2 FOUNDATION the review of science fiction

contents
number 2, june 1972

Back cover illustration by Robin Cambell

All editorial and subscription correspondence should be addressed to The Administrator, The Science Fiction Foundation, North East London Polytechnic, Barking Precinct, Longbridge Road, Dagenham, Essex RM8 2AS, England.

Printed in England by
Friesons Printing Services, Brentford, Middlesex

tb *Publisher: S. Chomet*
Production: P. & J. Hill

This journal is published quarterly in March, June, September and December by Transcripta Books, 30 Craven Street, London WC2

editorial

All new-born journals, no matter how lusty their cries, are basically delicate creatures. In putting together *Foundation* we are faced with a very real problem.

Who do we expect to read it?

Our purpose, as we said in the Editorial to *Foundation 1,* is to provide a platform for writing about science fiction, and those aspects of our own world to which science fiction so often refers. We hope to get the best of both worlds in doing this; we hope that, in treating science fiction as a subject worth serious study, we will attract academic attention: that university libraries will buy *Foundation* as naturally as they buy *Sight and Sound,* as a journal that deals responsibly with one of the most influential and varied of modern art forms.

On the other hand, we do not want to sink heavily to the bottom, weighed down with footnotes. We have to recognise that in the first instance we will be attracting a readership that already knows and loves science fiction, and that much of our preaching will be to the converted. The converted *are* sometimes academics, but they are just as likely to be housewives or motor mechanics. The danger is simply that a purely academic journal might alienate an entire readership potentially sympathetic to us. On the other hand, a journal that opts out of dealing with the difficult and sometimes intricate questions that science fiction regularly raises, in order to remain lightly entertaining and undemanding, will with equal certainty alienate an academic audience. "Academic audience" is a very simple phrase to deal with a complex group of people, but we can accept that academics, no matter how much they differ among themselves, have in common a desire to look at all the facts of the world in their variety and depth. They resent the simplifications of the popular press; they dislike logic chopping; they become irritated at the sort of writing that offers opinion only, with no recourse to substantiation, whether by reasoned argument or by the production of hard facts.

It would seem, in truth, that *Foundation* must inevitably fall between two stools; that we cannot appeal to two such disparate audiences at once. At least it would appear so, if it were not that the dichotomy is a false one. Academics, let it be remembered, are people; ordinary people, let it never be forgotten, have minds, just as academics have.

Martin Gardner once wrote (*Fads and Fallacies of Science*, Page 348), apparently goaded into a vitriolic frame of mind by reading some of John W. Campbell's notorious editorials in the old *Astounding* magazine:

> they suggest once more how far from accurate is the stereotype of the science fiction fan as a bright, well-informed, scientifically literate fellow. Judging by the number of Campbell's readers who are impressed by this nonsense, the average fan may very well be a chap in his teens, with a smattering of scientific knowledge culled

> mostly from science fiction, enormously gullible, with a strong bent towards occultism, no understanding of scientific method, and a basic insecurity for which he compensates by fantasies of scientific power.

Here we have one of the paradoxes of science fiction. The conclusions that Martin Gardner draws from *Astounding* have some validity. It may not be possible to prove the case, but it would not be at all surprising to learn that a proportion of science fiction fandom is made up of the sort of intellectual incompetent that Gardner hypothesises. On the other hand, from the contents of precisely the same magazine it would be quite simple to construct a case that science fiction of that period offered an insight into social evolution, technological development, and even metaphysical questions about the nature of the created universe, that could not be paralleled by any other popular literature of the time, or perhaps of any time. In other words, science fiction is unique amongst the genres of popular literature in regularly offering intellectual stimulation at a remarkably sophisticated level. It is true that the pulp magazines did (and do) contain a quite high proportion of instantly forgettable variations on a series of basically simple-minded themes. It is equally true (and the case has been documented by many critics, including Kingsley Amis) that the best of science fiction goes far beyond this.

If this is so, then the people who read science fiction are not ordinary readers at all. They are readers who seek intellectual protein — solid meat — and are not content with the bulky fats and carbohydrates that can be appropriately symbolised in England as the overcooked potato chips of the creative imagination. Perhaps the gap between the ordinary readers and the academics is narrower than we thought.

The gap becomes narrower still when we consider some of the fallacies in our usual opinions of academics. Yes, it is true that many academic journals are dusty and airless, and seem to be remote from life. But not always, by any means. The confusion stems from our inability to distinguish between the serious and the solemn. We simply caricature the academic mind when we see it as humourless, pedantic and ponderous. The academic is serious, because he thinks his subject matters; he need not be a solemn man.

The dichotomy between serious literature and entertainment is unreal. Two of the greatest writers of the nineteenth century, George Eliot and Charles Dickens, were both consistent best-sellers. People read them because it gave them *pleasure* to do so. Stanley Kubrick's *2001 A Space Odyssey* is an infinitely more serious film than *The Creature From The Black Lagoon*; it has also made many more millions of dollars. The Beatles and The Rolling Stones have been the two most popularly successful groups in English pop music of the last ten years. It is no coincidence, we think, that even leaving the music out of it, the words to their songs are more pungent, say more about life, than those of any other English group that immediately springs to mind. The words of their best songs are poetry, by the most serious standards by which we judge poetry. We cannot say that poetry is dead while good popular music continues to flourish.

In short, the general public is wrong if it feels that academic criteria are necessarily completely different from its own. And more importantly, the thinly disguised contempt with which many academics greet the various manifestations of popular taste is ill-judged in many cases, even though justified by others.

Public taste can be notoriously fickle and arbitrary, but in the long run it triumphs. Charles Chaplin has outlasted Billy Bevan; Shakespeare is remembered while Beaumont and Fletcher have only the most tenuous grip on our affections, even though they were equally popular in Shakespeare's own day. To take an example from science fiction itself, Edgar Rice Burroughs' Mars books outsold H.G. Wells at the time, but it is Wells who has attained the status of a minor classic, a status reflected in contemporary sales.

The moral of all this for ourselves – an editorial committee which has spent much time debating the status of our potential readership, and the ways in which we hope to appeal to them – is reassuring. Our criteria for including pieces need not be agonisingly difficult at all. We will not be academic if that means being boring. We will not be popular if that means being sensational. We will not be publishing for the hard core of SF fans if that means devoting equal attention to the second rate, and failing to give excellence its due.

These are all negative prescriptions. Positively, we *will* be academic, in that we are providing a platform for the serious discussion of science fiction as a significant twentieth century art form, whether this significance is seen in literary terms or in scientific terms: for the issues alive in science fiction are often the issues relating to technological advance in a world of crumbling social connections and cultural instability, and these deserve discussion for their own sake. We will be academic in that we will accept that our readership is intelligent and not to be condescended to or written down to. We will be academic in that we hope to be precise in matters of fact, logical in matters of presentation, and will not report flying saucers unless they have been sighted by two independent witnesses, one of whom should be the local vicar.

On the other hand we reserve the right to be inconsistent. We have already been told that the piece on computer-written stories in our first edition was utterly fatuous, and we have also been told (by computer men) that it raised some interesting issues about the relationship between programming and creativity. You can't hope to please them all, and we do not expect to be monumentally responsible on the one hand or always light-heartedly entertaining on the other.

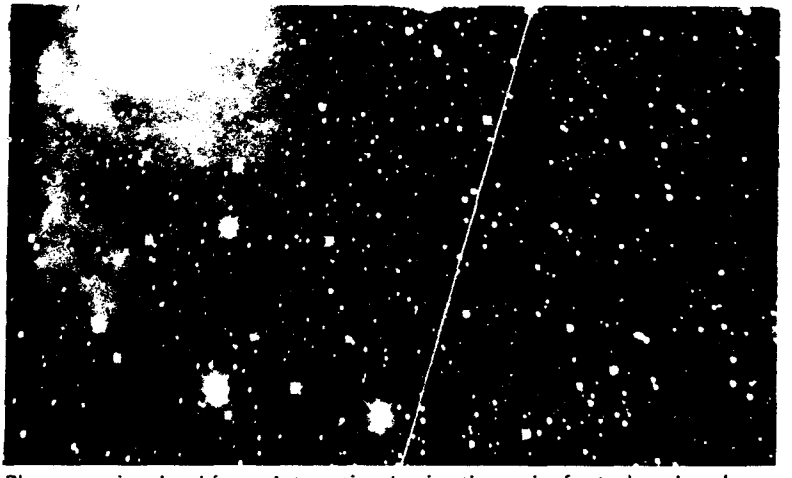
We recognise that there are people with important things to say who have an emotional need to say them in words of five syllables, and we will not necessarily exclude them on that account, even though we confidently expect occasional letters saying, "What do all them long words mean then?" We admit (with reservations) that the scientists spending their time constructing anti-gravity machines have a theoretical right to be heard just as much as those trying to figure out ways of cleaning up a world-wide pollution problem.

Fiction. At a recent meeting we decided that while we are only half professional – we hope we *look* professional, but we expect it to be at least a year before we

can afford to pay contributors) we would be in error if we tried to compete with the editors of professional anthologies. They *do* pay their contributors. Our own Review Editor is just such a man, and he assures us that his desk is not cluttered with unpublished masterpieces that he has no space for. In future, then, our bias will be towards critical and factual pieces, and we will not attempt to compete on unequal terms in a fiction market already under-supplied. We will be delighted if fiction of genuine excellence comes our way, but we make no promises. An important exception to this policy is that we may, as we have in the case of John Brunner's poems, publish important excerpts from work in progress by established writers, but again, this will at best be on an irregular basis.

And who are all these writers we are so busy rejecting or accepting? *You* are. Yes, of course we will be more than pleased if Isaac Asimov offers to give us (*gratis*) a ten page synopsis of the entire body of world scientific knowledge, but we have a special interest in providing a place for writers with less celebrated names. You have bought this magazine because you are interested in science fiction (or because you are a compulsive magazine buyer), and it is more than likely that you have something to say about it. We would be happy to listen, and if we think other people will want to listen also, then we will publish you.

It is often said that the future of the world depends ultimately on the common sense of the man in the street. We don't wish to sound self-important, but the same thing could be said for the future of this magazine.



Plans are going ahead for an international animation series for tv, based on James White's 'Space Hospital' novels, and originating from initiatives of George Hay, of the Science Fiction Foundation. This series will be handled by HDH Films London, in association with its partners in Paris, Munich, and Milan.

Darko Suvin is a Yugoslavian, and his published criticism of science fiction shows him to be very much in the European tradition, especially in his philosophical approach to the subject. For some time now, however, he has been teaching in the Department of English of McGill University in Quebec, Canada.

Professor Suvin is the Editor of the anthology Other World, Other Seas: Science Fiction Stories from Socialist Countries *(Random House, New York, 1970). He is also an executive member of the Science Fiction Research Association, an American body comparable to our own Science Fiction Foundation.*

The following article is the text of a paper to be delivered this July by Professor Suvin at Trieste, in the First European Science Fiction Convention, Eurocon 1.

We hope Professor Suvin will forgive us for adding one explanatory note to his article. The word "cognitive" is not often seen in criticism in this country, and it may be a little confusing. It is, though, a useful word: we take it that Professor Suvin uses "cognitive" to mean, at least in part, "desiring to seek out, know and understand the nature of". If the word is intended to carry a richer weight of meaning still, we are sure that this will emerge from a careful reading of his article, which so far as we know is the first really methodical attempt to define the differences between science fiction and the rest of literature.

In our next issue, we hope to carry the text of another paper delivered at Eurocon 1 by Peter Nicholls, a member of our own Editorial Committee. Mr. Nicholls' paper will be to some extent a companion piece to Professor Suvin's. He will be arguing in the same area (What is SF and how does it relate to other forms of literature?), but will present a partially opposing viewpoint.

cognition and estrangement: an approach to SF poetics

by Darko Suvin

1. Science fiction as fiction (estrangement)

1.1. The importance of science fiction (SF) in our time is on the increase. First, there are strong indications that its popularity in the leading industrial nations (USA, USSR, UK, Japan) has risen sharply over the last 100 years, regardless of local and short-range fluctuations. SF has particularly affected some key strata of modern society such as the college graduates, young writers, and the avant-garde of general readers appreciative of new sets of values. This is a significant cultural effect which goes beyond any merely quantitative census. Second, if one takes as minimal generic differences of SF either *radically different figures* (dramatis personae) or a *radically different context* of the story, it will be found to have an interesting and close kinship with other literary sub-genres, which flourished at different times and places of literary history: the Greek

and Hellenistic blessed island stories, the fabulous voyage from Antiquity on, the Renaissance and Baroque utopia and planetary novel, the Enlightenment state (political) novel, the modern anticipation, anti-utopia, etc. Moreover, although SF shares with myth, fantasy, fairy tale and pastoral an opposition to naturalistic or empiricist literary genres, it differs very significantly in approach and social function from such adjoining non-naturalistic or meta-empirical genres. Both of these complementary aspects, the sociological and the methodological, are being vigorously debated among writers and critics in several countries; both testify to the relevance of this genre and the need of scholarly discussion too.

In the following paper I shall argue for a definition of SF as the *literature of cognitive estrangement.* This definition seems to possess the unique advantage of rendering justice to a literary tradition which is coherent through the ages and within itself, and yet distinct from non-fictional utopianism, from naturalistic literature, and from other non-naturalistic fiction. It thus permits us to lay the basis of a coherent poetics of SF.

1.2 I should like to approach such a discussion, and this field of discourse, by postulating a spectrum or spread of literary subject-matter, running from the ideal extreme of exact recreation of the author's empirical environment [2] to exclusive interest in a strange newness, a *novum.* From the 18th to the 20th century, the literary mainstream of our civilization has been nearer to the first of the two above-mentioned extremes. However, at the beginnings of a literature, the concern with a domestication of the amazing is very strong. Early tale-tellers tell about amazing voyages into the next valley where they found dog-headed people, also good rock salt which could be stolen or at the worst bartered for. Their stories are a syncretic travelogue and *voyage imaginaire,* daydream and intelligence report. This implies a curiousity about the unknown beyond the next mountain range (sea, ocean, solar system . . . .), where the thrill of knowledge joined the thrill of adventure.

An island in the far-off ocean is the paradigm of the aesthetically most satisfying goal of the SF voyages, from Iambulus and Euhemerus through the classical utopia, to Verne's island of Captain Nemo and Wells' island of Dr. Moreau; especially if we subsume under this the planetary island in the aether-ocean – usually the Moon – from Lucian through Cyrano and Swift's mini-Moon of Laputa to the 19th century. Yet the parallel paradigm of the valley, over the range [3] which shuts it in as a wall, is perhaps as revealing. It recurs almost as frequently, from the earliest folk tales about the sparkling valley of Terrestrial Paradise and the dark valley of the Dead, both already in Gilgamesh. Eden is the mythological localisation of utopian longing, just as Wells' valley in the *Country of the Blind* is still within the liberating tradition which contends that the world is not necessarily the way our present empirical valley happens to be, and that whoever thinks his valley is the world, is blind. Whether island or valley, whether in space or (from the

industrial and bourgeois revolutions on) in time, the new framework is correlative to the new inhabitants. The aliens – utopians, monsters or simply differing strangers – are a mirror to man just as the differing country is a mirror for his world. But the mirror is not only a reflecting one, it is also a transforming one, virgin womb and alchemical dynamo; the mirror is a crucible.

Thus, it is not only the basic human and humanizing curiosity that gives birth to SF. Beside an undirected inquisitiveness, a semantic game without clear referent, this genre has always been wedded to a hope of finding in the unknown the ideal environment, tribe, state, intelligence or other aspect of the Supreme Good (or to a fear of and revulsion from its contrary). At all events, the *possibility* of other strange, co-variant co-ordinate systems and semantic fields is assumed.

1.3 The approach to the imaginary locality, or localized daydream, practised by the genre of SF is a supposedly factual one. Columbus's (technically non-fictional) letter on the Eden he glimpsed beyond the Orinoco mouth, and Swift's (technically non-factual) voyage to Laputa, Balnibarbi, Glubbdubbdrib, Luggnagg *and Japan,* stand at the opposite ends of a constant interpenetration of imaginary and empirical possibilities. Thus SF takes off from a fictional (literary) hypothesis and develops it with extrapolating and totalizing (scientific) rigour – the specific difference between Columbus and Swift is smaller than their generic proximity. The effect of such factual reporting of fictions is one of confronting a set norm – a Ptolemaic-type closed world picture – with a point of view or glance implying a new set of norms; in literary theory, this is known as the attitude of *estrangement.* This concept was first developed on non-naturalistic texts by the Russian Formalists (*Ostranenie,* Viktor Shklovsky, 1917), and most successfully underpinned by an anthropological and historical approach in the opus of Bertolt Brecht, who wanted to write plays for a scientific age. While working on a play about the prototype scientist, *Galileo,* he defined this attitude (Verfremdungseffekt) in his *Short Organon for the Theatre* (1948): "A representation which estranges is one which allows us to recognise its subject, but at the same time makes it seem unfamiliar". And further: "for somebody to see all normal happenings in a dubious light, he would need to develop that detached eye with which the great Galileo observed a swinging chandelier. He was amazed by the pendulum motion as if he had not expected it and could not understand its occurring, and this enabled him to come at the rules by which it was governed." Thus, the look of estrangement is both cognitive and creative: and as Brecht goes on to say: "One cannot simply exclaim that such an attitude pertains to science, but not to art. Why should not art, in its own way, try to serve the great social task of mastering Life?" [4]. (Later, Brecht was also to note that it might be time to stop speaking in terms of masters and servants altogether).

In SF, the attitude of estrangement – used by Brecht in a different way,

within a still predominately realistic context – has grown into the *formal framework* of the genre.

2. Science fiction as cognition (critique and science)

2.1 The use of estrangement both as an underlying attitude and a dominant formal device is found also in the *myth*, a ritual and religious approach looking in its own way beneath the empiric surface. However, SF sees the norms of any age, including emphatically its own, as unique, changeable, and therefore subject to a *cognitive* glance. The myth is diametrically opposed to the cognitive approach since it conceives human relations as fixed, and super-naturally determined, emphatically denying Montaigne's: La constance meme n'est qu'un branle plus languissant. The myth absolutises and even personifies apparently constant motifs from the sluggish periods with low social dynamics. Conversely, SF, which is organised by extrapolating the variable and future-bearing elements from the empirical environment, clusters in the great whirlpool periods of history, such as the 16th-17th and 19th-20th century. Where the myth claims to explain once and for all the essence of phenomena, SF posits phenomena first as problems and then explores where they lead to; it sees the mythical static identity as an illusion, usually as fraud, in the best case only as a temporary realization of potentially limitless contingencies. It does not ask about The Man or The World, but which man?: in which kind of world?: and why such a man in such a kind of world? As a literary genre, SF is just as opposed to super-natural estrangement as to empiricism (naturalism).

2.2 *SF is, then, a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author's empirical environment.*

The estrangement differentiates it from the realistic literary mainstream of the 18th to the 20th century. The cognition differentiates it not only from myth, but also from the fairy tale and the fantasy. The *fairy tale* also doubts the laws of the author's empirical world, but it escapes out of its horizons and into a closed collateral world indifferent toward cognitive possibilities. It does not use imagination as a means to understand the tendencies in reality, but as an end sufficient unto itself and cut off from the contingencies of the real. The stock fairy-tale accessory, such as the flying carpet, evades the empirical law of physical gravity – as the hero evades social gravity – by imagining its opposite. The wish-fulfilling element is the strength and weakness of the fairy-tale, for it never pretends that a carpet could be expected to fly – or that a humble third son could be expected to become a king – while there is gravity. It just posits another world beside yours where some carpets do, magically, fly, and some paupers do, magically, become princes, into which you cross purely by an act of faith and fancy. Anything is possible in a fairy tale, because a fairy tale is manifestly impossible. Therefore, SF retrogressing into fairy tale, e.g. space opera with a hero-princess-monster

triangle thinly disguised by astronautic costume, is committing creative suicide.

Even less congenial to SF is the *fantasy* (ghost, horror, Gothic, weird) tale, a genre committed to the interposition of anti-cognitive laws into the empirical environment. Where the fairy tale was indifferent, the fantasy is inimical to the empirical world and its laws. The thesis could be defended that fantasy is significant insofar as it is impure and fails to establish a super-ordinated maleficent world of its own, causing a grotesque tension between arbitrary supernatural phenomena and the empirical norms into which they infiltrate [5]. Gogol's Nose is so interesting because it is walking down the Nevski Prospect with a certain rank in the civil service, etc.; if the Nose were in a completely fantastic world – say H.P. Lovecraft's – it would be just another ghoulish thrill. When fantasy does not make for such a tension between its norms and the author's empirical environment, its reduction of all possible horizons to Death makes of it just a sub-literature of mystification. Commercial lumping of it into the same category as SF is thus a grave disservice and a rampantly pathological phenomenon.

2.3 As different from such harsh but deserved words, the *pastoral* is essentially closer to SF. Its imaginary framework of a world without money economy, state apparatus, and depersonalizing urbanisation allows it to isolate, as in a laboratory, two human motivations – erotics and power-hunger. This approach relates to SF as alchemy does to chemistry and nuclear physics: an early try in the right direction with insufficient sophistication. SF has thus much to learn from the pastoral tradition, primarily from its directly sensual relationships without class alienation. It has, in fact, often done so, whenever it has sounded the theme of the triumph of the humble (Restif, Morris, etc., up to Simak, Christopher, Yefremov. . .). Unfortunately, the baroque pastoral abandoned this theme and jelled into a sentimental convention, discrediting the genre; but when the pastoral escapes preciosity, its hope can fertilize the SF field as an antidote to pragmatism, commercialism, other-directedness and technocracy.

2.4 Claiming a Galilean or Brunoan estrangement for SF does not at all mean committing it to scientific vulgarization or even technological prognostication, which it was engaged in at various times (Verne, the US in the 1920's – 1930's, the USSR under Stalinism). The needful and meritorious task of popularization can be a useful element of SF works at a juvenile level. But even the *roman scientifique* such as Verne's *From the Earth to the Moon* – or the surface level of Wells' *Invisible Man* – though a legitimate SF form, is a lower stage in its development. It is better suited to the short story and a new readership, such as the juvenile, because it introduces into the old empirical context only *one* easily digestible new technological variable (Moon missile, or rays which lower the refractive index of organic matter [6]). The euphoria provoked by this approach is real but limited.

It evaporates much quicker as

positivistic natural science loses prestige in the humanistic sphere after the World Wars (cf. Nemo's as against the US Navy's atomic *Nautilus*), and surges back with prestigious peace-time application in new methodologies (astronautics, cybernetics). Even in Verne, the structure of the science novel is that of a pond after a stone has been thrown into it: there is a momentary commotion, the waves go from impact point to periphery and back, then the system settles down as before. The only difference is that one positivistic fact – usually an item of hardware – has been added like the stone to the pond bottom. This structure of transient estrangement is specific to murder mysteries, not to a mature SF.

2.5 After such delimitations, it is perhaps possible at least to indicate some differentiations within the concept of "cognitiveness" or "cognition." As used here, this term does not imply only a reflecting *of* but also *on* reality. It implies a creative approach tending toward a dynamic transformation rather than toward a static mirroring of the author's environment. Such a typical methodology of SF – from Lucian, More, Rabelais, Cyrano, and Swift to Wells, London, Zamyatin, and the last decades – is a *critical* one, often satirical, combining a belief in the potentialities of reason with methodical doubt in the most significent cases. The kinship of this cognitive critique with the philisophical fundamentals of modern science is evident.

As a matter of historical record, SF has moved from a pre-scientific or proto-scientific approach of debunking satire and naive social critique closer to the increasingly sophisticated natural and human sciences. The natural sciences caught up with and surpassed the literary imagination in the 19th century; the sciences dealing with human relationships might be argued to have caught up with the literary imagination in their highest theoretical achievements but have certainly not done so in their alienated social practice. In the 20th century, SF has moved into the sphere of anthropological and cosmological thought, becoming a diagnosis, a warning, a call to action, and – most important – a mapping of possible alternatives. Yet whenever it was relevant, it remained a poetic parable.

3. Science Fiction as a literary genre (concept and name)

3.1 As a full-fledged literary genre, SF has its own repertory of conventions and devices, many of them highly interesting (the motivation of the estranged framework and transition to it, the complex relations author-narrator, etc.). Especially crucial historically is the shift of the *locus* of estrangement from space to time. All this cannot be discussed in a short theoretical approach, as it is properly the subject for a book-size work. I should like to mention only that all the estranging devices in SF are related to the cognition espoused, and that together with the historical venerability of the genre's tradition as hero postulated, this seems to me a second, methodological reason for according it much more importance than is usually done in *academe*.

3.2 Finally, however, I should like

to discuss the concept of a science-fiction tradition or genre, which is a logical corollary of its being recognised as the literature of cognitive estrangement. It can be gleaned from my approach and examples that I think the literary genre which I am trying to define embraces the sub-genres mentioned in 1.1, from Greek and earlier times until today (the Blessed Islands, Utopias, Fabulous voyages, Planetary novels, *Staatsromane,* Anticipations and Dystopias – as well as the Verne-type *Romans scientifiques,* the Wellsian Scientific romance variant, and the 20th century magazine and anthology-based SF *sensu stricto*). If the definitions and delimitations for which I offered some – necessarily sketchy – arguments hold, the inner kinship of these sub-genres is stronger than their obvious autonomous, differentiating features. It is impossible here to enter into a historical discussion of these kinships and differences, except to observe that the significant writers in this line were quite aware of their coherent tradition and explicitly testified to it (the line Lucian-More-Rabelais-Cyrano-Swift-Verne-Wells is a main example). Also, some among the most perspicacious surveyors of the field, like Ernest Bloch, Lewis Mumford or Northrop Frye, can be construed as assuming this unity. I have tried to set forth some explicit reasons for stressing it too.

3.3. The novelty of such a concept shows at its most acute when trying to find a name for this genre as here conceived. This name should, ideally, clearly set it apart (1) from non-literature; (2) from the empirical literary mainstream; (3) from non-cognitive estrangings such as fantasy; and (4) it should try to add as little as possible to the already prevailing confusion of tongues in this region. Academically most acceptable at present is the designation of a literature of *utopian thought.* The concept is no doubt partly relevant, but fails to meet the first above criterion; logically, this is usually taught and considered within the scope of either history of ideas, or of political and sociological theory: although I would agree that literature (and especially this genre) is most intimately involved with life – indeed, that the destiny of humanity is its *telos.* I think one should quickly add that literature is also more than an ideological document. Since this is the rationale for any systematic literary study and scholarship, I may not need to labour the point.

The only proper way of searching for a solution seems to require starting from the qualities defining the genre, as this would at least take care of the criteria 1 to 3. Taking the kindred thesaurus concepts of *science* for cognition, and *fiction* for estrangement, I believe there is a sound reason for calling this whole new genre Science Fiction (*sensu lato*).

There are two main objections to such a solution. First, cognition is much wider than science. This is correct, and I argued as much myself in 2.5. This objection is much less weighty, however, if you take science in a sense closer to the German Wissenschaft, French science or Russian nauka, which includes not only natural but also all the anthropological sciences and even scholarship (cf. *Literaturwissenschaft*). As a matter

of fact, that is what science has been taken to stand for in the practice of this international genre; not only More or Zamyatin, but the writings of Americans such as Asimov, Heinlein, Pohl, Oliver, etc., would be completely impossible without sociological, psychological, historical, anthropological, *et sim.*, extrapolations and analogues. Further, an element of convention enters into all names (cf. comparative literature), but it has proved harmless as long as the name is handy, approximate enough, and above all applied to a clearly defined body of works.

The second objection is that the use of science fiction introduces an ambiguity between the whole genre and the 20th century SF from which the name was taken. Weighed against the advantages of the only term at hand fulfilling the above criteria, I would argue that this is at worst a minor drawback: nobody has serious trouble in distinguishing between More's book, the country described in it, and the sub-genre of utopia. The trouble begins with the variety of unrelated interdisciplinary and ideological interpretations foisted upon such a term; science fiction might perhaps escape the interdisciplinary part of that obstacle race. Furthermore, there seem always to be certain advantages to acknowledging clearly your methodological premises. As both Lukacs and Eliot would agree, any tradition is modified and re-established by a sufficiently significant new development, from whose vantage point it can be reinterpreted. This is, I would maintain, the case with the mentioned *ci-devant* traditions, e.g. of utopian literature, in the age of science fiction. The new name is no drawback at all, but simply an onomastic consummation.

4.1 If the whole above argumentation is found acceptable,it will be possible to supplement it also by a survey of forms and sub-genres. Beside some mentioned in 1.1 which recur in an updated form, such as the utopia and fabulous voyage, the anticipation, the superman story, the artificial intelligence (robots, androids, etc.) story, time-travel, catastrophe, the meeting with aliens, etc., would have to be analysed. The various forms and sub-genres of SF could then be checked for their relationships to other literary genres, to each other, and to various sciences. For example, the utopias, are – whatever else they may be – clearly sociological fictions or social-science-fiction, whereas modern SF is analogous to modern polycentric cosmology, uniting time and space in Einsteinian worlds with different but co-variant dimensions and time scales. Significant modern SF, with deeper and more lasting sources of enjoyment also presupposes more complex and wider cognitions: it discusses primarily the political, psychological, anthropological *use and effect of sciences and philosphy of science*, and the becoming or failure of new realities as a result of it. The consistency of extrapolation, precision of analogy and width of reference in such a cognitive discussion turns into aesthetic factors. (That is why the scientific novel discussed in 2.4 is not felt as completely satisfactory – it is aesthetically poor because it is scientifically meagre). Once the elastic criteria of literary structuring have

been met, *a cognitive – in most cases strictly scientific – element becomes a measure of aesthetic quality, of the specific pleasure to be sought in SF.* In other words, the cognitive nucleus of the plot co-determines the fictional estrangement in SF. This works on all literary levels: e.g., purely aesthetic, story-telling reasons led modern SF to the cognitive assumption of a hyperspace where flight speed is not limited by the speed of light.

4.2 *Finally, it might be possible to* sketch the basic premises of a significant criticism, history and theory of this literary genre. From Edgar Allan Poe to Damon Knight, including some notable work on the older sub-genres from the utopias to Wells, and some general approaches to literature by people awake to methodological interest, much spade-work has been done. In the work of Lem (see note 1) we may even possess some cornerstones for a needed critical home. If one may speculate on some fundamental features or indeed axioms of such criticism, the first might be the already mentioned one that the genre has to be evaluated proceeding from its heights down, applying the standards gained by the analysis of its masterpieces. The second axiom might be to demand of SF a level of cognition higher than that of its average reader: the strange novelty is its *raison d'etre.* As a minimum, we must demand from SF that it be wiser than the world it speaks to.

In other words, this is an educational literature, hopefully less deadening than most compulsory education in our split national and class societies, but irreversibly shaped by the pathos of preaching the good word of human curiosity, fear, and hope. Significant SF (to which, as in all genres – but somewhat disappointingly so – at least 95% of printed *matter claiming* the name does not belong) denies thus the two-cultures gap more efficiently than any other literary genre I know of. Even more importantly, it demands from the author and reader, teacher and critic, not merely specialised, quantified positivistic knowledge (*scientia*) but a *social imagination whose quality*, whose wisdom (*sapientia*), testifies to the maturity of his critical and creative thought.

Notes

1 The first version of this eassy crystallized out of a lecture given in the seminar on *fantastic literature* at the Yale University Slavic Department in Spring 1968. It was presented at Temple University, Philadelphia, at the University of Toronto, and at the 1970 conference of the Science Fiction Research Association at Queensborough Community College, New York. I am grateful for the opportunity of discussing it in these places. In particular I have derived much profit from personal discussions with Professor David Porter at the University of Massachusetts, J. Michael Holquist and Jacques Ehrmann at Yale, with Mr. James Blish and Miss Judy Merril, and with my colleagues at McGill University, Michael Bristol, Irwin Gopnik, Myrna Gopnik, and Donald F. Theall. This final version owes much to Stanislaw Lem's *Fantastyka i futorologia,* undoubtedly the most significent full-scale morphological, philosophical, and

sociological survey of modern SF so far, which has considerably emboldened me in the further pursuit of this elusive field, even where I differed from some of its conclusions. I am also indebted to the stimulus given by members of my graduate seminar on SF in the Department of English at McGill University. The final responsibility for the structure and conclusions of the essay cannot be shifted onto any other shoulders than mine, however little I may believe in private property over ideas.

While trying to keep the notes to a minimum, I am enclosing a basic bibliography of the most helpful books on theory and general surveys of SF after Wells:

Amis, Kingsley, *New Maps of Hell,* New York (1960).

William Atheling Jr. (James Blish), *The Issue at Hand,* (Chicago (1964).

———————, *More Issues at Hand,* (1970).

Bailey, James O., *Pilgrims Through Space and Time,* New York, (1947).

Bretnor, Reginald, Fd., *Modern Science Fiction,* New York (1953).

Bridenne, Jean-Jacques, *La Litterature francaise d'imagination scientifique,* Paris (1950).

Britikov, Anatolii, *Russkii sovetskii nauchno-fantasticheskii roman,* Leningrad (1970).

Caillois, Roger, *Images, images . . . ,* Paris (1966).

Clareson, Thomas, ed., *The Other Side of Realism,* Bowling Green, Ohio (1971).

Davenport, Basil Ed., *The Science Fiction Novel,* Chicago (1964).

Gerber, Richard, *Utopian Fantasy,* London (1955).

Gurevich, Georgii, *Karta Strany Fantaziy,* Moscow (1967).

Handke, Ryszard, *Polska proza fantastyczno-naukowa,* Wroclaw (1969).

Hillegas, Mark R., *The Future as Nightmare,* New York (1967).

Knight, Damon, *In Search of Wonder,* Chicago (1967).

Krysmansky, Hans-Jurgen, *Die utopische Methode,* Cologne (1967).

Lem, Stanislaw, *Fantastyka i futurologia I-II,* Cracow (1970).

Lundwall, Sam J., *Science Fiction: What It's All About,* New York (1971).

Moskowitz, Sam, *Explorers of the Infinite,* Cleveland (1963).

Moskowitz, Sam, *Seekers of Tomorrow,* New York (1967).

Panshin, Alexei, *Heinlein in Dimension,* Chicago (1968).

Pelke, Michael, and Norbert Lingfeld, *Roboter und Gartenlaube,* Munich (1970).

Schwonke, Martin, *Vom Staatsroman zur Science Fiction,* Stuttgart (1957).

Suvin, D. ed., *Other Worlds, Other Seas,* New York (1970).

Trotsky, Leon, *Literature and Revolution,* Chapter 6, Ann Arbor (1960).

The best available anthology is Robert Silverberg ed., *The Mirror of Infinity,* San Francisco 1970, with critical introductions by various hands to each story.

A virtue of discussing this seemingly peripheral subject of science fiction and its utopian tradition is that

you have to go back to first principles, you cannot really assume them as given – such as in this case, what is literature? Usually, when discussing literature you determine what it says (its subject matter) and how it says what it says (the approach to its themes). If we are talking about literature in the sense of significant works possessing certain minimal aesthetic qualities rather than in the sociological sense of everything that gets published at a certain time, or the ideological sense of all the writings on certain themes, this principle can more precisely be formulated as a double question. First, epistemologically, what possibility for aesthetic qualities is offered by different thematic fields (subjects?). The answer given by the aesthetics dominant at the moment is – an absolutely equal possibility, and with this answer our aesthetics kick the question out of its field into the lap of ideologists who pick it up by default and proceed to bungle it. Second, historically, how has such a possibility in fact been used? Once you begin with such considerations you come quickly up against the rather unclear concept of *realism* (not the prose literary movement in the 19th century but a meta-historical stylistic principle), since this genre is often pigeonholed as non-realistic. I would not object but would heartily welcome such labels if one had first persuasively defined what is "real" and what is "reality". True, this genre raises basic philosophical issues; but it is perhaps not necessary to face them in a first approach. Therefore, I shall here substitute for "realism" and "reality" the concept of "the author's empirical environment", which seems as immediately clear as any.

3. Sub-title of S. Butler's SF novel *Erewhon.*
4. J. Willett ed., *Brecht On Theatre,* pp. 192 and 96, New York (1964). I have changed Mr Willett's translation of *Verfremdung* as *alienation* into *estrangement,* since alienation evokes incorrect connotations.
5. Note the functional difference to the anti-gravity metal in Well's *First Man On The Moon* which is an introductory gadget and not the be-all of a richer novel.
6. E. Bloch, *Das Prinzip Hoffnung,* Vol. 1-2, Frankfurt a.M. (1959): L. Mumford, *Story of Utopias,* New York (1922), and *Utopia, the City and The Machine,* in F.E. Manuel, Ed., *Utopias and Utopian Thought,* Boston (1967); N. Frye, *Varieties of Literary Utopias,* in Manuel, *op. cit.*

the development of a science fiction writer: II

In which Mr. Blish continues our series dealing with the manner in which leading sf writers entered the genre, and how they developed within it.

In *The Shade of Future Things*, Brian W. Aldiss notes that his future was largely shaped by the discovery of magazine science fiction at the age of thirteen. The same thing happened to me, when I was nine, and I can even place the date: June, 1931. And it seems to me that the half of the Twentieth Century that I have seen, fifty years plucked out of the middle of it, has been science-fictional from first to last, for non-readers as well as for me. There have been very few exterior events, even including some political ones, which cannot be found earlier in the pages of some SF story. My sense of wonder seems to lie pretty near the surface, for it is capable of being turned on by almost anything; but one of the chief marvels of my existence has been the feeling that for me, events did not so much happen as come true.

Curious; I cannot suppose that I'm unique in looking at events in this way, and yet though I have met about seventy-five science fiction writers, many of whom I know or knew well, and uncountable hundreds of its readers, nobody has ever mentioned having this sensation. It is like looking at history standing on one's head. I suppose it is easier to be put off by the enormous numbers of SF predictions which *haven't* come true – its reputation as a literature of prophecy is vastly overblown, and survives only by ignoring its misses – but it seems to me that even in the 1930's it was possible to exercise a sort of common sense about the future, and to pick out the virtually inevitable coming events from the welter of sheer romancing. Speaking about some successful forecasting of his own, Robert A. Heinlein has described it as about as startling as for a man to look out of a train window, see that another train is coming head-on toward his own on the same track – and predict a train wreck. Just so; but the trick requires an instinct for the probable that doesn't seem to be very widely distributed. It has to be regarded as a gift, since I had it at the age of nine: the ability to see, for example, that interplanetary travel was as inevitable as Mr Heinlein's train wreck, whereas time travel was just a romancer's game.

I had played at being a writer even earlier. I was given my first typewriter, a second-hand Smith-Corona portable badly out of alignment, when I was about six. On this I produced single-copy booklets containing lurid but mercifully short stories of fire, war and other disasters, featuring myself and imaginary companions, as well as, later, some verse. But my major

ambition in those days was to become a scientist. Astronomy attracted me most, although my arithmetic marks would have discouraged me had I really known anything about the science, and it was not until I was in college that I got my first look through a telescope. I was, however, given a microscope, a small Wollensak which was not much more than a toy but nevertheless worked quite well, and discovered the protozoa to be quite as exciting as the planets. Around this instrument a basement laboratory started to grow (and continued to do so for the next ten or more years).

The collision between the laboratory and the typewriter, now so inevitable in retrospect, was in reality curiously muffled and was a long time in producing any visible consequences. It was begun in 1931 by one of my block friends who knew of my interest in astronomy, who offered to give me a book that told all about life on other planets. This turned out to be the April, 1931 issue of *Astounding Stories.*

I still have a copy, although of course not *the* copy. The cover, by Wesso, shows two men in tight-fitting jodhpurs jumping with apparently suicidal intent at three much bigger crocodile-men, against a nocturnal background of cone-shaped buildings whose triangular openings glow an ominous orange. In the background, too, there appear two other crocodile-men who seem to be trying to catch the humans in the red rays of some kind of electric torch. Seven years later, Brian Aldiss was to encounter magazines of this sort with covers bearing only marginal relationship to the contents; but this Wesso cover faithfully represented a scene in the lead-off story, *Monsters of Mars*, by Edmond Hamilton, in which the human explorers are transmitted by radio to Mars just in time to stop an invasion of Earth by the crocodile-men. The issue also included two other space-travel stories, a story about a visit to another dimension, one about a descent four miles into the earth, a fantastic story with a South Polar setting, and the beginning of a serial about time travel – a very good sample, luckily, of the range of science fiction subjects at the time. (Two of the authors, Mr Hamilton and Jack Williamson, are still active producers in the field.)

Thanks to previous reading in the then proliferating air-war pulps (which was eventually to lead me to learn to fly, though that's quite another story), I knew these pieces to be fiction at once – though the opening instalment of the serial, Ray Cummings' *The Exile of Time*, depicted a robot invasion so realistically that I decided then and there not to be anywhere near New York City in the year 1935, which did not seem even to me to be very far in the future. I think I must have been a little disappointed, but if I was, I was also sufficiently entranced by the stories so that all memory of disappointment has vanished. I promptly drummed up 20 cents (*Astounding's* successor, *Analog*, today costs 60 cents for about half the amount of wordage) for another issue, only to find that the one on the stands by then was the July issue–I had missed the two middle instalments of the serial. At the time, I looked about also for other magazines of the same

sort, but I found these to be larger, stodgier, and crucially, more expensive. Conversely, I found the *Buck Rogers* comic strip too unsophisticated, though I liked the drawings.

I learned a lot from these magazines, including a lot that wasn't true, such as that some asteroids had atmospheres and were inhabitable, or that the gravity of Jupiter is crushing; and what I learned that *was* true had about as much applicability to my daily life as the knowledge of how to bail out of an aircraft which has been shot down in flames. But the power of subsequent events to surprise me and/or take me aback was much diminished by the magazines, and much of my daily life now might have come right out of one of them. In this, of course, I do not differ from many thousands of other SF readers. But I think our understanding of this process gives us a slight edge over our fellow-citizens who didn't acquire our addiction, many of whom are now blundering about dazedly in the throes of what has been dubbed future shock. We may not like everything that's happening – I certainly don't – but we're a little less likely, perhaps, to be bowled over.

I had a letter published in *Astounding* when I was in seventh grade, but for reasons I don't at all understand it didn't occur to me to try to write a SF story until I was in high school. My then English instructor was duly astounded, but to his eternal credit, encouraging, a very rare attitude in that era. With a classmate, I started an all-fiction fan magazine, *The Planeteer,* mostly written by myself and about up to the usual fan fiction standards, that is, vile. (We did buy – yes, *buy* – two stories by professionals, one from Laurence Manning and one from Edmond Hamilton. They weren't much of an improvement).

I didn't actually sell a story until I was a sophomore in college (1940), and of the first ten I had published, only one had any merit whatsoever. The eleventh, however, *Sunken Universe* (1942) contained the germ of, and eventually was incorporated into, *Surface Tension* (1952), by far the most popular single story I have ever written. Together, they reflect the most directly of all my works my continuing interest in microbiology, which I pursued formally in university; but I think it is fair to add that the biological sciences play important roles in more of my output than in that of any other living SF writer known to me.

I was drafted soon after I graduated, in 1942, and during my two years in the Army, spent entirely Stateside as a medical laboratory technician, I wrote nothing. Once out, however, I went back into production with a vengeance, not only of SF, but of almost every other kind of thing for which a market existed, including Westerns, detectives, sports stories, popular science articles, and even poetry and criticism for the literary quarterlies (these last two still make up an important part of my output, although, of course, not of my income). It was during this period (1945-6) that I wrote my first SF novel, *The Duplicated Man,* in collaboration with Robert W. Lowndes, with whom I was sharing a New York City apartment while I did graduate work at Columbia University; but it

didn't see publication until 1953, and then in a magazine Bob himself edited. By 1948 I was selling so much – though to be sure at pretty tiny rates – that I was emboldened to try becoming a full-time free-lance author.

My timing couldn't have been worse. I had by that time also acquired a wife, an infant and a mortgage; furthermore, that was the year most of my non-SF markets chose to collapse. Defeated, I got a job as a trade newspaper sub-editor, continuing to write nights and weekends. I was also forced to sell the house.

Nevertheless, 1948 was an important year for me in another way besides teaching me some bitter economic lessons; it was then that I wrote the first of my stories about space-flying cities. John Campbell of *Astounding* rejected this but with an enormously detailed commentary, the gist of which was that what I had submitted couldn't be an independent story but a rather late stage of a series, made possible (the series) by the fact that I'd failed to consider almost all the implications of the central idea. The series was written, and bought, and the rejected story did appear in its proper order. (That story, *Earthman, Come Home*, is to be in Volume II of SF *Hall of Fame*, as *Surface Tension* is in Volume I). By 1962, the original 15,000 words had grown into four novels, now published collectively under the title *Cities in Flight*, and I hope to add a coda for the forthcoming Campbell memorial volume. In addition, the motion picture rights have been sold and I have myself written the shooting script for the first of the films.

These books, despite some novelties *en passant*, are rather old-fashioned, essentially slam-bang interstellar adventure in the direct line of descent from E.E. Smith (and, for that matter, early Campbell). Yet despite their actual age – the most recent of them is now a decade old – and their more fundamental mustiness, they're still bringing in substantial royalties and subsidiary sales; and the popularity of Larry Niven's *Known Space* series more recently would seem additional evidence that the mode of the interstellar epic is still viable. (*What are you guys going to write about now they've actually landed on the Moon?*).

I think, however, that I have done much more original work, which will in the end also prove to be more lasting. In order to keep this essay down to manageable length (and in part, I suspect, because I seldom enjoy reading autobiography and actively loathe writing it), I have barely managed to mention literary interests of mine quite outside SF, and among these is philosophy. A number of them surfaced at the same time in *A Case of Conscience*, which began its quite astonishing publishing history – at the time I was writing it, I was convinced that it was unsalable – as a 23,000 word magazine story in 1953. Later, against stern resistance from me, Frederick Pohl and Betty Ballantine persuaded me to make a novel of it, which appeared, under the same title, in 1958, and won me my only Hugo. It has stayed in print ever since and has been translated in many unlikely places, including Japan – I very much wonder how an Asiatic audience, even as thoroughly modern a one as the Japanese, could make much sense of a

novel the central problem of which is presented in terms of Christian theology, and sectarian Christian to boot.

I do not claim that I invented the theological SF story – in fact, I took pains to point out my ancestors in one of my two books of critical essays on SF, *The Issue at Hand* (1964) – but mine seems to have been the first to have captured and held the attention of what seems to be a majority of the modern SF audience. One reaction why this happened may be that I took what had been for me, up to that time, quite exceptional pains to make it full, well rounded and rich *as a novel*, so that it might hold the reader to whom its decidedly Scholastic theological involutions might prove dull or even outright repugnant. I have since discovered what I think may be an even more important reason, which I shall have to approach roundabout by way of a long anecdote, for which I ask forgiveness; I can see no other way to clarify it; As follows:

With some exceptions, I do not like fantasy, but I have had a lifelong affection and admiration for E.R. Eddison's *The Worm Ouroboros,* and had often thought of trying to write a novel in which the rituals of ceremonial magic as it was actually practiced would play a similarly important part. In 1957, the same year in which I wrote what is now the final novel of *Cities in Flight* and the novel version of *A Case of Conscience* – as well as a sort of novelised monster movie called *V O R* – I decided to try this, and for my central figure settled upon Roger Bacon, of whom I knew very little except the rather Faust-like legend best exemplified in Robert Greene's Elizabethan play *Friar Bacon and Friar Bungay.* When I began to investigate the historical Bacon, however, I found first of all that he had been an *opponent* of magic all his life, and second that his actual life as a pioneer of scientific method – perhaps its inventor – and his complex career and prickly personality made him far more interesting to me than he would have been as a magician. The outcome, years later, was a straight historical novel, *Doctor Mirabilis* (Faber & Faber, 1965; Dodd Mead, revised, 1971).

Doctor Mirabilis is my choice as the best book I have ever written, but it left unscratched the original itch to write a novel about magic. I finally (as I thought) satisfied this with a book called *Black Easter* (1969, after a magazine appearance), which generated more reviews than anything I had ever written before, most of them in newspapers which previously had been quite unaware of my existence. This was gratifying, but for me *Black Easter* had a much more important outcome: when I had just finished it, I realised that I had now written three novels, widely separated in times of composition and even more in ostensible subject-matter, each one of which was a dramatisation in its own terms of one of the oldest problems of philosophy: *Is the desire for secular knowledge , let alone the acquisition and use of it, a misuse of the mind, and perhaps even actively evil?*

I would not suggest for an instant that any of the three novels proposes an answer to this ancient question, let alone that I have one now or indeed ever expect to find one. I report only

that it struck me that in each of the three books the question had been raised, from different angles and without my being aware of it while I was writing them. I therefore noted, in the third one to be written, that in their peculiar way they constituted a trilogy, to which I gave the over-all title *After Such Knowledge,* and subsequently explained my reasons (including acknowledging that the concept of making them a trilogy had been hindsight) in a fan magazine article. Thereafter, and this time in full awareness of what my theme was, I wrote a fourth novel for the group, but since this was a direct sequel to *Black Easter,* I still regard it as a trilogy and hope that some day it will be republished as such, although at present it includes four titles: in the order in which they are best read, not in order of composition, *Doctor Mirabilis, Black Easter, The Day After Judgement* and *A Case of Conscience.*

I don't like propaganda disguised as fiction and have never written any – though one recent story of mine, *We All Die Naked,* has been widely mistaken to be such a hybrid; though SF has been extensively exploited as a vehicle for social criticism, from Swift on, my own credo is that I am a sort of artist (a severely crippled one, as nobody can know as well as I do) and that whatever the artist's positive function in society may be, he has the negative obligation to avoid carrying placards and to stay off barricades. I think this may apply with special force to the science fiction writer, part of whose stock in trade it is to imagine many different kinds of futures most of which will contradict each other and in none of which he can invest more than a temporary acceptance for the sake of the story and the people in it, which is where his primary allegiance must remain. I have never seen a Utopia or any other kind of fictional future, including any of my own, that on inspection did not turn into something I would hate to live in, or want anybody I cared for to have to live in; and much more pragmatically, I've observed that every example of what is now being called relevant SF (in the social political sense) that I have ever read has been turned into unreadable nonsense by subsequent history unless it also contained and indeed depended upon some essentially timeless riddle of the human condition, one still capable of invoking wonder, joy or sorrow as no amount of technological ingenuity or future shock can ever do.

And this, I flatter myself, is what explains why *A Case of Conscience* and its three successors had so extraordinary and unexpected an impact on the SF audience and widely beyond it, despite the fact that they belong to different genres and are all packed with esoteric details about subjects – Thirteenth Century politics and theological disputes, modern black magic, and far future technology – which seem to have nothing in common and should have split the readers into utterly disparate groups which might like one of the books but have no use at all for the others. But that's not what happened, and I now think I know why: the problem of the misuse of secular knowledge, and the intense distrust of it, runs through all four novels . . . and without any such intention on my part, it turned out to

be relevant as well as timeless.

I'm through with that problem now, since I'm not a philosopher and have nothing more to contribute to it. But I've got another one of that kind on the fire, and though I've no idea what fictional form it will take, I know now that this has become my metier – though I'll continue to write SF novels which are only games, because I like to and I still seem to be good at it – and I think I've found, at long last, why I wanted to be a writer in the first place, and why I continue to be one.

Voices from the Stars

The Science Fiction Foundation presents a series of edited tapes from 'The Star-Gazers', the Radio London programme of interviews with SF writers, presented by George Hay.

These come in:

Reel-to-reel tapeletters, two sides, approx 8 min per side, 3¾ i.p.s.
Reel-to-reel tapeletters, two sides, approx 8 min per side, 1⅞ i.p.s.
Cassette, as above, 1⅞ i.p.s.

1 *Side one:* Introduction by George Hay/James Blish on 'Solaris'
Side two: Peter Nicholls, SFF Administrator, on SF and the SF Foundation.

2 *Side one:* James Blish, book reviews
Side two: James Blish, book reviews

3 *Side one:* George Hay interviews Michael Moorcock on NEW WORLDS
Side two: Michael Moorcock and John Harrison on Jerry Cornelius

4 *Side one:* John Brunner on 'Stand On Zanzibar'.
Side two: Interview with John W. Campbell

Despatch within two weeks of receipt of order. All the above 50p each, p and p inclusive. From:

The Administrator,
SCIENCE FICTION FOUNDATION,
N.E. London Polytechnic,
Barking Precinct,
Longbridge Road,
Dagenham, Essex RM 8 2AS.

Attendees of SCI-CON 70, the 1970 British Science Fiction Convention, will recall the fascinating talk given by Dr John Clark, of the Department of Psychology of Manchester University, on the parameters of mystical experience. James Blish, Guest of Honour at that same Conference, has made able use of this material, as readers of his 'Midsummer Century' may have noticed. Research in this area has proven continuously rewarding. It is with pleasure that we bring you here, by courtesy of Pulse, the medical newspaper, a detailed exposition by Dr Clark of these findings.

a new map of the mind

by John H Clark

In this article I have set myself the task of constructing a three-dimensional map of the mind with which to attempt the solution of 'the problem of mysticism'. I define this problem as follows: To explain why the mystical procedures should cause the human mind to experience *these* states, the mystical states, as described in mystical literature.

As a preliminary step, I have tried to isolate the essential data. Looking at the various mystical procedures, I have selected what seemed to me to be the most frequently used method, the method of meditation as used in Yoga, and I have analysed it using a flow diagram [1].

I suggested that the effect of meditation is to reduce the number of 'Things on the Mind' to a minimum while, paradoxically, keeping up the level of attention. I speculated that this might lead to an unstable state of the brain which might therefore change suddenly to a more stable configuration. I used the analogy of a supersaturated solution which suddenly crystallises.

Analysing the mystical literature, I put forward a set of seven basic ideas which seemed to me, when elaborated by a variety of literary devices, to be capable of 'generating' descriptions of mystical states. These basic ideas are: Certainty, Knowledge, Unity, Eternity, Light, Joy and Freedom. I refer to them as: (C), (K), (U), (E), (L), (J) and (F).

Using both the descriptions of mystical states contained in the mystical literature, and clinical descriptions of pathological states such as mania and depression – together with our knowledge of the everyday states of mind of health – I pieced together a network of mental states which I refer to as the 'Labyrinth.'

These states are: The Average state, the Peak Experience, the Mystical state proper, the Void and the Zen state. I refer to these by the letters, A, P, M, V and Z. In addition, the first three states have 'gloomy' complementary versions: $\underline{A}$, $\underline{P}$ and $\underline{M}$. The last one of these, $\overline{M}$ (which I call 'M-bar'), is the terrible Dark Night of the Soul, one of the many hazards of the mystical path.

Mental network

My present task, therefore, is to put forward a map of the mind which will link up a flow diagram of Yoga meditation, a network of states of mind and a content-analysis of mystical

literature.

Certainty is a continuous variable, from C_{zero} to C_{100} (which latter term stands for *absolute* Certainty). Certainty is displayed twice on the map in the sense that it is shown increasing from C_{zero} to C_{100} around two sides of the circle, (see Fig. 1).

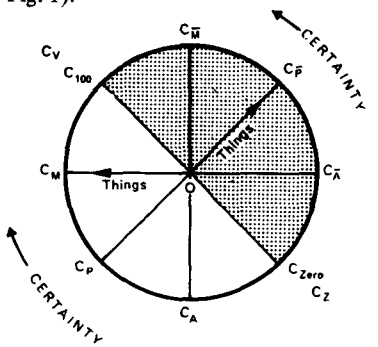


Fig. 1 Certainty

Note that certainty is drawn as an angular co-ordinate from the central point O, which I call the origin. The shaded area represents the 'gloomy' or pessimistic side of the map. This is an exact replica, or mirror-image, of the 'cheerful' or optimistic side. (In this article I do not have space to discuss the *natural* Outsider whom I believe to be quite at home at $\bar{A}$.)

The letter A stands for the A-state or the average state of everyday life. The position of A is meant to imply a low degree of certainty on the optimistic side of the map. It seems to me that this roughly speaking means a 'normal', ordinary, healthy life.

The average person is mildy optimistic. However, after, say, influenza, such a person may unexpectedly find himself at $\bar{A}$. This is a place having an equally small degree of certainty as there is at A, but now on the pessimistic side. Whereas, at $\bar{A}$, the average person feels that 'things' are on the whole going quite well, he now finds himself, at $\bar{A}$, in alien territory where, in a mood of apprehension, he doubts a benign outcome to even the most trivial situation. Indeed, he may feel anxious when called upon to perform the simplest task. This place A is felt to be alien by this person, who may say that he 'has the blues.'

Fortunately, such episodes are usually short-lived and soon forgotten.

Peak experience

However, every now and again another 'trip' may be taken from A. This time, however, the trip is to P, a place of increased certainty, and this change is felt as a state of euphoria. 'Things' are now going very well indeed and a sense of intense joy and increased freedom are experienced. Such episodes are very often accompanied by some excitement. These P-states can be 'triggered' by a wide variety of circumstances which have been detailed by Marghanita Laski in her book on ecstasy [2].

From P we can move on the map to M which stands for the mystical state proper. The M-state may sometimes be reached by the practice of meditation and this brings us to consider our two other dimensions, Things and Attention.

The effect of meditation, is to reduce the number of 'things on the mind' but, at the same time, to increase the attention being paid to them. I can represent this change

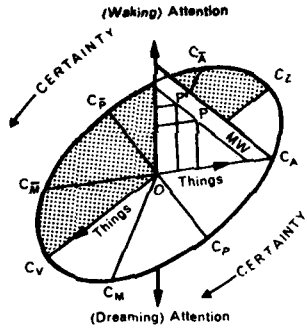


Fig. 2 Concentration

by a diagram (see Fig. 2)

The small letter p in Fig. 2 stands for a person (accompanied perhaps by his psyche?) who is, in this case, at the average state, A. The position of prime represents the person during concentration. The line labelled MW, for 'mindwork' has the property that all rectangles under it, such as the two rectangles with the letters p and p′ at their top right-hand corner respectively, have the same total length of side.

By using this diagram I am trying to represent an assumption that I make, that a person can move up and down such a mindwork line, and thus continue to do the same amount of mindwork, although varying the amount of attention being paid to a varying number of things. Should the level of mindwork increase or decrease, it can be represented by a family of other such lines, as shown in Fig. 3.

In Fig. 3 note that the proportion of attention to things remains the same at the three points marked p_1, p_2 and p_3. This constancy is shown by the line labelled 'Concentration=1'.

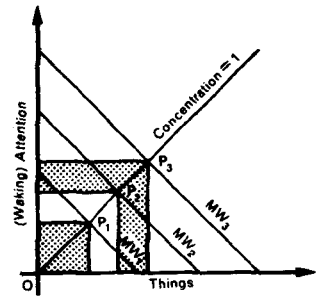


Fig. 3 Levels of mindwork

Ratio of attention

By concentration I mean the ratio of attention to things. That is to say: Concentration = Attention/Things. Thus, when the ratio rises there is a surplus of attention per thing and this, I suppose, corresponds to our subjective feeling of an increase in concentration. *In Fig. 4 there is such* an increase between p and p′.

The next important step is to see how certainty and concentration are linked on the map. My main idea is that certainty sometimes rises when there is a persistent and repeated surplus of attention, in other words when concentration rises well above 1,

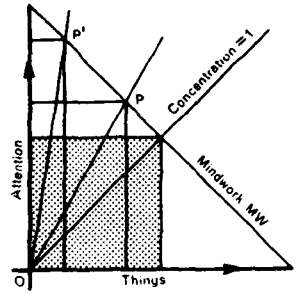


Fig. 4 Increase in concentration

as in meditation. However, as we all know, concentration itself is not usually enough to produce a rise in certainty; the mere act of thinking very hard about something does not, in itself, ensure a rise in our 'sense' of certainty.

To overcome this objection my explanation of the rise in certainty that does sometimes occur, in the presence of a rise in concentration, is as follows: I envisage that there is, in this case, an increase in a third factor.

This factor I suppose to be one concerning the internal agreement of some of the computing elements of the brain.

I suppose that this agreement in the brain is felt as a rise in certainty in the mind. This idea, of an internal agreement arising between surplus computing elements is expressed in another way by my analogy of a super-saturated solution which crystallises.

Concentration is only one of the ways by which this strange and somewhat unattached 'sense' of certainty may be raised. (Two other causes of a rise in certainty are the hallucinogenic drugs such as LSD and some mental illnesses, particularly mania).

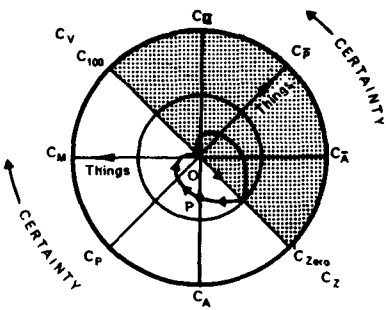


Fig. 5 The mystical path

We can now imagine the mystical path to be a spiral, as shown in Fig. 5. Assuming the level of mindwork remains at its everyday or average level, then as concentration increases, things will decrease and attention will increase.

As things diminish the point p moves in towards the origin and the mystical path swings round and up and inwards, (see Fig. 6). Finally p reaches

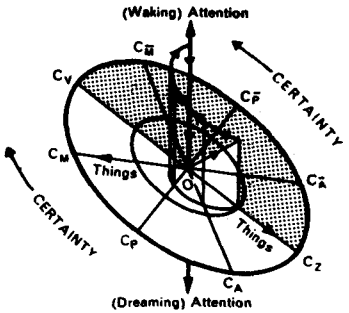


Fig. 6 The mystical path seen as an ascending spiral.

V, the plane of absolute certainty C_{100}; but this plane is only reached at the axis, which passes down through the origin O.

This seems to me to be a sort of cosmic joke. It would appear that the mystic can only achieve absolute certainty when he reaches the axis of the map, where there are *all* degrees of certainty, and none.

Upon reaching the plane of C_{100} at the axis, I image that the point p drops to the origin O, since I take it that attention cannot be 'paid' to zero things. We have now reached the V-state, the void, and we have done so at the origin. We have reached the void which is so mysterious that the only thing that can be said about it is

that *nothing* can be said about it. I symbolise this paradox by the following equation:

$$V = \{\ \}$$

The pair of empty brackets represent the null class – the empty set – of descriptions. This is *true* ineffability.

From the void a person can return to the world of things again by re-emerging from the origin into the strange plane of zero certainty, C_{zero} where everything is just the same as before but also, somehow, quite different. Here the 'doors of perception' have been 'cleansed', time has changed its character and the will is found to be free.

This, in the language of Zen, is *Satori* or Enlightenment.

The data we have from the mystics on the mystical path is incomplete and largely unstandardised. That is to say, each mystic uses his own terminology and selects which particular experiences to describe, from what must be a much wider set of experiences.

One of the tasks of psychological research, therefore, is to obtain more complete data using a standardised terminology. A start has been made in this direction by Marghanita Laski (Ref. 2) and a survey of 'religious experiences' in general is being planned by Sir Alister Hardy at Manchester College, Oxford.

However, using the data available to us at present it is possible to compare the different mystics' descriptions of the mystical path and to see where their terms coincide, where they overlap and where there are gaps. Since no one mystical author provides a comprehensive descriptive terminology, I have been obliged to devise one. I divide the mystical path up into seven stages, as follows: orientation, concentration, meditation, contemplation, the void, re-emergence and return.

I can now tabulate these seven stages as shown in the table:

Table 1. The Stages on the Path.

Stage Number	Name	Symbols
I	Orientation	Ⓐ ⟷ A
II	Concentration	A ⟷ A with high concentration
III	Meditation	A ⟷ P and A ⟷ M
IV	Contemplation	M ⟷ V
V	The void	V
VI	Re-emergence	V ⟷ Z
VII	Return	Z ⟷ A′

A few comments are necessary here to explain the symbols. The circle around A in stage 1, thus Ⓐ represents the conventional *persona* of average life. The circle symbolises the stability and protection which that life offers us. Perhaps mankind has evolved so as to be at Ⓐ most of the time?

The orientation stage, stage 1, is the stage of losing the sense of Ⓐ being 'reality', Hints of a 'greater reality', 'immortal longings' for a different way of life – such as mystics and poets describe – begin to erode the protective wall of everyday. This process may take time and be intermittent and so I represent it by a reversible arrow, thus:

Ⓐ ⟷ A

The next stage, stage II, is the process of concentration as typified by part of Yoga [1]. The degree of certainty remains at A but the person increases his concentration by diminishing the things on his mind while maintaining a high level of attention.

When stages I and II have been diligently pursued for a long time, the person may move on to stage III, the stage of meditation, which takes him on temporary 'trips' first to P and later, all the way to M.

Stage IV is usually described as being passive. It also appears to be irreversible, unlike the previous stages. Contemplation is, therefore, shown with an arrow that points only to the void.

The symbol for stage V is meant to convey the idea of a stay in the void of indefinite duration.

When the person re-emerges from the void, in stage VI, he finds himself in the eerie world of Zen [3], at C zero. I doubt whether one can stay at Z for long as I should imagine that it is an unstable state and incompatible with ordinary human life.

Instead, I suggest the person returns, in stage VII, to A but to a changed A, A prime, (which I call 'A–dash'). The change is along the dimension of non-attachment (not shown on the map) as described by great *Gurus* of the past such as Krishna [4] and by a notable modern *Anti-Guru*, Krishnamurti [5]. This idea fits in with the widely held opinion that the mystical path changes people progressively.

Work is in progress to extend the map. Dreams, to take only one example, can be represented by turning the map upside down.

Finally, let me draw your attention to the mystical path again, by showing it as it spirals upward in the three dimensions of this map of inner space (see Fig. 6).

References

1. John H. Clark, "A Program for Patanjali", *New Society*, (23 July 1970).
2. Marghanita Laski, 'Ecstasy', London *The Cresset Press* (1961).
3. Alan W. Watts, 'The Way of Zen'. *Penguin* (1962).
4. Swami Prabhavananda and Christopher Isherwood, 'Bhagavad –Gita'. London. *Phoenix House*, (1956).
5. M. Lutyens (Editor), 'The Penguin Krishnamurti Reader' *Penguin* (1970).

BOOKS RECEIVED

The Men in the Jungle by Norman Spinrad, Sphere Books, 35p.
New Worlds 4, Edited by Michael Moorcock, Sphere Books, 35p.
Nine Princes in Amber by Roger Zelazny, Faber & Faber, £1.75.
The Day After Judgement by James Blish, Faber & Faber, £1.60
Var the Stick by Piers Anthony, Faber & Faber, £1.95
Kuldesak by Richard Cowper, Gollancz, £1.80.
City of Revelation by John Mitchell, Garnstone Press, £2.90.
Report on Planet Three, Gollancz, £2.20.
Lords of the Starship by Mark Geston, Sphere Books, 30p.

The Sheep Look Up is a novel built around the regrettable possibility that the experts who prophesy imminent ecological collapse may be right, but that after a brief flurry of anxiety and the passing of a few enactments the public may grow bored with their repeated warnings and lapse back into their bad old habits. The action takes place during the last year before in the most technically advanced countries life becomes unbearable through an endless accumulation of minor setbacks such as the contamination of water by intestinal bacteria and the destruction of crops by perfectly resistant insect pests.

The action is divided into twelve monthly sections, each preceded by a short poem praising some human action which we would now look at askance, from the king's great slaughter of wild-life in pre-Norman days to the eventual arbitrary banning of salt as a potential poison.

The Sheep Look Up will be published in summer 1972 by Harper & Row, and a paperback edition from Ballantine will follow.

a series of twelve poems

by John Brunner

Illustration for 'The Tick-Tock Men' by Pat Calman

PROSPECTUS

The day shall dawn when never child but may
Go forth upon the sward secure to play.
No cruel wolves shall trespass in their nooks,
Their lore of lions shall come from picture-books.
No aging tree a falling branch shall shed
To strike an unsuspecting infant's head.
From forests shall be tidy copses born
And every desert shall become a lawn.
Lisping their stories with competing zest,
One shall declare, "I come from out the West,
Where Grandpa toiled the fearful sea to take
And pen it tamely to a harmless lake!"
Another shall reply, "My home's the East,
Where, Mama says, dwelt once a savage beast
Whose fangs he oft would bare in horrid rage –
Indeed, I've seen one, safely in a cage!"
Likewise the North, where once was only snow,
The rule of halls and cottages shall know,
The lovely music of a baby's laugh,
The road, the railway and the telegraph,

And eke the South; the oceans round the Pole
Shall be domestic. What a noble goal!
Such dreams unfailingly the brain inspire
And to exploring Englishmen do fire . . .

"Christmas in the New Rome", 1862

CARNAGE Hunted?

MARCHING ORDERS

"Go ye and bring the Light
To Savage strands afar.
Take ye the Law of Right
Where'er the unblest are.

* "Heathens and stubborn Jews,
Lovers of Juggernaut,
Give them the chance to choose
That which the Saviour taught.

"Go where the gentle Lord
Is still as yet unknown,
There where the tribes ignored
Strive in the dark alone.

"Arm ye to face the foe,
Carib and cannibal,
Men who must live as low
As any animal.

* "Cover the naked limb,
Shoe ye the unshod foot,
Silence the pagan hymn,
Conquer the godless brute.

"Tell them the news of Love,
Preach them the Prince of Peace,
Tear down their pagan grove,
Give them divine release."

"The Sacred Sower: Being a Collection of Hymns and Devout Songs Adapted to the Use of Missionary Societies", 1887; verses marked * may be omitted if desired.

IN PRAISE OF BIOCIDE

Than fund he ther fisceras;
The makede hym mickel welcom;
Craft was in hir kilyng;
Than hyede hym to hontyng;
Fowlis and faunis:
Sauf that his sotil shaft:
Ol that war on lyve:
Togh it ben to tel:

Ferce fukkis:
Dove and dawe:
Faible falwe:
Deth draggede:
Wantede the water:
Scars war to se:
Than cam the croude:
Ful war the festers:
So fal the Saxon:
So befal foemen:

and weltoghte fugeleras,
as maistre of londes.
with hem the cyning
hartis and brockis.
fain had the fled hym,
strock hem on ronyng.
overcam he of bestis.
talye of targetis.
For that
felte smerte,
darte to herte,
fel aperte,
divers sterte.
welvers ne froggis,
sluggis ne snakis,
to cyninges hal again.
fourten daies fed the.
so be hir sloghter,
wold frighten hys relme . . .

"The Chronicle of That Great Progress Made by our Lord the King through his Eastern Lands This Summer Past", 938 (text corrupt, a late copy by a post-Conquest scribe).

LONG MULTIPLICATION

Behold! th'industrious *Hind,* who daily walks
His narrow fields, and with a miser's care
(Tho' with a nobler motive, for to spare
Foul waste, and weeds) inspects the sep'rate stalks,

Who roots out all that are infect with blight
(For plants, like men, fall ill) and, mouthing ire,
Sets the sere stalks upon a smoky fire,
Then chooses from the seed that grew aright

Such as will, after golden harvest-time,
Repeat their kind, but bettered, sweet and sound,
Their Chaff stript off by thrashers as of yore:
Him do I sing, as worthy of my rime,
Him whose devotion to the pregnant ground
Makes two ears grow where one ear grew before.

"The Agricultural Muse," 1710

HERO FIDDLING

Hey, man with the big muscles!
  Yes, you!
Steam-powered, gas-powered, electrically-powered,
You with the big concrete and cement footprints!
Globe-girdler, continent-tamer, putting the planet through hoops,
  You I hail!
Packer and preserver of food in incorruptible cans,
Blocker-out of winter-blast with bricks and mortar,
Wheeled, shod, tracked with rails of shining iron,
Multiplier of goods and chattels, chewer-up of forests,
Furrow-maker across the unpopulous plains,
Flier higher than eagles, swimmer swifter than sharks,
Trafficker in the world's wealth, miracle-worker,
  I salute you, I sing your praises . .

"Song of the States Unborn," 1924

GRAB WHILE THE GRABBING'S GOOD

When I came here there was nothing to be seen
But the forest dread and the prairie green.
Coyotes howled in the vale below
With the deer and the bear and the buffalo,
  To my wharl-fol-the-day, whack-fol-the-do,
  Whack-fol-the-day-fol-the-didy-o!

So I took my axe and I cut the trees
And I made me a shack for to lie at ease,
With the walls of log and the roof of sod
And I gave my thanks at night to God,
  To my whack . . .

And I took my gun and my powder-horn
And I killed the varmints that stole my corn,
With meat and bread I had a good life,
So I looked for a woman who would be my wife,
  To my whack . . .

When he was a boy I taught my son
To use the plow and the hoe and the gun.
The fields spread out as the trees came down –
There was room at last for a little town,
  To my whack . . .

There's a church of clapboard with a steeple,
And Sunday morning it's full of people.
There's a bank, a saloon and a general store
And a hundred houses weren't there before,
To my whack . . .

And now that I'm old and prepared to go
There are cattle instead of the buffalo.
They'll carry my coffin to my grave
Down roads they say they're going to pave,
To my whack . . .

So I'm happy to know I made my mark
On the land which once was drear and dark,
And I'm happy to know my funeral prayer
Will be heard in the land that was stark and bare,
To my whack . . .

"Boelker's Camp Fire Songster", 1873

A VIEW STILL EXTREMELY WIDELY ADHERED TO

There's an 'eathen bint out in Malacca
With an 'orrible 'eathenish name.
As for black, they don't come any blacker –
But she answered to "Jill" just the same!
Well, a man 'oo's abroad can get lonely,
Missin' friends an' relations an' such.
She wasn't "me sweet one-an'-only" –
But there's others as done just as much!

I'm not blushin' or makin' excuses,
An' I don't think she'd want that, because
When she stopped blubbin' over 'er bruises
The long an' the short of it was
That I'd bust up 'er 'orrible idol
An' I'd taught 'er respect for a gun –
Yus, I broke 'er to saddle an' bridle
An' I left 'er an Englishman's son!

"Lays of the Long Haul", 1805

GALLOPING CONSUMPTION

The fourteenth of October is a day to be remembered forever
because a scion of the Royal Family set in motion the new
power station by pulling a lever.
It was in the presence of many distinguished nobility and
gentry.
There was such a press of interested persons the remainder
had to be excluded by a sentry,
A tall and handsome private of the county regiment
Who from the barracks at Darlington had been sent
And stood guard with the rest of his military fellows,
Resplendent in scarlet, a much more attractive colour than
yellow's.
There was a memorable address from the Lord Lieutenant of
the county.
Who spoke in literary and poetical terms concerning this new
fruit of Nature's bounty.
From this day forward there can be power in every humble
farm and cot,
Which will inevitably improve the standard of living quite
a lot.
When we enjoy the benefits of this let us hope everyone's
thoughts will centre.
On Mr Thomas Alva Edison, the celebrated American inventor.

"McGonigal Redivivus", 1936

FOLLOWED BY THE EXPLOSIVE HARPOON

There she blows, bullies, yes, there she blows now!
There she blows, bullies, abaft of the prow!
Jump to it, bullies, come reef your topsails,
Take to the boats and go hunting for whales!

I'm a Newcastle whaler, I've money at home,
But my pleasure is on the Atlantic to roam,
To brave the rough ocean and add to my store –
I've killed fifty whales and I'll kill fifty more!
There she blows . . .

The holds are all full, there's an end to our toil,
We're going to be rich from the blubber and oil,
And when we're ashore and I walk down the street,
I'll march to the music of coin chinking sweet!
There she blows . . .

I'll go to the tavern and buy ale and beer,
And the girls will flock round me and call me my dear,
There's no king or emp'ror lives more gallantly
Than a Newcastle whaler just home from the sea!
There she blows . . .

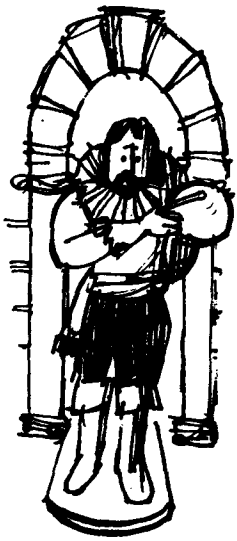
Broadside, about 1860, to the air of "An Honest Young Woman"

MOTHER-RAPERS

. . . 'Mid fume and reek
That caused unmanly Tears to lave my cheek,
Black-vis'd as *Moors* from soil, and huge of thew,
The Founders led me ever onward through
Th'intolerable Mirk. The furnace Spire
They broach'd, and came a sudden gout of Fire
That leach'd the precious Water from my corse
And strain'd my Vision with such awful force
It seem'd I oped my eyes to tropic Sun
Or lightning riving Midnight's dismal dun,
Or stood amaz'd by mighty *Hekla's* pit.
I marvel'd how Man, by his GOD-sent wit,
Thus tam'd the salamander Element
And loos'd the Metal in the mountain pent
To make us Saws; and Shears, and useful Plows,
Swords for our hands, and Helmets for our brows,
The surgeon's Scalpel, vehicle of Health,
And all our humble Tools for gaining wealth . . .

"De Arte Munificente", 17th cent.

THE TICK-TOCK MEN



Fernando: . . . Why, he does,
Nor will contented rest until the world,
The whole great globe and orb by land and sea,
Ticks to his pleasure like a parish clock.
You are a cog-wheel, Juan, as am I:
He's shaped us round, and prettied us with jags,
And gilded us with gold –
Juan: Add: gelded us!
Fernando: Aye, so he has, my brother. And 'tis all
Part of his clockwork. See you, he's the weight;
We follow from him in an engined train;
Ducats are oil to make our axles turn
Without a squeak.
Juan: I'll squeak,i'faith! I'll rant
And call down hurricanoes on his head,
I'll conjure earthquakes to beset his path!
Fernando: You've no escapement, Juan. You're enchained.
At your vain wrath he will politely nod
And say you have come forth to strike the hour,
He's 'bliged to you . . .

"The Tragedy of Ercole", 1625

WHEREWITHAL SHALL IT BE SALTED?

A chemist in an old-established corporation
succeeded after many decades of research
in isolating the active principle from oceans

Hopes were high of its immediate appeal
as a safe additive for preserving food
and miraculous enhanced of natural flavour

Regrettably however it was discovered
that in a solution as weak as three per cent
it caused dehydration and delirium and death

"Our Father Which Art in Washington," 1978.

Our first issue carried Doug Lett's 'Preliminary Notes On An Axiom System for Plot'. Those who may have found it a trifle over-technical are now invited to encounter the System's first-born. Stand back, then, for

here comes the captain of the guard!

by Doug Letts
illustrated by Pat Calman

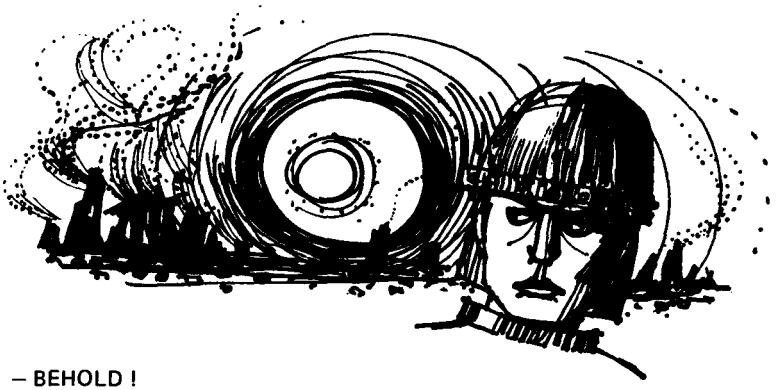
GET-LETTS
RUN
LETTS 1843

INPUT EDITION NO.
?1
?1
PLOT MACHINE MK.1
EDITION NO: 1
PLOT NO: 1
COPYRIGHT. D. LETTS. 1972
DEDICATION:–
TO GEORGE HAY

AT THE CENTRE OF THE SUN
– NEAR
–AT THE CENTRE OF THE SUN
–THE MOON SHONE BRIGHTLY
–WHO IS THIS THAT RAISES HIS SWORD?

MEANWHILE –
AT THE CENTRE OF THE SUN
– ALSO
– AMID THE SMOULDERING RUINS
– HERE COMES THE CAPTAIN OF THE GUARD!
– HERE COMES THE CAPTAIN OF THE GUARD!
– DELIBERATELY
– FIRING A DISINTEGRATOR AT THE LIFELESS BODY
– AND WHO IS ISCHAR?

HERE –
BY THE COOL RIVERSIDE
– NEAR
– WITHIN THE PRISON CELLS OF XANADU



– BEHOLD !
– SURROUNDED BY SLIME MOLDS
– HERE COMES THE CAPTAIN OF THE GUARD!

ON THE BATTLEFIELDS OF ISCHAR
– THE BODIES OF YAMS EVERYWHERE ABOUND
– HERE COMES THE CAPTAIN OF THE GUARD!

AT THE CENTRE OF THE SUN
– THE MOON SHONE BRIGHTLY
– XORXA RETIRED TO HER COUCH

BENEATH THE SURFACE OF JUPITER
– SURROUNDED BY SLIME MOLDS
– THE MOON SHONE BRIGHTLY
– SUDDENLY
– HERE COMES THE CAPTAIN OF THE GUARD!
–END–

PLOT MACHINE MK.1
EDITION NO: 1
PLOT NO: 2

DEDICATION:–
TO GEORGE HAY

WITHIN THE PRISON CELLS OF XANADU
– TO THE DISTANT BOOM OF THE CANNONS OF ISCHAR
– WITH DIFFICULTY
– HERE COMES THE CAPTAIN OF THE GUARD!

BY THE COOL RIVERSIDE
– FAR FROM
– AT THE CENTRE OF THE SUN
– THE BODIES OF YAMS EVERYWHERE ABOUND
– ENTERING BY THE PORTHOLE

MEANWHILE –
AT THE CENTRE OF THE SUN
– RAIN FALLS
– SUDDENLY
– HERE COMES THE CAPTAIN OF THE GUARD!
– THE EMPEROR RAISES HIS GLASS OF YUCH

AT THE CENTRE OF THE SUN
– THE MOON SHONE BRIGHTLY
– LO!
– TO THE DISTANT BOOM OF THE CANNONS OF ISCHAR
– XORXA RETIRED TO HER COUCH
– BEARING GIFTS FROM ISCHAR
– HERE COMES THE CAPTAIN OF THE GUARD!

AT THE CENTRE OF THE SUN
– THE BODIES OF YAMS EVERYWHERE ABOUND
–HERE COMES THE CAPTAIN OF THE GUARD!

THEN –
AT THE CENTRE OF THE SUN
– *LO!*
– RAIN FALLS
– FIRING A DISINTEGRATOR AT THE LIFELESS BODY
– HERE COMES THE CAPTAIN OF THE GUARD!
– *THE EMPEROR IS READING IN BED*
– WHO IS THIS THAT RAISES HIS SWORD?
–THE ENEMIES OF XORX ADVANCE
– HERE COMES THE CAPTAIN OF THE GUARD!

– END –

PLOT MACHINE MK.1
EDITION NO: 1
PLOT NO: 3

DEDICATION:–
TO GEORGE HAY

IN THE GALAXY OF XENOPHON
– THE GLOBE OF PHOBOS CIRCLING
– SLOWLY
– THE EMPEROR RAISES HIS GLASS OF YUCH

THEN –
AT THE CENTRE OF THE SUN
– SURROUNDED BY SLIME MOLDS
– SLOWLY
– HERE COMES THE CAPTAIN OF THE GUARD!
– WITH DIFFICULTY
– THE EMPEROR RAISES HIS GLASS OF YUCH
– THE EMPEROR IS READING IN BED
– YORXA MADE COFFEE

AT THE EMPEROR'S PALACE
– NEAR
– AT THE CENTRE OF THE SUN
– SNOW FALLS
– HERE COMES THE CAPTAIN OF THE GUARD!

IN THE PALACE WINECELLAR
– RAIN FALLS
– HERE COMES THE CAPTAIN OF THE GUARD!
– SUDDENLY
– WHO IS THIS THAT RAISES HIS SWORD?

–END–

PLOT MACHINE MK.1
EDITION NO: 1
PLOT NO: 4

DEDICATION:–
TO GEORGE HAY

ON AN UNNAMED ASTEROID
– THE MOON SHONE BRIGHTLY
– HERE COMES THE CAPTAIN OF THE GUARD!
– HERE COMES THE CAPTAIN OF THE GUARD!
– HERE COMES THE CAPTAIN OF THE GUARD!

WHILE –
AT THE CENTRE OF THE SUN
– THE MOON SHONE BRIGHTLY

– ENTERING BY THE PORTHOLE
– AND
–HERE COMES THE CAPTAIN OF THE GUARD!
– HERE COMES THE CAPTAIN OF THE GUARD!

HERE –
AT THE CENTRE OF THE SUN
– METEORITES THUD THE GROUND
– THE MOON SHONE BRIGHTLY
– SLOWLY
– BEARING GIFTS FROM ISCHAR
–HERE COMES THE CAPTAIN OF THE GUARD!
–THE BEAUTIFUL DAUGHTER OF XORX, XORXA

ON THE BATTLEFIELDS OF ISCHAR
–THE ICE COLD WALLS DRIPPING WITH CONDENSATION
– METEORITES THUD THE GROUND
–WHO IS THIS THAT RAISES HIS SWORD?

IN THE PALACE WINECELLAR
–THE MOON SHONE BRIGHTLY
–LO!
–THE MOON SHONE BRIGHTLY
–SLOWLY
–HERE COMES THE CAPTAIN OF THE GUARD!
–SLOWLY
–XORXA MADE COFFEE

–END–

things you ought to know

The World Futures Society is now holding regular meetings in the London Area. Those interested are invited to contact: David Berry, 45 Bromley Common, Bromley, Kent. Tel: 01 - 460 2355.

The H.G. Wells Society was founded in 1960. It has an international membership, and exists to promote a widespread interest in the life, work and thought of Herbert George Wells, and to encourage active participation in the implementation of a number of his ideas. The Society arranges meetings and exhibitions in Britain and abroad, and is currently engaged in encouraging the formation of school study-groups and class-room projects on Wells. Those interested in the Society should contact Peter Hunot, Chairman, 17 Anson Road, London, N.7. Tel: 01 - 609 2677.

Extrapolation, formerly the Journal of the MLA Seminar on Science Fiction, now changes its sub-title to *A Journal of Science Fiction and Fantasy* and is

copyrighted. Its editor, Thomas D. Clareson, who has already produced the massive *SF: The Other Side of Science Fiction*, now announces two more forthcoming books: *SF Criticism: An Annotated Bibliography* from Kent State University Press this June, and *A Spectrum of Worlds* an sf anthology due out from Doubleday in September. Correspondence re *Extrapolation* to Mr Clareson, Box 3186, The College of Wooster, Wooster, Ohio, USA.

Sphere Books still welcome suggestions for *SF* classics, i.e. not just books that you personally might prefer, but books you feel would be well received if they were made available once more. Such suggestions should go to: Angus Wells, Sphere Books Limited, 30-32, Gray's Inn Road, London WC1 8JL.

The April 1972 issue of *The Magazine of Fantasy and Science Fiction* is a special James Blish issue. It contains, in addition to a complete new novel by Mr Blish, a bibliography and two critical articles on his life and work. The magazine is obtainable at – as they say – any good magazine outlet, or from the distributors, Seymour Press.

In our last issue, we omitted to give credit to the Canadian magazine, *Riverside Quarterly*, through whose courtesy we reprinted Mary Weinkauf's article, 'The God Motif in Dystopian Fiction'. Our apologies: RQ has a consistently high level of academic quality, and should be boosted, not slighted.

If the Science Fiction Foundation were asked for its formal views on the subject of Ufology, these would probably summate to an authoritative No comment. We would refer you to *Interplanetary News*, which gives a detailed coverage of this subject. 15p monthly, from: Mike Parry, 15 Nealdon Street, Stockwell, London SW9 9QX.

OBITUARY

A sad and keenly felt loss to the cause of British science fiction was occasioned by the sudden death of Edward John Carnell on 23 March 1972 after a long and painful illness. Ted Carnell's contributions to this cause were legion – from being an active pre-war fan and amateur editor in the British Science Fiction Association and the British Interplanetary Society to the professional editorship of *New Worlds, Science Fantasy* and *Science Fiction Adventures*, wherein many now-established writers first saw their work in print. The encouragement extended to these and many other more inexperienced authors again showed itself in his later career as a specialist sf literary agent and in his series of anthologies *New Writings In SF*. The latter will continue under the editorship of Ken Bulmer; the agency is being carried on by Leslie Flood – but the man himself, in all his genial and expert aspects, can never be replaced. May his memory ever remain in the thoughts of all those connected with *SF* throughout the world.

reviews

edited by Ken Bulmer

One important function involved in a review or critical appreciation of a book is the quotation of all available information on the book as a physical artefact in the context of publishing. Immediately, this means that an indication should be given that the book is a paper-bound book, lack of this meaning it is hard-bound. The price and the page count should be noted. Title, author and publisher are obviously required, as should be a note as to previous titles. The date should be given as closely as possible and, an item often omitted, the SBN or ISBN number should be quoted when supplied. In the case of US books the Library of Congress Catalog Card Number when supplied should be quoted.

An interesting error which crept into the last issue had even more interesting repercussions. The name of the new editor of *Analog* – Ben Bova – was quoted as Ben Nova in the page-long piece written by John Windsor for the *Guardian.* I refuse to quote the title the *Guardian* saw fit to inflict on this useful and painstakingly researched survey of sf.

A point worth making in a critical commentary is to observe that George Hay thought up and supplied the original motive power for the idea that culminated in the Pan Book *The Making of Doctor Who.*

Tau Zero
by Poul Anderson; New York, Lancer Books, 1971, 207 pages, 95 cents.
Ringworld
ISBN 0 575 01440 3
by Larry Niven; Victor Gollancz Ltd., 1972, 288 pages, £1.90.

The recent English publication of Larry Niven's *Ringworld* in hard-back, and the re-publication of *Tau Zero* by Poul Anderson in paper-back, gives readers here a belated opportunity to compare two novels, *both* of which have been called the ultimate in hard science fiction.

If critical esteem and public acceptance can be measured by the Hugo and Nebula awards, *Ringworld* is a clear winner. It won both, the Nebula in 1970 and the Hugo in 1971. Although this victory must reflect the honest opinion of a large number of well-informed devotees, it reminds us once more how sadly inadequate democratic procedures have always been in creating literary judgments of any sensitivity. (For example, in the second decade of this century *Tarzan Of The Apes* sold more copies than any work by E.M. Forster, H.G. Wells, D.H. Lawrence, Joseph Conrad and James Joyce).

Both *Tau Zero* and *Ringworld* derive their intellectual force from grand scientific concepts, concepts of such massive scale that they both deserve their reputation as landmarks (spacemarks) in the history of hard science fiction – that surprisingly small but important branch of the genre in which the science is central and not simply decorative.

But there are two important differences. First, *Tau Zero* is based on a known scientific principle that has been in the public domain for 68 years, while *Ringworld* is based on a grandiose piece of engineering whimsy that has a vanishingly small chance of ever finding fruition in the real universe. Secondly, *Tau Zero* takes its initial conception and develops it with a satisfying logic; *Ringworld* takes its initial conception and treats it rather like the man who spends £300 on a Hi-Fi Stereo, and shows it off by playing stereophonic records of a ping-pong match.

Before amplifying these cryptic remarks, I should say that there is an especially good reason for leading off a review column with these two books. It is that they both exemplify, with a precision very satisfying to a reviewer, the areas where the science-fictional imagination is very strong, and those where it is weak. That tired and misued old critical phrase " a sense of wonder" (familiar to all SF fans) is as good an open sesame as any for getting into the question I am broaching.

We sometimes speak of a sense of wonder as if it were one of the great good things – an automatic credit in the critic's account book. The trouble is that a sense of wonder is often confused with a sense of gullibility; the ooh's and ah's at the sideshow pitches of any second rate carnival demonstrate a sense of wonder at its most depressing level. The sales of *The Search For Bridey Murphy* show a similar phenomenon.

The phrase "sense of wonder" includes so much. It may include the feeling of natural awe felt by a Wordsworth in a clean, empty landcape:

> And I have felt
> A presence that disturbs me
> with joy
> Of elevated thoughts; a sense
> sublime
> Of something far more deeply
> interfused,
> Whose dwelling is the light of
> setting suns,
> And the round ocean and the
> living air,
> And the blue sky, and in the
> mind of man:
> A motion and a spirit, that impels,
> All thinking things, all objects of
> all thought,
> And rolls through all things.

That is to put it at one of its highest points. It may include, differently, the exhilaration Einstein must have felt when it first occurred to him to question the static Cartesian framework which had been used up to his time to give mathematical expression to the shape of an entire universe.

But that sudden romantic expansion of the mind is a very different thing from the momentary little *frisson* we get when we read that a cow gave birth to a calf with two heads: "Gee Whiz, Mabel, How about that, huh?"

Any competent phrenologist would find Larry Niven's bump of wonder so large as to merit medical disbelief (though it is partly concealed beneath a formidable thatch of brown, curly hair, and further hidden behind clouds of pipe smoke). It manifests itself in *Ringworld* in two big ways, and lots of little ways. (One of the little ways is his creation of an imaginary race, known as Puppeteers, who have two heads. "Golly! Gee Whiz!").

Of the big ways, one almost makes

the novel, and the other practically destroys it. The one that almost destroys it is the notion that luck is linked in humans to a recessive gene. Cross-breed enough Pools' winners, and you'll emerge with a Teela Brown. Teela, who is literally born lucky, is a member of the expedition which crash-lands on the Ringworld. But although this inborn ability is most ingeniously worked out in terms of plot, the reader's sense of wonder ("What a kooky idea!") is aroused for no more than ten seconds, and indeed the context this notion creates is completely hostile to any sustained human interest. Teela's "luck" is such that cause and effect are no longer connected, free will becomes irrelevant, and human endeavour becomes piddling and unimportant; the story therefore cannot move us – not even to laughter.

How utterly extraordinary that an author should *voluntarily* do what the nasty critics have been saying for years that SF writers do – populate a story entirely with puppets. Mind you, there are some conscious ironies in all this – even the Puppeteer turns out to be a puppet. But irony does not work efficiently in an intellectual vacuum.

My quarrel is not with the detail in which Niven works out his plot – given the initial premise the rest follows logically. My quarrel is with the lack of self-control with which Niven uses an idea (cf *Galaxy* or *Fantasy And Science Fiction* 1950s vintage, if my tase buds are still working,) that is quite simply cute; whimsical; it might even seem endearingly dotty if the reader had got out of bed on the right side that morning. The idea is worth, at best, a tricksy short story (Theodore Cogswell could have done it with one tentacle tied behind his back). Instead it becomes the prime formal component of the novel's structure.

Why waste my thunderous critical wrath on a pygmy? But this pygmy, goddamit, won a Hugo and a Nebula! And more than that, he demonstrates what came close to killing SF as a genre with anything to say – the lack of discrimination between ideas of genuine human relevance (ideas that matter to us) and ideas which are intellectually on a par with the happenings of April Fools' Day. "Wouldn't it be fun to short-sheet Mother's bed?" "Wouldn't it be fun to invent a world where luck is inherited?"

What worries me is that I can hear a shrill voice from the back of the hall, crying: "How do you know that luck isn't inherited?" Or even: "The Russians have spent 10,000,000 dollars on secret work on the genetics of good fortune." (I love the way that Russian secrets are an open book to so many of my friends).

The notion worries me because of the anti-science element that has played a quite prominent part in fandom. You know, the people who are convinced that there is a series of scientific conspiracies to keep the truth from us about flying saucers, or Velikovsky's theories about the parting of the Red Sea and other SF events in the Bible, or Ron Hubbard's radical discoveries in the philosophy of mental health (scientology), or Wilhelm Reich's orgone therapy, or H.E. Bates' eye exercises, or even chiropracty. These conspiracies are widely held to exist, despite the fact that an entire segment of the publish-

ing industry has grown up to publicize, with staggering success, just those issues which the cultists claim the scientists are suppressing. These are just the fellows who may well believe that in Teela Brown, Niven is dramatising an intellectual case of real human importance. Niven's success does suggest that the crank element in fandom is still alive and well.

I suppose it is not enough to grumble that the idea is *self-evidently* puerile. To spell it out briefly, if luck is inherited, then we must assume the ability of humans to influence the movement of inanimate objects in the past, present and future. If we assume this, we must also assume that only one person at a time could have this ability, because otherwise a potential collision could take place (molecules tugged in two directions at once?), which would destroy the philosophical basis of the concept luck – by making a lucky person potentially unlucky. Most important of all, the existence of even one such person would immediately create a totally mechanistic and pre-ordained basic for all action in the universe, an idea utterly offensive for aesthetic reasons.

Tearing myself away with difficulty from the awesome philosophical abyss about to open beneath my feet ("O the mind, the mind has mountains, cliffs of fall"), I turn to the Ringworld itself. Nothing above is meant to suggest that Mr Niven is a man of negligible abilities. His Ringworld may not have originated with him as a concept, but it is a wonderful if unlikely idea, and he has given life to its details.

Go away and read the book,much of which you will probably enjoy, if you want these. Briefly, the Ringworld is a continuous belt – a wide, stubby cylinder which revolves on its own axis; the axis passes through the sun and is bisected by it. (The snappy physicists among you will realize that it is always midday in the Ringworld,or would be if Larry Niven had not invented a series of gigantic revolving sunshades). The Ringworld is about 1 million miles wide, and 180 million miles in diameter – that is, if you walked around it until you came back to where you started, you would have travelled 600 million miles. It is only fifty feet thick. Its surface area is 3 million times that of earth, though its mass is much the same. Its period of revolution gives it the equivalent of earth-type gravity, and it has air on its inside surface.

Forget the details. The point is that as imaginary worlds go, this one is a lulu. Its details are never obviously silly. Niven is a better scientist than this reviewer at least, and he is always plausible when it comes to the mechanics of his artefacts.

The silliness comes in with the story which hardly seems worth recounting. Having invented all that wonderful surface area to put his entertainingly grotesque quartet of characters on (we won't go into the character department right now) he abruptly runs out of steam. To put it in a nutshell, the characters come across a series of civilisations, each one virtually indistinguishable from the one before.

Some of you may not be familiar with that famous work entitled *A Reference Book of Planetary and Galactic Civilisations for the Use of Science Fiction Writers.* It was a compendium John W. Campbell Jr worked up from Spengler, Toynbee,

and *The Child's Wonder Book of World History*. Campbell had the only copy, and he used to lend it to his writers. Asimov and Heinlein used to swap it backwards and forwards all the time; Alfred Bester could only get hold of it twice. There's a nasty story, that A.E. Van Vogt had it xeroxed, but his secretary made a mistake and xeroxed a Superman comic in place of Chapter 6. Anyway it came out all right, because he never noticed. Poor old Jim Blish couldn't get hold of it when he needed it, so he had to read Spengler in the original, to the ultimate confusion of the fans.

The rumour is that Fred Pohl has the book now, but he is more cautious about who he lends it to. But he liked Larry Niven and lent it to him, and Larry took the Ringworld civilisations from the chapter called "The Decline of Technocracy into Superstitious Tribalism". He made a few mistakes, but Fritz Leiber and Walter Miller had scrawled so many annotations all over the margins and between the lines that he can hardly be blamed.

Critical annoyance should probably not be directed at Niven, who is capable of being a thoroughly entertaining fellow, but at the idiocy of that section of fandom that discriminates positively in favour of the lightweight, the undemanding – who do not even require the minimal adequacies of literary craftsmanship, such as the tying up of loose ends. (Niven leaves one of his four protagonists mortally wounded, and forgets to tell us whether the make-shift medical attention he receives is successful. The novel does not end. It just stops).

Tau Zero, by Poul Anderson, is a more interesting book – not least because at first sight it seems to present a similar case. (Christopher Priest and Bruce Gillespie argue this case in two fanzine reviews). Nothing in Poul Anderson's earlier career led me to expect *Tau Zero*. It is true that some of the previous novels, such as *Guardians of Time*, have shown that Anderson has at least the basic requirements for major league status. He respects scientific facts, he has a mean talent for a snappy story line, and a quite encyclopedic knowledge of this and that which has more than once led the Gollancz blurb writer to inscribe "awe-inspiring polymath" on his covers.

Poul Anderson has been showing promise for many years, but the laurels always seemed to wither before he could be crowned with them. The trouble is, he has always had two rather crippling defects: (a) a rather sentimental obsession with Scandinavian saga materials, and (b) his habit of peopling the cosmos with pasteboard characters – very often stereotypes of the American-Capitalist-huckster-pragmatist variety – dishonest, shrewd, energetic and lovable, rather like those newspaper men that Clark Gable and Cary Grant used to play.

Tau Zero is based on the concept of a relativistic universe promulgated by Einstein in 1904, and since then given experimental support from nuclear physics, cosmic ray studies, optics and even moon flights.

For many years now, the interstellar flight which takes a shorter time subjectively than it does for the imaginary observer back on earth has been a cliche of science fiction. So far as I know, no SF writer before now

(amazingly) has sat down and thought the idea through to its end, an end which I find truly awe-inspiring. Given continuous acceleration, closer and closer to the always unreachable speed of light, the time contraction effect for such a spaceship could be so vast that the ship in only a few subjective years could outlive the entire universe. (Work out the maths for yourself; it's very simple. Subjective time equals observer's time multiplied by tau, where tau equals the square root of $1 - V^2/C^2$. The closer tau approaches zero, the greater the time contraction).

I know I am not alone in finding this topic extraordinarily gripping – emotionally gripping in the incredible freedom it seems to posit, as well as intellectually gripping. Although Anderson's story is wild conjecture, it is conjecture which is truly scientific; it does not contravene the known facts; it is even, though the cosmologists argue about this one, supported by them.

Anderson uses that cosmology which posits an ultimate entropic death of the universe, ending with a contraction back into a primordial cosmic egg, which eventually explodes into new universes of matter and anti-matter. My one scientific objection to his story is an uncertain one. Assuming that his starship could only exist within the framework of a physical universe, it is hard to see how it could avoid the ultimate catastrophe. Anderson's book gives me a picture of a final cosmic egg, with the starship somehow outside it. But it is my understanding that the word "space", at this point in the history of the cosmos, has no meaning. Space itself exists nowhere outside the egg. The egg, or monobloc, surely *is* the entire universe.

> Chidambaran took him by the elbow and pointed at the screen. "There. Do you see?"
> On the edge of perception gleamed the tiniest of sparks.
> "A good way off, naturally." Foxe-Jameson said into the silence. "We'll want to maintain a most respectful distance."
> "What is it?" Telander quavered.
> "The germ of the monobloc," Chidambaran answered. "The new beginning."

That is the passage that worries me. But because any presently held views about the death of the universe must remain so speculative until more evidence comes in (as it will), Anderson can be forgiven, I think, for suspending the laws of physics so that a starship and its universe can be spatially separated.

Anderson has never been a subtle writer. I have heard it claimed that he has all the stylistic clumsiness of the worst of the pulp writers, and I know that many readers find the rather primitive vigour of his style in *Tau Zero* more farcical than moving. I do not, because I find the cumulative force of the vision (which is supported not just by Anderson's prose, but by its potential *truth*) allows the rough edges of the style a certain appropriateness.

> "*Ya-a-ah-h-h!*" screamed Lenkei, and rode the ship down the trough of a wave whose crest shook loose a foam of supernovae. The haggard men on the steering bridge with him stared into the screen that had

been built for this hour. What raged in it was not reality – present reality transcended any picturing or understanding.

The almost comic discrepancy between the scale of the cosmic forces, and the ordinariness of the characters who observe them, has been the main ground of the criticism for this book. I find the discrepancy, which is real enough, becomes almost a part of the metaphor. The longing to grasp the meaning of the great universal processes is as old as Man himself, but so is the inability to find the words or the understanding necessary. We are tugged between a spirit-wrenching desire to reach out, and a sometimes farcical intellectual puniness which can make the act of reaching seem clownish.

Anderson knows this, I believe, and whether he knows it or not, the phenomenon is accurately reflected in his style, which has certain comic-book elements ("*Ya-a-ah-h-h!*" screamed Lenkei) but is an interesting hybrid. "A wave whose crest shook loose a foam of supernovae" is not a metaphor from an insensitive or unimaginative man.

The criticism that Anderson has found an epic theme and peopled it with characters appropriate to a rather primitive social satire is not a valid one, I believe. The discrepancy is part of the necessary meaning of the book. Even if a partial failure of the imagination is involved on Anderson's part, the very familiarity of the characters has an oddly touching aptness.

This might seem a very perverse way of defending a book, and I do not want to carry it too far. The novel *is* wooden in spots, but there is a genuine attempt here to render a human situation that matters. (In *Ringworld*, Larry Niven shows no awareness that the attempt is necesssary).

Poul Anderson's gaucheness is certainly embarrassing at its worst:

She took both his hands and said:
"How I want to be your woman again."
He stammered in gladness,
"Tomorrow?"

But this is not so foolish in context. The tough pragmatic hero, Reymont, has earned the right to stammer by this stage of the novel.

I read the book twice, to see if the second time through I found the treatment of the human conflict as bad as so many had said. (The first time through I was half hypnotised by the pace and grandeur of the story itself.) I found, surprisingly, that the characterisation was in fact much better than Anderson usually manages – and rather more ambitious. The apparent insensitivity of the protagonist (who bullies a hyper-intellectual crew out of a self-indulgent despair) is done with conviction, but more important, it is convincingly shown in dramatic terms to fulfil a necessary condition for survival. If we compare Reymont's toughness with, say, the brutal military chauvinism of Heinlein's hero in *Starship Troopers*, it is clear that Anderson's understanding of intellectual toughness *does* include the knowledge of what forces in the psyche pull against it. Anderson understands tenderness too. With Heinlein the toughness results simply from a basic cynicism: "Most men are self-righteous fools, so we'll have

discipline, dammit." (Heinlein's notion of tenderness, as with many American He-man writers, is being nice to pussy cats).

Directness and simplicity need not be the same as crudeness. Anderson's lack of subtlety is not entirely crippling; he maintains a sort of lucid plausibility in his human relationships.

Much of the trouble with Anderson's use of Saga materials in the past has been their inaptness. They have sometimes appeared almost ludicrous – a way of claiming literary dignity through the use of imposed motifs, while the intrinsic substance of the story can not support the heroic pretensions.

In *Tau Zero* the Nordic element has a double justification. The ship's first officer is Ingrid Lindgren, and she is not randomly Scandinavian at all. A good case is made out for the future growth of the moral authority of the Scandinavian nations (in a warring world) becoming so strong that eventually the threads of international power are all seen to end in the neutralist hands of the Scandinavian arbitrators. It is against the background of this society that the starship leaves earth, and its good points are symbolised in Miss Lindgren. Her earnestness, with just a touch of sanctimoniousness, is quite well done in the novel.

It is Miss Lindgren who provides the novel with its central symbol, at the point where the uncontrollable flight of the starship seems to have doomed its occupants to end their lives aboard (the deceleration equipment having broken down, and being very plausibly unfixable). Miss Lindgren sings a song.

Now songs in science fiction are notoriously bad. Robert Heinlein's story *The Green Hills Of Earth* is a compendium of the dangers to SF writers who deal with song-writing. (Those of you who know this archetype of the tear-jerking element in pulp SF will not be surprised to learn it first appeared in *The Saturday Evening Post* in 1947). The song in *Tau Zero* claims to be from a piece called *The Songs of Gurre* by Jacobsen, set by Schonberg. In my ignorance I do not know if such a work exists, but the words are good, whoever wrote them, in a hectically romantic way. The song is about the Wild Hunt of the Damned, an ancient and potent myth:

> Be greeted, King, here by Gurre Lake!
> Across the island our hunt we take,
> From stringless bow let the arrow fly
> That we have aimed with a sightless eye.
> We chase and strike at the shadow hart,
> And dew like blood from the wound will start.

These are the opening lines – awkward but forceful. The tale of the lost hunters, neither dead nor alive, eternally denied their rest, has for me a harsh reverberation at this point of the novel. Its summoning up of this very old image of deathlessness, eternally cruel and eternally in pain, is justified here; it is not simply Anderson's old Vikingophilia.

As in *Ringworld,* the human element in *Tau Zero* is subservient to its initial technical concept. *Ringworld* is almost a paradigm of what is so often wrong with the science-fictional imagination – if imagination is the

right word in this context. Coleridge would have said that fancy is the word to use here. I believe that Coleridge's long discussion (in *Biographia Literaria*) on the distinction between Fancy and Imagination should be compulsory reading for all science fiction writers.

> Imagination, Coleridge tells us:
>
> > dissolves, diffuses, dissipates, in order to re-create . . . it is essentially *vital*, even as all objects (*as* objects) are essentially fixed and dead.
>
> But Fancy:
>
> > has the glare and glitter of a perpetual, yet broken and heterogeneous imagery, or rather an amphibious something . . . it sacrifices both heart and head to point and drapery.

Niven seems not to know that if a technical concept is not given meaning in a human context it simply does not matter. Anderson does know this, and on this occasion his rather graceless and journalistic style is rendered sufficiently flexible (because, I suspect, this book *meant* something to its author, a man who has not been above writing pot-boilers in the past) to carry him safely to the triumph of his career. At last Poul Anderson has found a story in which all the things he does best – the accurate technology, the romantic excitement of exploration, the tough hero, the Scandinavian emotional reverberations, come together and form a whole.

Science fiction is littered with so-called classics, most of which have no right to that rather ill-defined status. I suspect that *Tau Zero* will last as a genuine minor classic of the genre; that it will be re-read with pleasure for many years. *Peter Nicholls.*

One Step From Earth
ISBN 0 571 09816 9
by Harry Harrison, Faber & Faber, 1972, 210 pages, £1.75.

Harrison solo this time. The workmanship is uneven, and there is a slight air of pot-boiling- of simply turning the stuff out – hanging over this collection of short stories.

All the stories are linked by examining what might really happen if somebody invented a Matter Transmitter. The theme is old enough, but the things that follow from the theme are mostly fresh, and written at a level of ingenuity that lifts the book out of the ruck. Not far out of the ruck though. One good idea per story, entertainingly worked out, and that's about it. One story, "Waiting Place" is unnerving, because it gives clear evidence of the mind of Harry Harrison having been successfully invaded by the spirit of Robert Sheckley, prose style and all.

The best story is "Heavy Duty", where a convincing human problem (unrequited love on a high gravity planet!) is given a less than pat resolution. It contains one startling though tiny piece of evidence that Harrison *could* extend his range if he wanted to – a short love lyric that many a seventeenth century song writer would have been proud to have penned:

> I dare not ask a kiss,
> I dare not beg a smile,
> Lest having that, or this,
> I might grow proud the while.
> No, no, the utmost share
> Of my desire shall be
> Only to kiss the air
> That lately did kiss thee.

The irreproachably Petrarchan sentiment is given a grimly ironic context, in which the self-abnegation of the above lyric is shown to have a distinctly sexual passion behind it, and meets with a distinctly twentieth century rebuff.

It is only fair to add that run-of-the-mill short stories from Harrison are pretty damn good by traditional SF standards.

The Palace of Eternity
ISBN 0 330 02962 2
by Bob Shaw; Pan Books, 1972, 173 pages. £0.30.
Ground Zero Man
by Bob Shaw, New York, Avon Books, 1971, 160 pages, 75 cents.

The current re-appearance of several Bob Shaw novels in paperback, and the publication of a new novel, *Ground Zero Man*, also in paperback, would be sufficient excuse for a full-length appraisal of Bob Shaw, if space allowed. That must wait for another day and another issue, but I would like to put it on record that Shaw is perhaps *the* most promising of all the younger SF writers. He is a truly inventive ideas man, but perhaps more importantly he gives the lie to the notion (which my reviews above do nothing to prevent) that there is no room in science fiction for good characterization.

The harrowing account of a failed marriage in *Ground Zero Man* contains some of the most accurately scarifying domestic dialogue I have read in years. The novel, incidentally, is basically a thriller, though it hangs on a science fiction gimmick – and it is good enough to put Shaw up there with John Le Carre and Len Deighton for intelligent pungency.

The Palace of Eternity is flawed for me by a wildly unexpected leap into metaphysics half way through, partly derived, I suspect, from Eric Frank Russell's *Sentinels From Space.* But the good things (often a matter of pointed and sometimes beautiful detail) are indeed excellent.

The big boys up there in the Pantheon had better get ready to make room for Bob Shaw. Some of them (I do not mention Arthur C. Clarke) have been resting on their laurels, a prickly attitude to maintain, for altogether too long. *Peter Nicholls*

The Making of Doctor Who
ISBN 0 330 23203 7
by Malcolm Hulke and Terrance Dicks, 115 pages, Pan Books, 25p. (paperback)

Follows along the line of such American documentary books as *The Making of Star-Trek.* As this is a children's book – one of the *Piccolo* series – it is written more simply. Not at all, 'written down', though – the chapters explaining the workings of a television studio, and of script-writing and special effects, are worthy of any adult's study. Has line and photo illustrations, and script excerpts. *George Hay.*

R is For Rocket
ISBN 0330 23166
by Ray Bradbury, Pan Books, 220 pages, Paperback, 25p.
S is For Space
ISBN 0 330 23167 7
by Ray Bradbury, Pan Books, 221 pages, Paperback 25p.

These two carry some Bradbury classics, such as *'The Golden Apples of the Sun' 'Pillar of Fire'* and *'The Man'*, plus introductions in which the author explains what it is that powers them. "I was in love with everything I did.

My heart did not beat, it exploded. I did not warm toward a subject, I boiled over. I have always run fast and yelled loud about a list of great and magical things I knew I simply could not live without." Not for dystopians – but for those who still recall what life is about, superb. *George Hay.*

Mutant 59.
ISBN 0285 62032 0
By Kit Pedler and Gerry Davis.
Souvenir Press, 295 pages, £1.80.
Doddering oldsters will recall a story from the Thirties called *'The Death of Iron'.* Now we have one about the Death of Plastic. Needless to say, the authors of *'Doomwatch'* have seen to it that it is better plotted and written than its forerunner. No disrespect to call it a rattling good yarn, with all the appropriate environmental warnings thrown in subliminally, as it were. One notes, though, that iron is still with us .... *George Hay*

Anywhen
ISBN 0 571 09509 7
by James Blish,
Faber & Faber, 184 pages, £1.75
Eight stories with a preface and introductory notes. Blish fans should note that *'A Style In Treason'* is the expanded version of *'A Hero's Life'*, from K. Bonfiglioni's magazine *Impulse* and that the Conradian *'A Dusk of Idols'* appears here for the first time since it saw light in a 1961 copy of *Amazing Stories.* Those too snobbish – and they still exist – to credit quality in 'pulp' magazines have only themselves to blame if they have to wait the odd decade for their treats. *George Hay.*

The Lathe Of Heaven
ISBN 0 575 01385 0
by Ursula Le Guin
Gollancz, 184 pages, £1.80
The Tombs of Atuan
ISBN 0 575 01398 2
by Ursula Le Guin
Gollancz, 160 pages, £1.25
Like Philip Dick, Miss Le Guin is concerned about Reality. Both treat it as a heavily booby-trapped area; where he hesitates, and often retraces his steps, she walks sure-footed. Clearly, the Enemy have seen fit to give her a map. The book-jacket of *The Lathe of Heaven* says that it is about the relationship between dreams and reality. Factually, this is so, for the story revolves around a mild and good-natured man who finds that he has the power to 'dream true' – that which he dreams, becomes reality, literally changing the world. However, this is only a device to mount a parable; the real issue lies between the hero and the power-hungry psychiatrist who seeks to direct the dreams into the channels he believes will ennoble the world. The author demonstrates her point by showing the way in which each such attempt leaves the world that much the worse. Miss Le Guin is a classicist – she has stated her debt to Isak Dineson – and this book has a quality which can only be described as oracular.

The Tombs of Atuan is a sequel to *A Wizard of Earthsea,* published over here as a book for children, though in the States it was put out for adults. Ged, the trainee-wizard of the earlier book, here plays a less central, role, supplying his skills and wisdom for the saving of the heroine, a young girl brought up as Priestess to a distinctly unpleasant set of Nameless

Gods. This, in terms of this author's capacity, is a slight work – though not one to be missed. Since there is clearly intended that there be more books about Ged, let us hope that in them we learn more about magic and the naming of true names. "All doing of magic, all wizardry," says Ged, "hangs still upon the knowledge – the relearning, the remembering – of that true and ancient language of the Making." As is her wont, Miss Le Guin is speaking sidewise to us.
George Hay

Nine Princes in Amber
ISBN 0 571 09782 0
by Roger Zelazny, Faber and Faber, 1972, 188 pages, £1.75.

Roger Zelazny is one of that unfortunate band of writers who received immoderate praise early in their careers for an unfounded reputation and subsequently could go in only one direction – down. There *are* good things in *Nine Princes in Amber;* but they appear only to have squeezed unnoticed into the book when the writer was fortunate enough for that moment to forget he had a slipping reputation to prop up. The description of the flight down the underwater staircase called Faiellabionin, whilst a routine hunt and chase scene, is nevertheless given a chrome-polished vision that may illustrate the problems facing Zelazny of sustaining that albatross reputation, and bears a significant comparison to the sections in which he merely runs the words through his typewriter.

The book opens in a vaguely sub-Chandler fashion and gradually one is led to understand that this Earth is but a Shadow and that reality lies in Amber, that there are nine princes, Oberon is a king of sorts, Tarot cards form a pseudo-signalling communications network, and the plot can be summed up by this paragraph from the penultimate page: "I would never rest until I held vengeance and the throne within my hand, and good night sweet prince to anybody who stood between me and these things."

At no time does one feel engaged with either the characters or the motivations, for however universal vengeance and regaining of thrones may be as themes for literature, some kind of passion and belief must give them life. The form chosen to exploit the imaginative devices helps little, for at best Zelazny's style can be described as uncertain. It may be doing Mr Zelazny an injustice to suggest that he is somewhat contemptuous of his readers – although this is a hazard these unfortunate writers must run – but one is uneasily aware that behind the arch mannerisms of style the unengaged face of the writer is wearing a sly and almost patronising grin.

From the evidence of the title and the structure one is led to understand that this is the first of nine books, so that no overall judgement should be attempted at this time; but this does mean the book is unsatisfying as a novel. It can be looked at as the first part of a serial (this may be a fair or unfair trick to play on the buyer) and therefore should give some indication of what to expect from over half a million words; but however valiantly the writer attempts to create a ground-plan for his personal mythology, there is a conspicuous lack of any intellectual focus. One can only wish Mr Zelazny better fortune in the future and, tending to cringe a little from the idea

of a further eight like this, one also hopes he does not hit on the title of *Forever Amber.* *Charles Ward.*

The Cream Of The Jest
by James Branch Cabell,
Pan/Ballantine, Published by arrangement with Margaret Freeman Cabell, by Ballantine Books Limited, London, 1972, Paperback 275 pages, 40p.
Readers who have never happened upon James Branch Cabell are strongly recommended *not* to start with this, the last volume of his twenty-volume *Biography of the Life of Manuel,* but to go to *Figures of Earth, The Silver Stallion, Jurgen,* in that order, and on through the series, finishing with this one. Those I have just quoted are available in the British Tandem paperback edition, as well as in American ones, which carry one or two others in addition.

It is easy enough to enjoy *The Cream of the Jest* in its own right, as a mystery story about an author who finds himself involved with the characters in his own novels, starting with the imaginary 13th-Century province of Poictesme and going on up through the ages, meeting up with sundry historical personages along the way. You even get a thirteen-page geneology of all the characters of the Manuel Biography thrown in. There's value for money there, all right. The point is, Cabell was one of the greatest men of letters of this century; the Biography is not just a collection of stories, but an extended and magnificent essay on the human condition and the function of literature, an extraordinary combination of erudition, irony and playfulness. It can be read with enjoyment starting at any point – but start at the beginning, and you will be doing yourself a favour.
George Hay

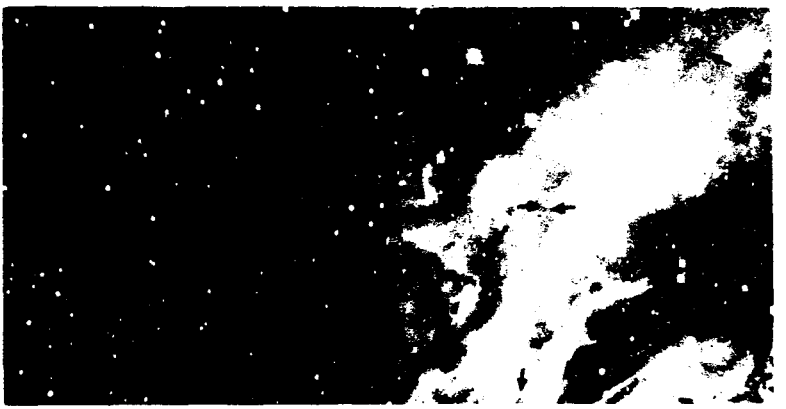
Fugue For A Darkening Island
ISBN 0 571 09794 4
by Christopher Priest
Faber and Faber, 147 pages, £1.75.
This story, set slightly in the future, postulates a Britain under the rule of a right-wing government, and the arrival in it of hordes of refugees from an Africa decimated by nuclear war. On that level, it is just another dystopian howl. This is being unfair, however, to the author, since in fact the presentation of the story is particularly convincing, and, from a construction point of view, quite fascinating. Presume that the story starts at Point A in time, and proceeds to its end at Z; the chapters in between are not presented in a linear fashion, but chopped up and shuffled in time, so that one gets the effect of a series of still frames out of sequence. Of course, they are only out of sequence in terms of standard story-time; in fact, they have been set out very skilfully to produce the maximum effect. In addition, the author has used a flat descriptive style which eliminates any possible reader pleasure from the *how* of events, forcing one's nose down, as it where, into the *what* – the what being a revolting collection of characters meeting a well-deserved fate and getting the maximum of suffering from it. One cannot even say that the situation is too far-fetched, or the characters too repulsive, to be convincing. True, any redeeming qualities the characters might have had have been carefully removed, but what is left is far too close to what we see around us every day to be dismissed

as fanciful. No, no – Mr Priest, having chosen a revolting target, has hit it with an unerring thud. *George Hay*

Lud-In-The-Mist
by Hope Mirlees
Pan/Ballantine , Paperback. First published in the U.K. in 1926. This edition published by Ballantine Books Limited, London, 1972. 273 pages 40p.
Lin Carter's introduction tells us that Hope Mirlees was "a gifted English novelist . . . who enjoyed a brief popularity during the nineteen twenties" . . . *sic transit.* To consider that it took an Anglo-American joint operation to get it into print again in the author's own country, and then to compare its quality with that of many much-trumpeted contemporary writers – to do this is to despair of British publishing.

The book is a parable of what happens when the world of Faerie spills over its boundaries into the domain of bread-and-butter and domesticity. The latter is represented by the merchants and townsmen of the free state of Dorimare, who take good care to keep on the hither side of the Debatable Hills, which is the boundary protecting them from Fairyland. The ills which afflict the good townsfolk – and whose resolution provides the mainspring of the tale – come about through the fact that characters of dubious intent have started to smuggle fairy fruit into Dorimare.

If you think there is anything twee or affected about this novel, you are quite wrong. Miss Mirlees presents certain home truths in a blunt, almost brutal manner. If her story is charming – as it is – she does not let us ever forget the original meaning of that word, as distinct from its present, rather effete sense. She does not let us forget that nature is utterly ruthless as well as beautiful, or that effects of the super-natural upon the natural can be utterly disastrous, and generally are. Yet, contradictory though it may sound, the book is loaded with affection for the intimate colours and sounds of everyday life, and for the quirks of human behaviour. The writing is masterly. Read it,and be grateful. *George Hay*



science fiction and London University

by Philip Strick

On 3 June 1972, still a month away as I write this but already past as you read it, an event of some significance in the history of science fiction in Britain will have occurred. For the first time, a University-level examination paper in science fiction will have been undergone by a group of half a dozen students. If they pass (the papers are to be examined by James Blish), they will be awarded London University Sessional (non-diploma) Certificates – which won't put extra letters after their names but which will confirm that they have attended a full course of instruction in the subject and have contributed enough work of sufficient quality and standard to satisfy the University's representatives. That will in effect mean that they are better qualified to teach science fiction than anyone else in the country. Including their teacher.

It is an exciting outcome of the third year for which I have given this Course for the University. Taking place in almost forbiddingly scholastic surroundings, the chairs and desks ingrained with chalk dust, the caretakers eager to move us on within seconds of the allotted time, the events are modestly sandwiched between courses on stained glass and Egyptian hieroglyphic writings and seem equally bizarre as a way of spending two hours on Friday evenings for more than twenty successive weeks. When one student asked, halfway through an early session last year, whether she had come to the right room for Byzantine Architecture, it even seemed that extra-mural classes might all in some curious Borgesian fashion turn out to be identical, and that the influence of academism on science fiction had contrived to pigeonhole it, stale and impotent, in some harmless and forgotten inkwell.

Fortunately, the subject manages to survive the surroundings, and this year's set of discussions has been the liveliest yet. Although anything over thirty enrolments is discouraged by the University, and there are always plenty of drop-outs by people who find that science fiction isn't what they thought it was (one lady abandoned us this year with some irritation when she found she was actually being expected to read the stuff), a tough core of over a dozen enthusiasts sat right through the entire course while another handful drifted in and out obeying some unknowable migratory instinct. Other courses foundered during the power strike. Not ours! Candles materialised as if by special arrangement with the astral plane, together with unusual refreshments to encourage the thought processes. There were visits in person by John Brunner, Christopher Priest, James Blish, and John Christopher; there were visits on film by Isaac Asimov and Harlan

Ellison. And by the final month, as if by spontaneous combustion, there were stories from the students themselves, startling, funny, and original, all set to go for publication. Science fiction, it seemed, was alive and well and planning to stay for a while.

What the course set out to do when London University gave it a first try in 1969 was to define the 'classics' of science fiction since the 1940's. I felt that for too long the accepted standards had been set by *1984*, or on a different level by the popularity of John Wyndham and Nigel Kneale, and that it was necessary to investigate whether a fresh *Frankenstein* or a new *War of the Worlds* had appeared that, unrecognised so far, was actively influencing the science fiction of today. It was necessary, naturally, to indicate something of the history of the subject, giving due time to Poe and Wells, but I also hoped that we would come nearer to understanding the special qualities of such people as Heinlein, Lovecraft, Bradbury, Matheson, Herbert, and later of Disch, Ballard and Dick. There was also the important point, the reason why I agreed to take on the courses in the first place, that I wanted an excuse to re-read the books I have collected around me for most of my life and to find out if they were still as good as I had thought. On the whole, as it turned out, they weren't. They were far better.

Each week the course analyses a different author, usually by concentrating on one example of his work in detail and investigating the extent to which it is representative of his overall theme and style. This means some frantic reading – around six books a week – by the lecturer trying to keep one jump ahead, and some equally frantic searching by the students for copies of the main item for discussion. Although the University provides a number of books for the course (thanks to which it now has an extremely respectable science fiction collection!) there are still no certainties in paperback availability; it helps to keep in close contact with Derek Stokes' bookshop, and even then there can be some nasty surprises. There was no sign of *I Am Legend*, for example, just when we needed it – or of *The Space Merchants*, *The Atrocity Exhibition*, or even *Death of Grass*. Such crises, however, don't lead to despair; some of the best debates have resulted from stories being read out to students as their first encounter with the writer concerned.

The Course begins again, called for want of a title 'Worlds of Science Fiction', on 29 September. It happens at the Stanhope Institute, Longford Street (Tel: 387 6787), which is just north of Great Portland Street tube station; enrolments should be addressed to the London University Department of Extra-Mural Studies, 7 Ridgmount Street, WC1 7AD (Tel: 636 8000). There are twenty-four sessions, briefly interrupted by Christmas, going on until 6 April, 1973, including authors ranging from Aldiss to Zelazny. And the students? They're a complete cross-section – computer experts, psychologists, trainee teachers, radio engineers, shopgirls, housewives, retired colonels, they only seem to have one thing in common. At the start of the course, they're interested in science fiction. At the end, they're hooked on it. That's a process worth sharing.