way we did, from another group of stranded Pak. But I certainly don't want to open THAT can of worms, especially since Louis Wu doesn't have access to the information that would tell him all this.

So I've got to dream up another origin for the Ringworld humans, and not mention the Pak at all. Under the known space assumptions, Louis Wu's perfectly reasonable assumption (Earth was settled from the Ringworld) is wrong, and I've got to leave it that way.

The Core explosion – the fact that the galactic core has exploded in a kind of chain reaction of supernovae – is important, because it explains how the puppeteers got out there near the Ringworld in the first place. I didn't need it to motivate Louis Wu into going, but I might as well use it for that, because I'm trapped into explaining it anyway. But, damn it! How many times can I describe the Core explosion before it gets boring? One more time would do it, I think.

The puppeteer planet. Now, I had been planning for years to reveal the secret of the puppeteer planet somewhere. A flying fleet of worlds seemed perfect to build up the reader's imagination, so that he would have less trouble grasping the sheer immensity of the Ringworld structure. But, who knows? I might have found a better way, if the problem of the puppeteer world hadn't been sitting there looking at me for two years.

All of that accumulated previous to Ringworld. Where would I be if I tried to write a sequel to 'Ringworld'?

I'd have all of the previous assumptions, plus the fleet of puppeteer worlds, plus the existence of the Ringworld two hundred light years outside human space (enough to give any civilisation an inferiority complex), plus the probably concealed fact that puppeteers have been breeding men and kzinti for their own purposes, 'with mixed success', plus hand-carried tasps raising havoc with human society, plus – and this is the kicker – plus the Teela Brown gene.

It's just too much clock winding. I've got to deal with all of that, in any story I write, even if it's only in my own head. More likely I'll have to explain it all, somewhere in the story, without losing the reader's attention. I'd never be able to write something as short as 'There Is a Tide' or 'At The Core'. Traditionally, stories in a series tend to get long and longer, without limit.

But first prize for the most restrictive assumption goes to the Teela Brown gene. The following is quoted from 'The Elephant No.5', Cory Panshin's fanzine in Apa Nesfa, 11/22/1970.

"I can't help wondering if there is still time for it to be stopped. There are several thousand other humans with Teela's luck. If humanity as a whole does not continue to breed for luck, these several thousand might still mate together and produce a separate race of gods. These will almost certainly become immortal, through a drug obtained from the Ringworlders. In time they will learn how to use their powers, if they have not already done so. Teela's luck controlled her, she did not control it. It was tied to her unconscious needs and so was merely destructive. If she could have tied it to her conscious desires, it would have been devastating.

The question that keeps intruding itself is one of exactly what luck is. Loosely, it means having good things happen to you rather than bad. But who decides what is good? In Ringworld, luck seems to work towards the fundamen-

tal human needs: survival, reproduction, development of the individual personality. It might be possible to think of other imperatives, but these three are sufficient to give rise to a multitude of possibilities.

Survival, for example. Does the lucky man inevitably grow so rich and powerful that nothing can ever hurt him? Or would he, secure from birth, be equally content to travel through life as a beggar, 'knowing' there will always be sufficient food and a warm place to sleep? Or development of the personality. To function most efficiently and avoid being hurt, the lucky man must be as free of neurosis as a scientologist's dream and as serene as a Buddha. Freed from desires, would he become the supremely effective man, or simply withdraw into philosophical contemplation? And reproduction. Would the compulsions of luck goad him to spread his seed as widely as possible, or to interbreed so as to intensify the luck in the next generation? And will the universe of these beings go all Phil-Dick — schizo — mind destroying, or will it become personal, benign, compassionate?"

Now I thought of all these possibilities, honest I did. And they are all valid! Dear friends and perfect strangers have offered other suggestions too. Don Cochrane suggests that with her luck, Teela doesn't 'need' character development, or even human intelligence, and thus doesn't need the Ringworld. Someone in the audience (this article is derived from a speech made at the Presicon) suggested that lucky competition would be unlucky for Teela Brown. This suggests both that Teela will never meet another lucky one, and that she will not have lucky children; either the gene is recessive, or she's sterile.

The problem is that I've got to think like a philosopher 'and a novelist'. To a novelist, the Teela mutation is no good.

Who would I write about, in a universe of Teela Browns? The teelas themselves? But everything is coming up roses for the teelas; there is no tension; the only question is 'how' everything will come out for the best. A Georgette Heyer universe! Cory is a Georgette Heyer fan; I am not. I can't write unless I am permitted an unhappy ending. Furthermore, the teelas are not particularly human. Like the puppeteer world, their environment contains no sharp edges. They are hard to identify with.

There is only one way to write about Teela Brown. Show her in action, let the reader wonder what's going on, then show him what she is. Then 'drop her'.

I could write of the non-teelas, the ones who didn't have the gene. But the luck of the teelas would affect them too. Else they would be angry people, rebellious, envious. Perhaps they would rise in their wrath to destroy the lucky ones — and fail, or succeed only to find that they have killed a lot of non-teelas, while the luck of the teelas has failed to operate.

I could, but I won't. There's too much author control. The question that keeps intruding itself is one of exactly what luck is. . . . But who decides what is good? I do! Am I not the author? And there's just no way to hide it. The luck that protects Teela Brown boils down to Larry Niven. When the reader knows what she is, I'm finished with Teela Brown. Suspense and Teela Brown are incompatible.

As of this writing, the known space series is virtually complete. I plan to write one more novel within the history: 'Protector', starting in 2121 AD. But the series would be complete without 'Protector'.

Why would anyone want to end a successful series? All that rich back-ground, all the interlocking assumptions, the developing alien species, the complex web

of politics, the strange worlds!

Why? See Isaac Asimov's article, ***Ya Gotta Have A Good Foundation***, in which he explains why he dropped 'his'. My answers are about the same. That rich background is based on a growing set of assumptions, and the assumptions are growing restrictive.

Just so we'll know what we're talking about, I append a short list of the stories in the series. I think this list is complete. Those of you who haven't ready any of them will find the rest of this article incomprehensible.

Including 'Protector', the known space series will include about 470,000 words when finished.

Now, most of the assumptions in the series were made for the sake of some specific story.

For instance: magic. 'Not Long Before The End' fits the rest of the series, because it assumes that any world's magic gets used up by the inhabitants. Thus, the dragons died because their metabolism was based on magic. The gods were more powerful, needed magic more, and died earlier. These days there is no magic at all.

But to be really consistent I should assume that magic works on all uninhabited worlds, from the Moon outward. I haven't used that premise, and I won't.

Again, there was a mediocre short story, 'The Coldest Place'. It was based on Mercury, on the frigid back. Two months before it was published, and two months after I cashed the check, some Russian scientists showed that Mercury has a thin hydrogen atmosphere derived from the solar wind. Later it developed that the planet rotates. My background was ruined.

But I re-used the main characters in 'Becalmed In Hell", which I want in the Known Space series. Therefore two of the assumptions basic to the Known Space series are that Mercury has no atmosphere and does not rotate.

THE KNOWN SPACE SERIES

1)	'Not Long Before The End'	11,000 BC	
2)	'The Deadlier Weapon'	1970 AD	
3)	'The Coldest Place'	1978 "	(obsolete)
4)	'Becalmed In Hell'	1982 "	
5)	'Eye Of An Octopus'	1984 "	
6)	'Wait It Out'	1989 "	
7)	'How The Heroes Die'	1999 "	
7½)	'Cloak of Anarchy'	2020 "	
8)	'World of Ptavvs'	1.5×10^9 BC to 2106 AD	
9)	'At The Bottom of a Hole'	2112 AD	
10)	'Death By Ecstacy'	2120 "	
11)	'Protector'* (includes The Adults)	2121 "	- onward - (Not yet written)
12)	'Intent to Deceive'	2122 "	
13)	'The Warriors'	2440 "	
14)	'A Gift From Earth'	2450 "	
15)	'The Ethics of Madness'	2543 "	
16)	'Neutron Star'	2603 "	
17)	'A Relic of Empire'	2603 "	
18)	'At The Core'	2605 "	
19)	'The Soft Weapon'	2607 "	
20)	'Flatlander'	2608 "	

21)	'The Handicapped'	2611	"
22)	'Grendel'	2612	"
23)	'There Is A Tide'	2789	"
24)	'Ringworld'	2809	"

Now move forward a bit and consider the General Products hull. I needed a spacecraft hull that was by definition indestructible and impenetrable, to formulate the thought-problem in 'Neutron Star'. To continue to write stories in that particular piece of future, I had to keep the GP hull. I got good use out of it in 'Flatlander', but didn't really need it. It was a definite handicap in 'Ringworld', making it very difficult to arrange a crash landing. In some of the other stories in that series I just went ahead and used ships without GP hulls. I'd had the forethought to make the GP hull very expensive.

Then there's the Grog problem, which I touched on in 'Handicap' and never touched again. A friend of mine, Dan Alderson, did a masterful analysis of the Grog problem, four pages single-spaced, using 'all' of the assumptions in the known space series including Brennan, the human-stage protector in 'The Adults'. The problem with Brennan is that he would solve the Grog problem by exterminating the Grogs, immediately, totally; he would not even consider a less drastic solution. Dan's optimum solution was to fly a bandersnatch from Jinx to Down and leave it as a kind of guardian. Bandersnatchi were shown to be immune to the Slaver power in 'World of Ptavvs', and the Grogs are Slaver-descended. If a Grog got out of line with a bandersnatch, she would be run over. She could not even dodge.

I've been thinking of 'The Adults' as outside the known space series. Brennan or any other protector would declare instant war on any of the alien intelligences of known space. A protector could do no less.

Mind you, the buildup of restrictive assumptions hasn't been all bad. The universe of discourse gets bigger, richer, more complex with each story, which is why 'anyone' writes a future history, from Heinlein on. I used many individual ideas over and over.

The kzinti were left over from an early story called 'The Warriors'. I like the way they developed as they went along.

Originally I built up the extinct Slaver Empire of 'World of Ptavvs' in order to define the characters of Kzanol the thrint and Larry Greenberg the temporary thrint. But I liked some of the products of tnuctip biological engineering so much that I kept them.

For example, 'A Relic of Empire' started with a vivid mental picture: a gang of evildoers unwittingly using stage tree logs to make a bonfire. Stage trees are organically grown solid fuel rockets. That story was the first link between the 'World of Ptavvs' universe and the Beowulf Shaeffer universe.

For years I wanted to use a field of mutated tnuctip sunflowers. They would behave in concert like an enormous solar mirror, and would be very dangerous: dangerous enough to take over any terrestrial world. I tried to use them in one unsuccessful story, then got double use of them in 'Ringworld'. They were a clue to the nature of Teela Brown's luck, and they helped to show the size of the Ringworld structure. Granted that they will eventually take over the entire structure; but on a structure that size, 'eventually' can mean hundreds of millions of years!

I needed the bandersnatchi as an example of a sentient being who can't make or use tools, for 'Handicap'.

There were things I was going to refuse, but never did.

To write stories subsequent to 'Ringworld', I would have to fall back on environments the teelas had not yet reached. Under the circumstances, that would be a copout. The Teela mutation is the biggest thing to hit mankind since a plains ape picked up a broken antelope's thighbone.

What about writing stories into the middle of the known space series? Now that would work, and I plan to do it once. It should be the last novel in the history of known space, and it starts around 2121 AD.

'The Adults' began with Phssthpok, a Pak, a member of a race ancestral to Man, and superior in many ways. That story ended with Brennan, a human analogue of the protector-stage Pak, vastly changed from the original Belter Jack Brennan.

I plan to rewrite that story, making it the first half of the novel 'Protector'. The rest of it would be the story of the protector-stage Brennan-monster. Thus far my notes deal only with Kobold, Brennan's refuge beyond Pluto, where he has been using artificial gravity as an art form.

Now look where my restrictions fall.

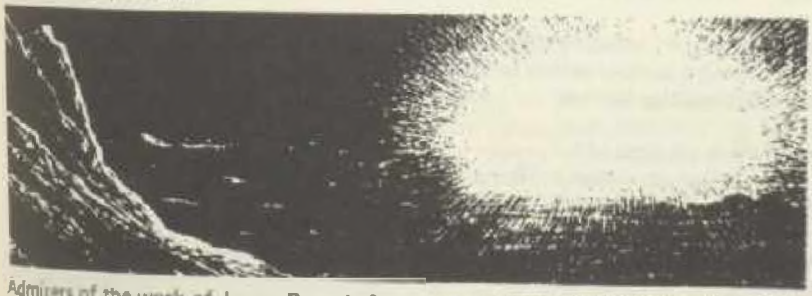
1) Brennan must die or leave human space, previous to 2440 AD. Otherwise he would do his damndest to exterminate the kzinti. Under the circumstance he would probably be successful — and we know he wasn't.

2) If Brennan leaves human space, I must force him to avoid certain regions. If he found out about Grogs or bandersnatchi or damn near everything intelligent and nonhuman, he would try to exterminate them. This is instinctive. Brennan has no control over it.

3) Brennan may have the wit not to interfere with humanity, human society, human aspirations. This is lucky for me, the author. But there are things he could not leave alone. He would move immediately to eliminate the organ bank problem, which for Brennan means going into the prosthetics business.

4) Brennan would never leave human space without seeing to it that there is a Protector in case of need. So where was he during the kzinti invasion? And how the hell am I going to get around that?

— See the problem?



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James Blish, Treetops, Woodlands Road, Harpsden (Henley), Oxon.

USA residents, $5 to:

Paul Spencer, 665 Lotus Avenue, Oradell, NJ 07645, USA

This article is intended both for those who understand the workings of computers, and those who do not. To the first we will say that it has been checked and approved by Dr Chris Evans (of 'Sleep, Dreams and Computers' fame) no less; to the second, that, no matter your degree of ignorance in this area, you should read it through to the end. Your time will not have been wasted

preliminary notes on an axiom system for plot

by Doug Letts

1. An axiom system for ***plot (AS-plot)*** is likely to involve the description of the ***relationships*** between ***plot-elements (PE)*** by means of a ***symbolic language (SL).*** For this purpose we might take a modern symbolic language, such as Carnap's ***Simple Language A (SL-A)*** as given in his 'Introduction to Symbolic Logic and its Applications', Dover S453, 1958., and use this SL-A to describe the instantaneous relationships between PE's. The PE's themselves are described - or at least some attempt will be made! - in terms of ***micro-plot elements (MPE's).*** The elements of MPE's are the things, real and imagined, of the universe. That word 'universe' is not to be confused with the ***universe of a plot***, of which AS-plot predicates the derivation of something of psychological significance, ***a plot.***
2. MPE's are ***things*** like 'people','places','machines' - represented symbolically by ***thing names*** or convenient abbreviations - the individual constants of SL-A; and ***one-place descriptive predicates*** like 'blue', 'made of titanium', etc. One-place or ***monadic*** predicates are hardly sufficient however, so we extend our descriptions to include ***two-place*** or ***dyadic*** predicates, generally used as ***relational predicates.*** Some dyadic predicates may be extended versions of monadic predicates:

S(a) a is standing
S(a,b) a and b are standing together

This is of help in reducing the number of symbols in the SL, but we are faced with a massive symbolisation program for representing the many possible two-place relationships such as

Fr(a,b) a is a friend of b
Gr(a,b) a is greater than b (in the domain of natural numbers)
Fa(a,b) a is the father of b

Three-place and ***n-place*** predicates are also required. A simple three-place predicate is:

Br(a,b,c) a,b and c are brothers

In this case, a satisfactory symbolisation is obtained by using the ***conjunction*** of two two-place predicates:

Br(a,b). Br(b,c)

(From this conjunction and the property of this particular relational predicate we can infer 'Br(a,c)', but this takes us outside the discussion of AS-plot.)

3. It is now possible to attempt the description of some PE's in terms of MPE's and the SL-A. This could be done by asserting that one or more PE's is true, e.g. "The inhabitants of Ganymede are the traditional enemies of the inhabitants of Callisto".

"XerX is the emperor of Europa".

"No Europan is welcome on Amalthea".

Translated into SL-A these assertions are the ***factually true (F-true)*** sentences or F-true PE's for investigation under AS-plot:

(x) (y) (G(x). Inh (x). C(y). Inh (y). Tre (x,y))

(x) (XerX(x) ⊃ Emp(x,eur))

(u) (t) (E(u). Inh (u) ⊃ W(u,t) A(t). Inh (t))

To get the story moving, as they say, it is of course necessary to specify that there is at least one inhabitant of Europa with the name Xerx:

(∃x) (XerX (x). Inh (x). E(x))

In a similar fashion, the other two PE's, since they contain ***universal quantifiers***, may require further qualification. I will by-pass that problem for the moment.

4. PE's that are ***factually false (F-false)*** are of course written as F-true sentences prefixed by a negation sign. ***Indeterminate*** sentences and sentences having only a ***probability*** of truth or falsity may be written as F-true sentences incorporating a ***determinating term*** which may be resolved by dice-throwing, or some other aleatory method, where such a term cannot be logically deduced (in respect of truth or falsity) from other F-true PE's. For example, let us suppose that "Xorxa is the daughter of XorX", we may incorporate this into the set of PE's for investigation by the device of conjunction with an indeterminate term 'Ind(n)', where 'n' is a reference number identifying an aleatory process or simply a reminder that the sentence requires qualification:

Ind (43). [(x) (y) (Xorxa (y) ⊃ XorX(x). Dau (y,x))]

The diligent reader will note that this sentence says 'all Xorxa's are the daughters of XorX's, subject to the 43rd indeterminate factor being true' and that the use of 'x' and 'y' as universal quantifiers has indirectly related her existence to the existence of Callistons and the Europan Emperor himself. However, by leaving the sentence in such an imprecise form we allow the possibility of she-kittens sired by the old tom-cat 'XorX' to have the same name as the emperor's daughter. (A she-cat can look at an emperor, as they say on Io.)

5. So far, all the PE's formulated in this note may be considered as suitable descriptions of a particular instant in the history of Jupiter's satellites, or at most, some short span of that chronicle. In a special sense, Xorxa is the daughter of XorX ***before*** a girl-child is born to the emperor, and, alas, long after the aged benefactress is dead. However, (setting aside for the moment the possibility of time-travel within her own lifetime.) it is necessary to qualify ***all*** the F-true sentences of PE's by a ***time-dependent*** term. The aleatory or indeterminate sentences will require similar qualification just in case they come out true. A basic require-

ment may be the conjunction of an existential qualification that is dependent upon the age of a man, or the attachment of an existential qualification to the potable quality of a demi-litre of Ganymede *Yuch* bought in 3754.1. Two possibilities are open to us, the ***fixed-point*** and the ***floating-point*** time-dependent qualifier.

6. For the purposes of computer programming, it may be convenient to have ***all*** the sentences of the PE-system cast into a ***standard format***:

$S_n \equiv$ (LPE-n), (Ind-n), (Tu-n, T1-n),(Td-n)

- which is read as: "The sentence number n is the conjunction of the nth logical expression of a plot-element, the nth indeterminate factor and two time dependent qualifiers, the nth fixed-point qualifier and the nth floating point qualifier". In the fixed-point system 'Tu-n' and 'T1-n' are upper and lower bounds in ***plot-time ('Tp')*** and the expression '(Tu-n, T1-n) is interpreted as 'true' in case $Tu\text{-}n \geq Tp \geq T1\text{-}n$. In the fixed-point system, 'Td-n' is the duration, in units of Tp, of the ***truth-value*** 'true' of the expression '(Td-n)'. The standard format allows considerable flexibility of expression to S_n because the fixed-point and floating-point ***constants*** can be replaced by ***variables*** made subject to the operation of other sentences of the PE-system. However, this flexibility raises the serious problem of ***consistency*** of plot, for example, a faulty choice of sentences may produce a ***logical programme loop*** and an ***alternation*** of truth-values of particular sentences, representable in an intant of Tp by cases such as:
"With a malevolent smile, the Emperor raised his glass of *Yuch*" and "With a malevolent smile, the Emperor raised his hand".

7. Let us define a ***plot-view ('PV')*** as the totality of F-true sentences in the PE-system at an instant of Tp, and include in PV, as valid elements, the negation of those sentences which are F-false at the same instant. (Generally, interest is focussed on the F-true sentences at Tp, say "XorX is alive", though it may be necessary to say "XorX is dead" even 10 years after his assassination.)
It is now possible to formulate a crude definition of ***action*** or ***plot-activity ('PA')*** in terms of PV: Every transition of truth-value from 'true' to 'false' of the sentences in PV as Tp progresses (increases) represents an element of PA, the larger the number of truth-value transitions per unit of Tp, then the greater is the action of the plot:

$$\frac{d\ \mathrm{Trans(PV)}}{d\ \mathrm{Tp}} = \mathrm{PA}$$

This definition of PA requires considerable qualification, else we may find ourselves with an 'action-packed novella' which merely records the loss of the I.G.S. 'Triton' with two-and-a-half million bottles of *Yuch*, the manufacturer of which was the subject of an excessive number of PE's in standard format - every broken bottle becoming a truth-value transition in Tp. Further, it is not necessary for every element of plot-activity to find expression, and, it is permissable to adjust the ***apparent*** PA or ***pace*** by a suitable choice of relationship between Tp and Tr (i.e., the relationship between plot-time and ***real-time*** or ***reading-time***.) Evidently,

the following relationships hold:

$$\text{pace} = Ef \times PA \times \frac{d\,Tp}{d\,Tr}$$

$$= Ef \times \frac{d\,Trans(PV)}{d\,Tp} \times \frac{d\,Tp}{d\,Tr}$$

$$= Ef \times \frac{d\,Trans(PV)}{d\,Tr}$$

where Ef is the ***expression factor*** at Tp, not Tr, since the latter is not in the control of the system.

8. It should be clear from the foregoing notes that the use of the word 'plot' in ordinary language differs from *my* use of 'plot'. This difference is summed up by the difference between ***expressed plot*** and ***total*** plot, the material that is used and the plot-material that is available. The problem of plot is essentially one of bringing together a sufficient number of PE's for a total plot to emerge, and – in case the total plot is too large – ***to go where the action is*** using this material for the expressed plot. 'Where' implies a location, 'action' implies truth-value transitions; both imply an observer, which may be a plot-character, a plot-mechanism sensible of some of the truth-value transitions, or the 'imaginary' observer, the real you and I passing unseen through the domes of Callisto. Regarding ***action***, it is necessary to consider ***related action***, except in the rare case of no other action being available, e.g. the inhabitants of Jupiter's satellites having perished through alcoholism, the only truth-value transition available for expression may be summed up by:

> "All was still. There was nothing to break the silence of the centuries except the exploding bottles of ***Yuch*** in the great wharehouse of Vromm on Ganymede. Even now, perhaps, the last amber flagon is shattering".

But apart from such thought-provoking terminal situations, ***action*** is to be interpreted as ***related action***, and related action is such that the suppression of its truth-value transition alters a given plot-expression (expressed plot). (The suppression of a truth-value transition, needless to say, will ***always*** alter total plot.) It is a matter of style how many ***unrelated actions*** are allowed into the expressed plot. I am reminded of the writer Peter Trewartha who once told me that he would attempt to write a book in which ***nothing*** happened. The interpretation of a sentence list, S1,S2,S3, . . . , Sn, with their truth-values at the instant Tp' in Tp, is certainly a case of nothing happening, i.e. a long descriptive passage, followed by another, and another . . . , where each sentence list is different so that there can be no truth-value transitions.)

9. Are we any nearer to an AS-plot? It is easy to regard the sentence-list, (PE's) as the axioms of a ***plot-universe***, a fictitious universe, one which has no concealed element, and if the aleatory processes are replaced by determined processes – replace a decision made by dice-throwing by a decision made from a pseudo-random number series – every ***event*** (element of PA) is repeatable at will. Since the axioms are in the language of symbolic logic, they are programmable, and it should not be impossible to construct a visual-display-unit to represent a viewpoint within the imaginary or conceptual universe, if only to present an English language description from that viewpoint to the external observer. Then, guided by machine-formulated indices of 'action' and 'related' action to ***go where the action***

is, tracing its course through *plot-time*, sometimes back-tracking to 'fill in' a sequence of actions by taking another viewpoint of the principle action or a concurrent lesser action.
10. A more dramatic presentation of events in the plot-universe would emphasise the description of space, size and motion in the sentence list and the interpretation of events as a sequence of still pictures, which in quick succession . . .
11. Enough of this! The application of computer techniques to cartoon film animation is already 10 years behind my expectations! (Meanwhile, listening on headphones, I hear *the voice* saying: "The Emperor XorX is raising his glass (click!) . . is raising his glass (click!) . . is raising his glass . . " - and that means the machine's in a *loop* again. Why won't they let *me* write the story?)

Amendment notes: *(For use in a more serious discussion only!)*
(1) The *arbitrary event* instead of *unrelated actions*
(2) Early substitution of *event* for *element of plot activity*
(3) On page (3) delete: 'evidently the following relationships hold'
insert : 'The relationship between 'pace' and PA is'
(4) On page (2) 'setting aside the possibility of time travel within her own lifetime' is not clear.
(5) Look for some expressions of 'or' that might be more clearly expressed with an 'either'.
(6) In section 9, proceed from *plot universe* to the general *hypothetical universe*. Attempt to relate *plot* to the tracing of events in the real world. Has Tolstoi's *War and Peace* got a plot? - a *single* plot?
(7) *Going where the action is* is a necessary condition for plot formation; is it a sufficient condition?
(8) Emphasise that any AS-plot must have a foundation in an AS-universe
(9) We say of some unusual sequence of events, "That would make a good plot!" Why?
(10) Are "love-story' plots unusual, or beyond common experience? Is there an S.F. love-story of *calibre*?
(11) Tie up *plot-elements* with *sentence lists*, or *sentential formulas*.
(12) I recall the S.F. story of the advertising company that tested its promotional campaigns in a computer simulation of the real world. Story deals with man in the simulated world discovering inconsistencies in his universe that were introduced to torment him, by a malign computer operator. Ends with exchange of personalities during a telephone call between the two 'worlds', and the *escapee* posing the problem that the 'real' world was a simulation within a higher lever world, and possibilities of further adventure in seeking out the inconsistencies that might denote this.

Plot Machine Mk. 1.

```
START: begin
          do select MODE (sets m = 1 = 8)
          if INPUT sentence mode (m = 1)
             begin
                set SENTENCE COUNT = 0
             A  increment SENTENCE COUNT
                do READ sentence
```

```
        do STORE sentence
        (loop to A, exit option and overload alarm is in STORE)
      end
   if DELETE mode (m = 2)
      begin
        do offer OPTION TO PRINT (sets PRINT OPTION)
      B: do INPUT SENTENCE NUMBER
        if PRINT OPTION taken do SENTENCE PRINT
        do SENTENCE DELETE
        (loop to B, exit option is in SENTENCE DELETE)
        do REPACK sentences
      end
   if print sentence LIST mode (m = 3)
      begin
        do offer OPTION TO PRINT (exit to SINGLE, SOME, ALL)
SINGLE: do INPUT SENTENCE NUMBER
        do SENTENCE PRINT
        (offer option to QUIT, or loop to SINGLE)
        --- Line deleted ---
  SOME: do INPUT SENTENCE NUMBER (start point)
        do SENTENCE PRINT
        go to NEXT
   ALL: set SENTENCE COUNT = 0
  NEXT: increment & test SENTENCE COUNT, exit to QUIT
      do SENTENCE PRINT
      (loop to NEXT, Keyboard CANCEL gives option to QUIT)
  QUIT: end
   if ADD sentence mode (m = 4)
      begin
        do SETSTART
      C: do READ sentence
        do STORE sentence
        (loop to C, exit option and overload alarm is in STORE)
      end
D: if PLOT selection mode (m = 5)
      begin
        do SELECTION NUMBER
        do selection PROCESS
      end
   if PRINT plot mode (m = 6)
      begin
        set SENTENCE COUNTER = 0
      E: increment & test SENTENCE COUNT, exit to F
        do is sentence CHOSEN? (sets CHOSENFLAG)
        if CHOSENFLAG do SENTENCE PRINT
        (loop to E)
   F: end
   if NEW plot mode (m = 7)
      begin
        do DELETE LAST SELECTION
```

```
            set m = 5
            go to D
          end
        if END mode(m = 8) go to FINISH
        go to START
FINISH: end
```

reviews

Edited by Ken Bulmer

The legitimate concern of the critical section of FOUNDATION the science fiction review, is with all aspects of the imagination. The quantity and quality of sf criticism have fluctuated widely over the years; but with the proliferation of sf themes and ideas and images and their universal use in all media of the present day and into the foreseeable future, the critical appraisal of sf is of immediate value and, as never before, of continuing importance.

There could be no better introduction to the review section in establishing a foundation on which to build the required critical apparatus than the earlier contribution from Kathryn Buckley. This has been developed from a highly successful lecture delivered at the 22nd British National science fiction Convention at Worcester, and Kathryn Buckley will be contributing further to these pages in the future as time and circumstances allow. As a matter of editorial policy in general all reviews and critical notices will be signed.

Solaris by Stanislaw Lem, translated by Joanna Kilmartin and Steve Cox; Faber & Faber, 1971, £2.00, 204 pages, ISBN 0 571 09205 5.

Superlatives have been flying around London in unusual profusion recently. Faber & Faber were said to have discovered the most exciting Science Fiction writer of the decade, Stanislaw Lem. He is a Polish writer, and his newly translated novel is *Solaris*.

The bibliography at the back of the book shows that Stanislaw Lem has been publishing Science Fiction for twenty years now. To call him a "new" writer would betray a smug insularity. Lem is a writer of real intellectual stature, and it is to the shame of publishers that he has not been translated in this country before at novel length. just as it is to the credit of Faber & Faber, whose Science Fiction list has for a long time been intelligently chosen, that they have published him now.

We think of Science Fiction as a primarily American phenomenon - certainly an English-language phenomenon. It is difficult for us to judge the European situation, since although bibliographies show that much Science Fiction is being written there, in a dozen languages, we have only a handful in translation. "European" is a word used advisedly in the case of *Solaris*.

Generalities about the national characteristics of any art form are perilous. Yet the "Europeanness" of *Solaris* seems to me its essential quality, and

in my case at least, it has to do with my unwillingness to judge *Solaris* a novel of unflawed excellence.

This being so, a statement of my prejudices seems fair. It has long seemed to me that writing in the English language has certain qualities which mark it off from most European writing. English, to my subjective eye, is a peculiarly dense and rich language (springing as it does from the diversities of Teutonic and Romance tongues); this denseness leads to a preoccupation with textures, with the very feel and flavour of life. Characteristically, this brings with it an ambiguous relationship between the writer and his work. In the English novel the writer can often be separated from his characters only with difficulty.

The European tradition is a different one. I see it as a tradition of the novelist as God, aloof from his creation. And because the style is the man, French style (for example) is perhaps purer, spare than English. A cool objectivity of author towards characters is often evident. Even in so passionate a novel as *Madame Bovary* one feels that the figures are seen with the minute clarity of figures seen through a telescope reversed to the eye. The European novel is pre-eminently analytical, symbolic, diagrammatical. One sees why Samuel Becket, an Irishman, chose to write *Waiting For Godot* in French. To put the whole matter very crudely indeed (and possibly save several pages) the English habit of mind is to allow the general to emerge from the particular (it sometimes doesn't). The European habit is much more to insist on the general; the specific often appears only as a condensation of general principles, rather as a theorem in geometry is deduced from a set of basic axioms. I am referring here to writers as widely separated as Kafka in *The Trial*, Chekov in *The Cherry Orchard*, Dostoievsky in *Crime and Punishment* and Goethe in *Faust*. If so diverse a list of titles can be said to represent a tradition, it is to that tradition that *Solaris* belongs.

It is a tradition that gives me pause, because I am so steeped in the English habit of mind that I am seldom moved even by the purity and objectivity of thought the European habit represents. That is, it moves my mind but not my gut. I think we English speakers are a more emotional lot than we pretend; I think we cherish the chaotic confusion of the phenomenal world; I think we easily resent that careful, allegorical patterning of events so typical of the European metaphysic of artistic creation; we like our writers messy and involved. (On the other hand, an extreme form of the attitude I have used the sweeping editorial "we" for, might be "The Jews are very clever, but you can't trust them". I hope my wild generalisation about European Literature are more grounded in reality than this one.)

Solaris is a metaphysical novel in the strict sense; it is *about* metaphysics - that which lies beyond the laws of physics. Within Science Fiction *Solaris* has affinities with James Blish's *A Case of Conscience*, and in a different way with any recent novel by Philip K. Dick. Like Blish, Lem is interested in the attributes of Godhead. Like Dick, he is interested in paradoxes of appearance and reality, though with Lem this fascination is purposeful, whereas with Dick it sometimes seems like a preoccupation with the hallucinatory for the sake of sheer, elegant mind-teasing.

Solaris features one of the most unusual Science Fiction notions for

some time - an apparently sentient planet which is a single living organism. This idea was crudely prefigured in Conan Doyle's *The Day The World Screamed*; I can't recall it being used since.

The planet Solaris is the symbolic enigma against which the protagonist, Kelvin, is pitted. Kelvin arrives on a research satellite, from which experiments on the nature of Solaris are carried out, only to find one of the three crew members dead, and the other two apparently mad. Also on the satellite are other "humans" (?) who have no logical right to be there, including Kelvin's mistress of some years back, for whose suicide he had been partly responsible. She is not a phantom; nor is she entirely, in the usual sense, flesh and blood, though she is unaware if this deficiency.

The gothic framework is not merely sensational for its own sake; indeed some readers may prefer more sensation than they are given, because the horror of the situation is filtered through the dogged, mundane intelligence of a basically unromantic hero.

The focus of the novel is not the confrontation of the scientists with the quasi-human incarnations of their past guilts, loves and fears. Nor is it simply another version of the man-versus-alien-intelligence story, since Solaris never fights back, seems hardly to react to stimuli, and remains resolutely unheeding and incomprehensible throughout the whole novel.

The focus is Kelvin's attempt to understand the nature of Solaris, and further (by implication) the intellectual need of all humanity to pierce through into the heart of darkness, to use Conrad's phrase; in other words, when faced by a metaphysical problem which is by its nature not resolvable by human agency, the human tendency is to stretch the mind towards breaking point in the attempt. But this is very much a simplification of a theme as complex as an asymmetric pattern in an Oriental carpet.

The steady intellectual force of *Solaris* is in its cumulative consistency in remaining complex, its refusal to ask easy questions or give easy answers, its single-minded economy of word and action. It is the novel's strength that it is not susceptible to easy paraphrase. It is very precise in its complexity, and my nebulous phrase "the heart of darkness" does the novel a disservice by substituting a grandiose vagueness for something much finer, much more translucent, in the novel itself.

We often take "abstraction" to be synonymous with vagueness. It sometimes is, but not with Lem; his novel is remarkable in its nearly successful attempt to define a series of phenomena for which (almost by definition) the usual vocabulary of science or of philosophy is inadequate. Lem does this, in part, by documenting the investigation of Solaris not just through Kelvin's eyes, but by producing a whole series of essays written on the subject by scientists whose work, we are told, spans a full 78 years before Kelvin arrives on the satellite. Much of *Solaris* consists of abstracts from imaginary scientific papers.

I can think of nothing like this in literature outside of the 100 pages or more of whale lore in *Moby Dick* (Melville had bona fide sources for most of it) and the notes at the end of Tolkein's *Lord of the Rings*. But in Lem's case the entire apparatus of (imaginary) scholarship is directed very purposefully

towards one end. By testing and rejecting, a series of theories about the ineffable, though he never defines the planet itself, he does finally define its importance. He does define the area of ("epistemology" isn't quite right) metaphysics his novel illumines. He works by circling closer and closer to his target area; it is a patient process, requiring patience in the reader, but succeeds where a bull-like rushing in a straight line would have failed.

Let me try again to state the theme of *Solaris*. It is not about "Is there a God?"; it is partly about "What would God be like?"; it is very much about "What would be our relationship with Omnipotence?" But again the simplification fails, because the novel can plausibly be read as having nothing to do with God, but merely having to do with the semantic necessity (perhaps same kind of human longing is involved also) of using a religious vocabulary when confronted by phenomena not explicable in terms of human intelligence.

Kelvin himself comes to think more and more that Solaris can only be thought of in terms of a god, albeit a manned god. But it may be that Lem wishes us to see this as an ironic comment on the ultimate deficiencies of the scientific intelligence.

Solaris is a moving novel. I suggested above that it moves the mind rather than the gut, but this is not entirely fair. Oddly, it moved in me a kind of nostalgia, for a younger time when questions of cosmic significance were common currency in long and sometimes drunken university converations. I think as we get older, some of us at least allow such questions to drift towards the back of the mind, out of the pragmatic knowledge that the unanswerable leads to yearnings best subdued. There is for me a kind of nostalgic innocence in the daring of *Solaris* in confronting inexplicable issues with what is stylistically an almost casual aplomb. But the confrontation is not childish.

It is not an easy novel to read, either, though it is far easier than many other writers could have managed, faced with the difficulties of such an endeavour. To bring my case about the novel down to earth (a less than apt phrase considering the setting) some examples are in order.

Consider the following piece, fairly typical of the descriptive passages in *Solaris*. The subject is certain unstable structures called asymmetriads, which arise unpredictably up from the living ocean of the planet:

The asymmetriads are born in the same manner as the symmetriads but finish differently, and nothing can be seen of their internal processes except tremors, vibrations and flickering. We do know, however, that the interior houses bewildering operations performed at a speed that defies the laws of physics and which are dubbed 'giant quantic phenomena'. The mathematical analogy with certain three-dimensional models of the atom is so unstable and transitory that some commentators dismiss the resemblance as of secondary importance, if not purely accidental. The asymmetriads have a very short life-span of fifteen to twenty minutes, and their death is even more appalling than that of the symmetriads: with the howling gale that screams through its fabric, a thick fluid gushes out, gurgles hideously, and submerges everything beneath a foul, bubbling foam. Then an explosion, coinciding with a muddy eruption, hurls up a spout

of debris which rains slowly down into the seething ocean. This debris is sometimes found scores of miles from the focus of the explosion, dried-up, yellow and flattened, like flakes of cartilage.

Not one of the high-spots - chosen rather as typical. One notices first the restraint of the style, dealing with a flamboyant happening in a scrupulous, almost plain prose. It is not a flat prose though; it is capable of great precision (as in the image of the flakes of cartilage) and some subtlety. Typically, it proposes a theory of some fascination, only to dismiss it drily as perhaps too imaginative, perhaps "purely accidental" as in the case of the quantum analogy.

We must remember we are reading the novel in translation, and make the necessary allowances, though purely on the evidence of the English text (I cannot read Polish anyway) the translation seems masterly - lithe, lucid and relaxed. In English, the style comes out as remarkably like Herman Melville's, and as much as anything else I have said, this suggests the nature of Lem's talent.

Lem's exuberant inventiveness also reminds one of Melville. The planet Solaris has an elemental originality about it, unusual in the world of science fiction where the straining for originality all too often tends to the pointlessly fantastic, or subsides dismally into the reworking of old themes, like a prospector chipping away at an exhausted vein of gold-bearing quartz.

A final quotation will serve to show one of the more likeable qualities of Lem (and also one of the most formidable). Until quite recently Science Fiction has suffered by the necessity of authors having to rely on mass circulation magazines to reach their audience These magazines have done much to make Science Fiction what it is today, and much of it, such as the emphasis on a direct and unpretentious style, has been good. By and large though, editors have balked at placing too heavy a load upon their readers' intellects.

Lem, on the other hand, flatters his readers with the unspoken but obvious assumption that his reader will be a very literate intelligent fellow. He has none of that slight tone of condescension familiar in the writings of, say Isaac Asimov or Robert Heinlein, where difficult points are spelled out at length, or circumnavigated, or cheapened by the use of facile analogy.

According to Muntius, Solaristics is the space era's equivalent of religion: faith disguised as science. Contact, the stated aim of Solaristics, is no less vague and obscure than the communion of the saints, or the second coming of the Messiah. Exploration is a liturgy using the language of methodology: the drudgery of the Solarists is carried out only in the expectation of fulfillment, of an Annunciation, for there are not and cannot be any bridges between Solaris and Earth. The comparison is reinforced by obvious parallels: Solarists reject argument - no experiences in common, no communicable notions - just as the faithful rejected the arguments that undermined the foundations of their belief. Then again, what can mankind expect or hope for out of a joint 'pooling of information' with the living ocean? A catalogue of the vicissitudes associated with an existence of such infinite duration that it probably has no memory of its origins? A description of the aspirations, passions and sufferings that find expression in the perpet-

ual creation of living mountains? The apotheosis of mathematics, the revelation of plenitude in isolation and renunciation? But all this represents a body of incommunicable knowledge.

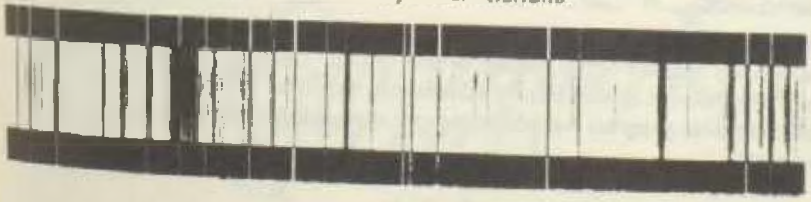
The striking thing about this and similar passages is that they are not turgid, though they look clotted at first glance. The abstrations are not synonymous with vagueness. The use of a very specific is abstract religious terminology, in completely unexpected association with the processes of scientific investigation, has something of the power of poetry springing like cool water from an apparently arid style. "Poetry", because the language of science and the language of religion have large accretions of meaning - they are languages carrying an aura of powerful feelings, very different feelings. The sudden fusion of two such powerful symbolic accretions is the very stuff of poetry. This flash of insight where a conjunction of diversities reveals a basic likeness is not completely unlike Lady Macbeth's "Come to my woman's breasts and take my milk for gall you murthering ministers", where motherhood is yoked with murder, or John Donne's blend of politics, geography and love in "She is all States, and all Princes I".

Solaris is a fine novel. In theme it is very much a part of what Science Fiction fans call "the main-stream", and while it is absolutely pure Science Fiction, it does not have the sort of limitations often associated (sometimes unfairly) with genre writing. It is good because it fulfills the recipe for good Science Fiction which James Blish once phrased with deceptive simplicity: it is *about* something. It touches us more deeply than any story that relies only on picaresque ingenuities of plot can do. Whenever Science Fiction *is* about something, it has graduated from the Ghetto. It does not cease to be Science Fiction, but it automatically becomes elect to the main-stream also, and in such cases, distinctions between "traditional" literature and Science Fiction become immediately irrelevant.

If I go no further than calling it "fine" (a word which suggests a certain thinness) it is because I find it ultimately diagrammatic, a novel more notional than realized, to use the shorthand jargon of modern criticism. *Solaris* is a novel about a philosophical thesis, and its characters have no independent life beyond that thesis. The physical details of the novel are alive and sharp, but that sharpness (to change art forms for the moment) is the sharpness of a Klee or a Modigliani, not a Goya or a Rembrant.

I mean nothing condescending in any of this. *Solaris* is not just good Science Fiction - it is, by any standards, good literature. It is a serious novel that demands the implicit praise, I believe, of being judged by the most rigorous criteria.

by Peter Nicholls



The History of the Future

The titles listed are the first from *The History of the Future*, a collection of reprints of utopias and forecasts of the future. These books have been chosen for their interest as stories and for the way they illustrate the effects that technological progress has had upon our way of regarding society and social problems.

Each volume will have a specially written preface provided under the general editorship of Professor I.F. Clarke.

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Anonymous. First published in 1763. 256 pages. £4.50

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Sebastian Mercier. First published in 1770. Translated by W. Hooper 1772. 480 pages. £6.

THE LAST MAN
Mary Shelley. First published in 1826. 3 volumes. 1088 pages. £12.25

EUREKA: A PROPHESY OF THE FUTURE
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THE AIR BATTLE
H. Lang. First published in 1859. 120 pages. £3.40

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Cornmarket Reprints

To hand as we go to press come *Anywhen* by James Blish and *Fugue For A Darkening Island* by Christopher Priest, both from Faber and Faber at £1.75.

On his novel form to date, Mr Priest is clearly destined to be a writers' writer. In this instance, a chillingly dystopian story is transformed by an ingenious construction. Nothing 'experimental' about it, though – 'thorough' is rather the word.

Connoisseurs of Mr Blish's stories will jump at *Anywhen*. To those who believe that Delaney, Le Guin, S. Lem, et al., were the first to inject the anthropological into stuffy old sf, may I recommend particularly *A Dusk of Idols* – first published in 1961?

George Hay

things you ought to know

While the pundits are arguing fine points of antecedants or style, the average sf reader is often wondering where he can actually lay his hands on the literature. For this reason, we would like to give you some data on availability of magazines in this country. These have always supplied support for old and new writers alike; without them, many a writer would never have made it to novel publication. For this reason, and also to help him keep abreast of rapid developments in the field, the serious reader would do well to read them.

British magazines – in pocketbook format – now easily available from good booksellers are *New Worlds*, edited by Michael Moorcock and published by Sphere Books, and *New Writings in SF*, published by Corgi Books and edited by John Carnell. From the United States comes *Analog*, distributed by Condé Nast Publications, and edited, since the death of the late lamented John W. Campbell, by Ben Nova. *The Magazine of Fantasy and Science Fiction*, distributed by Seymour Press and edited by Ed Ferman, and *If* and *Galaxy*. These last two are bi-monthly, and are now being imported by Universal-Tandem Ltd. *GALAXY* will be available from May, and *If* from June. If you have trouble locating any of the above, we strongly recommend that you contact the publishers/distributors; you want to read the material and they want to sell it, so you have a common interest.

To those who would appreciate a really in-depth, bang-up-to-date coverage of all aspects of science fiction – books, films, personalities, whatever – we recommend *Locus*, the fortnightly newsletter edited in New York by Charlie and Dena Brown. There isn't anything to touch it for value. Details from English agent Malcolm Edwards, 75 Harrow View, Harrow, Middlesex.

British readers not already familiar with the works of Cabell – referred to by James Blish as "one of the greatest stylists in English literature" – should know that this author's *Figures of Earth*, *The Silver Stallion*, and *Jurgen* are available in paperback from Tandem Books. Though the books are complete in themselves, they relate to each other, and should be read in sequence.