FOUNDATION

THE
REVIEW OF
SCIENCE FICTION

38

including articles by Robert Silverberg, Gregory Benford and Kim Stanley Robinson
featuring Brian Stableford on the first volume of Colin Wilson's *Spider World* trilogy.

FOUNDATION 38

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FOUNDATION

THE REVIEW OF SCIENCE FICTION

Contents
Number 38, Winter 1986/87

Editorial

This issue sees, I suppose, the most radical change in the appearance of *Foundation* since the earliest issues. We have dropped the triple chevron motif which signalled our links with the North East London Polytechnic—not because our links with NELP have ended, but because NELP itself has recently dropped this logo. We have taken advantage of this to introduce a new design for the title and, most obviously, the colour cover itself. This latter change was planned by David Pringle before he resigned as editor, and one of my first tasks as Deputy Editor was to make approaches to publishers, proposing that they should fund a colour cover, advertising one of their books, in return for our publishing an article linked in some fashion with that cover. The response was encouraging enough for us to launch the new design. Naturally we are not going to compromise our editorial independence in any way; indeed our very first "Cover Feature" is not, as you will see, overly enthusiastic about the first book offered to us by our first collaborator, Grafton Books. An almost equally important point to make is that the rise in price of individual issues, which took effect from no. 37 (from £2.40 to £2.95) has nothing to do with the introduction of colour covers. The additional cost of printing will be born by the publishers; the rise in price simply followed the realisation that we were losing money on each copy sold in bookshops. The rise to £2.95 will enable us to keep the subscription at the same (amazingly low) level for a while longer, and will perhaps persuade a few more people that taking out a subscription is indeed a bargain that they cannot afford to ignore . . .

The Science Fiction Foundation continues to take part in new ventures, despite the lack of funds which makes any such ventures very difficult. Perhaps the most plausible initiatives will be those undertaken together with other institutions. The most recent is the one-day course organised by Anthony Croghan (SFF Council member) on behalf of the Library Association and the SFF, on "Using Bibliography and Science Fiction". It is aimed at librarians, and is designed "to show the nature of the bibliography of a topic and, by placing this in a context, show what are the needs it meets for different kinds of users". It will be held on Thursday April 2nd at the Library Association (7 Ridgmount Street, London WC1E 7AE), from whom further information (including details of financial assistance) can be obtained.

Our most significant new venture, however, has been taken jointly with the British Science Fiction Association and the International Science Policy Foundation. Negotiations between Dr Maurice Goldsmith of the ISPF and the two brothers, Arthur C. and Fred Clarke, resulted last year in the establishing of an annual Arthur C. Clarke Award. A panel consisting of two representatives from each of these three bodies will select the best sf novel published for the first time in the UK in the year in question; the prize itself, £1000, will most generously be supplied by Arthur C. Clarke. In due course this Award may replace the annual BSFA Award for best novel; we certainly hope that it will develop into an award as well known and coveted, in its way, as a Hugo or a Nebula, which, sadly, the BSFA Award has itself never really become.

The panel whose members have been reading through all the eligible books published in 1986 consists of John Clute and myself from the SFF; Paul Kincaid and Mike Moir from the BSFA; and Maurice Goldsmith and George Hay from the ISPF. Last month the

panel drew up its short-list: the books are, in alphabetical order, Margaret Atwood, *The Handmaid's Tale* (Cape); Greg Bear, *Eon* (Gollancz); Samuel R. Delany, *Stars in My Pocket Like Grains of Sand* (Grafton); Gwynneth Jones, *Escape Plans* (Allen and Unwin); Kim Stanley Robinson, *The Memory of Whiteness* (Macdonald); Josephine Saxton, *Queen of the States* (Women's Press); Bob Shaw, *The Ragged Astronauts* (Gollancz); and Lucius Shephard, *Green Eyes* (Chatto). The panel will be meeting in March to select the winner, and the first award will be announced (in the presence, it is hoped, of Fred Clarke) at the annual Easter sf Convention, which this year is Beccon, held at the Metropole Hotel in Birmingham. It will not (I indiscreetly predict) be an easy choice; I await the result with even more interest and curiosity than anyone else.

Ventures such as these are inclined to place a great strain on our limited resources—which can be translated as "our gallant but over-worked part-time secretary, Joyce Day". Joyce was, unfortunately, seen as the obvious person to help the panel get this award off the ground, by writing to publishers and so on. We shall obviously have to avoid this in future. Luckily a new Publicity Officer at NELP took some of the work off Joyce in the course of the autumn, and the publicity handouts that were distributed to publishers and newspapers did bring the Science Fiction Foundation some very useful publicity, most notably in the form of a half-page article by Richard Boston in the Education section of the *Guardian* (December 9 1986). It was all we could have wished for. I almost (but not quite) blush to record Mr Boston's enthusiasm and excitement over the Foundation's "immense potential". He stressed what had been done already, but lamented the aforementioned limited resources. "On less than half a shoestring the Foundation has made itself what the Thatcher government calls a centre of excellence . . . It would require the tiniest fraction of a percentage of what is doled out annually in favour of minority interests such as opera to transform the Science Fiction Foundation into something which we could justifiably boast of as one of the best in the world."

The article was illustrated by the ambiguous image of the Mekon floating between the shelves of the SFF Library, reading a document entitled "1986 Education Act". (US readers please note: the Mekon was the little mega-brained green Venusian, whose attempts to clobber Dan Dare are deeply embedded in the memory of every British sf reader who grew up during the '50s.) And Richard Boston noted, during his trip to the SFF Library, that "the most serious gap in the collection . . . was a complete set of the *Eagle*, so if any ageing Dan Dare fans have copies mouldering in the garage, they might consider donating them (or indeed other sci-fi material) to the Foundation." And, in fact, since then, an early run of the *Eagle* has been donated, as well as a number of other early magazines. The Foundation can buy almost nothing; it depends on review copies coming to *Foundation,* and on the generosity of publishers and readers. Search your conscience, your shelves, and your garage.

Edward James
St Valentine's Day, 1987

We welcome Robert Silverberg, one of sf's best-known names, to this issue with an extract from a forthcoming anthology which he is editing. Detailed studies of short stories—the life-blood of sf—are rare, and they are particularly welcome and interesting when they come from the pen (or, more accurately, word-processor) of someone who knows so much about the craft himself.

Three Worlds of Wonder

ROBERT SILVERBERG

Introduction

These are three extracts from a book called *Robert Silverberg's Worlds of Wonder,* which Warner Books will publish in the United States, and Gollancz in Great Britain, some time in 1987. The use of my name in the title is not merely a bit of self-advertising, but is meant to indicate that the book contains stories that have spoken in a specific way to me, stories that have brought me illumination and transformation and the special sort of delight that is to me science fiction's greatest merit. They are, in the main, the stories that I was reading in my own formative years as a writer—when I was eighteen or twenty years old, and just embarked on the beginnings of my career.

What I have done in *Worlds of Wonder* is to offer a long autobiographical essay, "The Making of a Science Fiction Writer", followed by thirteen stories that I regard not only as superb examples of sf but as works that had particular influence on my own writing methods. To each of these stories I have appended an essay of several thousand words, technical in nature but also to some degree personal, in which I attempt to explain the virtues I see in the stories, the way they represent certain aspects of the ideal in science fiction, and the effect they have had on my development.

Three of these essays are presented here. The full list of stories included in the book is:

"Four in One", Damon Knight
"No Woman Born", C.L. Moore
"Home is the Hunter", Henry Kuttner
"Scanners Live in Vain", Cordwainer Smith
"Common Time", James Blish
"Hothouse", Brian W. Aldiss
"Colony", Philip K. Dick
"The New Prime", Jack Vance
"The Monsters", Robert Sheckley
"Fondly Fahrenheit", Alfred Bester
"The Little Black Bag", C.M. Kornbluth
"Light of Other Days", Bob Shaw
"Day Million", Frederik Pohl

"Common Time"

This is a marvellous story. I have thought so for more than thirty years, and since 1970 I have included it in no less than five of the anthologies I have edited, which is one way of

putting my money where my mouth is. It is built around the startling and uniquely science-fictional predicament of a space voyager travelling faster than light, and handles that theoretically impossible situation with as much scientific plausibility as anyone could; it is told in an effective and dramatically moving manner; and at the proper moment it leaps into a passage of (completely legitimate) linguistic fantasy that continues to haunt me a generation after I first came upon it in that year—so memorable for me—of 1953.

I happen to know, because I was a close friend both of James Blish and of the editor (Robert A.W. Lowndes) who commissioned the story, how "Common Time" came into being: and a very curious genesis it was indeed. Those who wonder how story ideas are born are likely to find the tale instructive.

There was, in the olden days, a custom among fiction magazines of printing four magazine covers at a time. Evidently it was cheaper to do it that way; and the old pulp magazines were nothing if they weren't cheap. Magazines then, as they usually do now, preferred their cover illustrations to depict some scene from one of the stories within. But sometimes the press date for the latest batch of covers would approach and the editor would have no story on hand for the next issue that contained an appropriately illustratable scene. Printers' schedules are notoriously inflexible and writers' schedules are notoriously haphazard, which led some editors finally to come up with this ingenious solution to the problem: have the cover painted *first,* find the story that it illustrated afterward. Since commercial artists are generally more reliable about deadlines than most short-story writers, the editor and his art director could work well in advance, keeping a backlog of paintings on hand and asking certain dependable writers to produce stories written around the scenes shown. That way there would always be "cover stories" waiting to be included in the issues whose covers were being printed in those batches of four. (I did a good many such stories myself, from 1956 until about 1963, and one final one in 1968. The custom seems to be extinct now.)

Blish, early in 1953, was handed a photostat of a painting that showed a draftsman's compasses with its points extended to pierce two planets, one of them the Earth and the other a cratered globe that might have been the Moon. A line of yellow string also connected the two worlds. In the background were two star-charts and the swirling arms of a spiral nebula. Blish later recalled that the pair of planets and their connecting yellow string reminded him on some unconscious level of a pair of testicles and the vas deferens, which is the long tube through which sperm passes during the act of ejaculation. And out of that—by the tortuous and always mysterious process of manipulation of initial material that is the way stories come into being—he somehow conjured up the strange and unforgettable voyage of "Common Time", which duly appeared as the cover story on the August 1953 issue of *Science Fiction Quarterly.* Where I encountered it, and read it with deep astonishment, one hot summer afternoon early in the Eisenhower administration.

I failed to notice, I ought to admit, anything in the story suggesting that it was about the passage of sperm through the vas deferens and onward to the uterus. To me in my innocence it was nothing more than an ingenious tale of the perils of faster-than-light travel between stars. Damon Knight, in a famous essay published in 1957, demonstrated that the voyage of the sperm was what the story was "really" about, extracting from it a long series of puns and other figures of speech that exemplified the underlying sexual symbolism of everything that happens: the repeated phrase "Don't move" indicates the moment of orgasm, and so forth. Blish himself was fascinated by that interpretation of

his story and added a host of embellishments to Knight's theory in a subsequent letter to him. All of which called forth some hostility from other well-known science fiction writers, and for months a lively controversy ran through the sf community. Lester del Rey, for example, had no use for any symbolist interpretations of fiction. "A story, after all, is not a guessing game," del Rey said. "We write for entertainment, which means primarily for casual reading. Now even Knight has to pore through a story carefully and deliberately to get all the symbols, so we can't really communicate readily and reliably by them. To the casual reader, the conscious material on the surface must be enough. Hence we have to construct a story to be a complete and satisfying thing, even without the symbols . . . If we get off on a binge of writing symbols for our own satisfaction, there's entirely too much temptation to feel that we don't have to make our points explicitly, but to feel a smug glow of satisfaction in burying them so they only appear to those who look for symbols."

It seems to me, looking back at the controversy across nearly thirty years, that everyone was addressing a slightly different issue. Knight's point about symbols was that nearly every story—Blish's was simply an extreme example—has an underlying symbolic content, scarcely apparent to the reader *and perhaps not even to the writer,* which operated on the reader on the unconscious level to enhance the story's power. Nowhere was Knight suggesting that a writer should begin with the pattern of symbols and fill in the plot, the character, and the setting afterward, although some of his opponents seemed to interpret his essay that way. Del Rey, of course, was right to insist that the writer must attend to the surface level of his story: unless it makes sense as narrative to a casual but not inattentive reader, it isn't likely to *have* any readers who will appreciate its amazing symbolic substructure. But that isn't to say that a story doesn't have such a substructure, whether the author meant it to be there or not. Blish, who supplied additional symbolic details to buttress Knight's clever analysis and went searching for more in all his previous stories, could have been construed as having been converted by Knight to the notion that the symbols are more important than the story; but I don't think that that was the case. Having written "Common Time" as a response to someone else's set of images, Blish now was looking with much fascination at the set of images his own unconscious mind apparently had thrust up into narrative levels of his story, and to his own surprise found many of the same images in his earlier works.

My own position lay somewhere in the middle, and still does. I think every story is probably full of unconscious symbols, but Knight's idea that there are grand archetypes that can be relied on to affect a reader's response seems untrustworthy, because to my way of thinking there is no universally shared language of symbols: a burning barn may "mean" *sexual excitement* to one reader and *famine and hardship* to another. So *spaceship = penis* or *flowing water = eternal life* are not likely to evoke the automatic and universal response that the writer may be hoping to achieve. But it can be tremendously effective for a writer to bury a private symbol-set in the deeper layers of a story. A coherent and coherently evolving group of internally consistent images and correlations that works in the depths of a story to amplify and intensify the events of the narrative can certainly lend additional structural integrity to that narrative, I believe. But the surface narrative, as del Rey insists, must come first; the writer, if he is so inclined, may experiment with building in a symbolic under-structure, which may or may not have much effect on the reader; and the writer's own unconscious will surely add its own additional

level of symbology, which will probably have a strong but indeterminable effect on the power of the story but which is best detected after the fact by someone other than the writer. (And the writer himself would be well advised to pay no attention, lest he wind up paralyzing himself with a self-conscious scramble for bigger and better symbols.)

All that having been said, what do we have in "Common Time"?

Again, the fast opening. *Don't move,* we read, and we know that something must be wrong. Garrard is in trouble, but he may have saved his life by keeping still.

What sort of trouble? Blish tells us. The exposition is quick and clear: an experimental faster-than-light voyage is under way. There have been two previous such flights. The pilots of both—each traveling solo—were never heard from again. Good: the science-fictional situation has been established, and the protagonist is in jeopardy. He is awakening on schedule into a strange situation that turns out to be even stranger than expected, for time, it seems, is standing still for him.

Garrard comes to that realization in stages. He has to struggle to move his eyelids. Then he notices that the clock isn't running. And then it occurs to him that he isn't breathing. Such use of transitions and gradual processes are valuable in developing a story: they build reader involvement, they create suspense. Where an amateur might baldly say, "Time had apparently stopped", Blish takes a couple of pages to make us *feel* Garrard's discovery of that fact, step by step. (The trick can be abused; we might have been buried under ten pages of tiny transitions, thus hiding the forest behind the trees. A sense of proportion is essential in every aspect of constructing a story.)

In fact, time hasn't stopped—only slowed enormously, so far as Garrard can tell. It becomes his task to figure out what is really going on. He suspects that his two predecessors must have perished because they failed at that task. His survival, then, is at stake. The problem of the story is established. Now Garrard must struggle for his life, undergoing an agony that is the main body of the tale. (I'm using *agony* in its classical meaning here: not necessarily pain or grief, but simply a struggle or a contest. It comes from the Greek word *agon,* which referred originally to such contests as those of the Olympic Games. The word prot*agon*ist, meaning the chief personage or personages in a drama, comes from the same root: the protagonists are the ones who enact the *agon*, or struggle, that lies at the heart of every dramatic situation.)

Garrard's agony is indeed an agonizing one. It brings him periods of prolonged emotional and physical distress, which gradually he learns to understand and even use to his own advantage. Blish relates it in a dry, concise way. The tone of the story is controlled, the texture is austere; that is one of its fascinations. Hysteria would not have enhanced anything here. The situation itself is weird enough; no need to hype it up with heavy breathing, only to tell what happens simply, clearly, and straight forwardly. (Or, at any rate, *apparently* straightforwardly, I ought to add, considering that Damon Knight would have us believe that what we are really reading is a description of the process of fertilization and not an account of the problems of a spacefarer.) Tension is created by the absolutely clear delineation of the absolutely incomprehensible, and by a few technical devices such as the use of italicized words: the initial *Don't move,* and then the repeated *pocks* of the calendar.

Thus Blish guides us deeper and deeper into the mysteries of the flight of the DFC-3, maintaining tight control as he draws us along. One way he does this is by making the unreal as real as he can: by giving us the air pressure readings, for instance, or by his brief

and masterly discussion of the relativistic effects, or by such incidental bits of erudition as the reference to tenesmus—followed immediately by its definition to keep the reader from feeling baffled and hostile. Blish does beautiful detail-work, down to calculating the force Garrard must exert to move a pencil. (Is the calculation correct? Most readers, including this one, won't bother to check. Best not to fake it, though. God will check, and so will a few readers of a certain disposition, and they'll tell everybody. Besides, a writer who gets into the habit of faking what doesn't need to be faked is sure to forfeit his credibility somewhere along the line: everybody needs to fake a little here and there, and you will be able to fool even a smart reader on many things, but the limit is all too easily reached.)

The detail-work is part of the job of creating and maintaining the illusion. The author, by demonstrating a fund of competence and experience deeper than the reader's, exerts his authority. (The pun is no accident.) One necessary thing any writer must do is make the reader believe at least for the time it takes to read it that this made-up chunk of events and conversations is actually a report on a segment of reality; and a good way to achieve this is to tell the story in a calm, confident way, so that it seems as though one is operating from a position of complete knowledge. Genuinely holding such a position is a great help in accomplishing this, which is why the best writers try to learn everything they can about the universe and how it works. Nobody learns it all, but if you learn enough you can feel safe in adopting an air of omniscience and make it seem convincing. Nervous and apologetic writers, like nervous and apologetic lovers, rarely are successful. And the skilful writer, like the skilful lover, knows how to move deftly around his own areas of inadequacy so that he gives the illusion that he is without any.

Having made us believe that Garrard really is out there somewhere in the DFC-3, Blish begins now to pull the rabbits out of his hat. Garrard, by methodical counting, manages to discover that he will experience 6000 subjective years while the ship is making its 10-month journey to Alpha Centauri. We feel the horror of that revelation. Then comes the elegant and ironic return to normal time, denoted by the cascade of *pocks* just as Garrard has begun to come to terms with the problem of how he will usefully spend his vastly extended life-span aboard ship. Which leads to the next surprise: having figured out how to cope with slowing down, Garrard suddenly finds himself speeding up. Which leads into the "pseudo-death" and the beautifully dreamlike scene of the clinesterton beademung.

Here Blish's cool, precise style pays off. He has been setting us up for a sudden wild departure into the utterly alien; and when it comes, we can handle it, more or less, because it is embedded in an otherwise unflamboyant narrative texture. The clinesterton beademung! The twin radioceles! What wonderful gibberish! Only it isn't really gibberish. In constructing the words of this section Blish's Joycean studies stood him in good stead. That word "radioceles" is derived from a medical term suggested to Blish by the original image of testicles that he thought he saw on the cover painting and used as his starting point; "beademung" is a sort of Latin-German dream-language hybrid meant to mean "the Blessed", and so on. None of this really matters to the reader, though it surely amused Blish. What does matter is that the scene gradually and brilliantly drops into the syntax of the beademung ("The offer the clinesterton beademung had just made was enormously hearted", Blish tells us *in exposition,* "and he in turn was much minded and of love, to his own delighting as well to the beadmungen; that almost went without saying.") The miracle of the scene is that we often come close to understanding what is

going on, and where we fail we can still take pleasure in our perplexity. It is a lovely passage, charmingly mysterious.

The awakening from pseudo-death is almost comic. Garrard notices a fallen book, and remembers that the clinesterton beademung had dropped it. "But what under God was a clinesterton beademung?" Garrard asks himself – a beautifully handled double take. And the rest of the story is devoted to answering that question, with uncertain results. Garrard returns to Earth; he assesses his experience; the structure of the story is reinforced now by references hearkening to the voyage, such as the unwinding of the counting-mechanism. Then come the explanations, such as they are. The *Don't move* of the first sentence proves to have been the solution to the story's basic problem, that of surviving a faster-than-light voyage. Blish recapitulates that by re-using the phrase, in a wryly altered context, at the very end – along with an echo of the beademung's wondrous dreamlike "with all of love" phrase.

Garrard has had a strange voyage that comes to a revelatory conclusion; and so have we, which is why the story is so satisfying. It works on many levels. It is a pleasing exploration of a classic science-fiction theme, the problem of what might happen if we violate the accepted relativistic laws and attain velocities faster than that of light. It is constructed deftly, each story situation introduced at the proper moment and tied together by a neat circularity of phrase linking the beginning and the ending. It is written in crisp, efficient prose, vivid without being flashy, which admirably communicates what it intends to tell us. And, if we are to go along with Damon Knight's symbolic analysis, it provides us not only with an interesting sf tale but with a subterranean narrative carrying us through the fundamental adventure with which human life begins. The only aspect of short-story technique that is neglected is character development, but not, I think, because Blish was incapable of telling us more about Garrard, only that he saw it as unnecessary. It must have seemed sufficient to Blish to depict him as a competent and resilient man. Filling the story with details of Garrard's unhappy marriage, his yearning for the stamp collection he left behind on Earth, or his fierce abhorrence of Chinese food would probably not have added to its impact. (Though at least one amplification of Garrard's character would have been useful, I think. I'll get to that in a little while.)

I found "Common Time" particularly valuable, encountering it as I did in 1953 while my own ideas of how to construct a story were still in the formative stages, because it keyed right in to a structural formulation that I had encountered at about that time in my college studies, and which has remained important to me ever since: Kenneth Burke's notion of "the tragic rhythm", which for him underlies all dramatic art.

Burke, one of the most profound of the great American literary critics of the first half of the twentieth century, sought in a number of fertile, stimulating books (*A Grammar of Motives, A Rhetoric of Motives, The Philosophy of Literary Form,* and many others) to arrive at a set of generalizations that would explain the fundamental structure of any literary work, be it a novel, a poem, or a play, of any era and any culture. This brought him some derision from other literary critics: R.P. Blackmur, for instance, charged that Burke's method "could be applied with equal fruitfulness to Shakespeare, Dashiell Hammett, or Marie Corelli". Burke, upon consideration of Blackmur's attack, saw nothing really wrong with that. "You can't properly put Marie Corelli and Shakespeare apart until you have first put them together", he replied. Which was a fair statement of my own position. For there I was with H.D.F. Kitto under one arm and the new issue of

Astounding Science Fiction under the other, trying to derive for myself a set of structural principles that would apply equally well to pulp-magazine fiction and to the plays of Sophocles and Euripides.

What Burke called the tragic rhythm could be encapsulated in a three-word formula, which I still keep somewhere in the back of my mind as I go about planning a story: *"Purpose, passion, perception."* In his 1943 essay, "The Tactics of Motivation", he provided this explanation: "Out of the agent's action there grows a corresponding passion and from the sufferance of this passion there arises a knowledge of his act, a knowledge that also to a degree transcends his act." All the structural formulations for fiction that I know say approximately the same thing—what it all boils down to is that Odysseus wants to get home to his wife, runs into all sorts of problems during the voyage, and is rewarded in the end by his discovery of her constancy – but Burke's version, because it identifies the components with one-word tags, seems to me the most basic.

Purpose. Easy enough. The main character has a goal in mind. Odysseus wants to get home; Hamlet wants to know who murdered his father; Raskolnikov wants to demonstrate his innate superiority by knocking off a nasty old pawnbroker and getting away with it. Garrard wants to survive his voyage in the DFC-3 and come back home with an explanation of what happened to his two predecessors.

In a simple adventure story the protagonist's purpose is the centre of the narrative, and the whole point of the story is how he goes about achieving (or failing to achieve) what he has set out to do. In deeper, richer stories there is some larger, underlying purpose. What goes on in *Hamlet* is not only a detective story but a rite of purification for an entire troubled kingdom. ("Something is rotten in the state of Denmark.") *Crime and Punishment,* too, is about larger things than the murder of one pawnbroker and the efforts of the local police to bring the killer to justice. Garrard wants to figure out some way of outlasting the relativistic effects that are complicating his starship voyage, but there are issues in "Common Time" also having to do with the relationship of the human species to the rest of the galaxy.

Passion. In our day this word has come to mean nothing more than romantic ardour, or even simply the acting out of physical desire. But is has an older cluster of meanings having to do with pain, suffering, and being acted upon, and that is the sense Burke uses. The love of Romeo and Juliet involves passion not only in the physical sense but in the sense of real torment: what those two go through for their love is harrowing indeed and brings them to a terrible calamity. Theologians speak of the passion of Christ on the Cross, by which they mean His agony during the crucifixion. (And remember the discussion of the underlying meaning of "agony", a few pages back.)

So passion, in Burke's sense of the word, is the central action of a story: the struggle of the protagonist, against whatever obstacles may arise, to achieve his purpose. The protagonist, be it noted, is not the only character in a story with a purpose; others have them too, and some have purposes that are diametrically opposed to that of the protagonist. Such characters are called *antagonists,* and it is the struggle or *agon* of protagonist and antagonist from which springs the conflict that gives a story its plot. In "Common Time" there is no concrete antagonist: as is frequently seen in science fiction, the antagonist is the universe itself. Garrard must wrestle with the inexorable laws of relativistic travel. The sufferings he undergoes aboard the DFC-3—the passion at the heart of the story—are unique, and uniquely fascinating. (It was the great science fiction

writer C.M. Kornbluth who pointed out during the 1957 debate over the symbolic content of "Common Time" that the initials of Garrard's ship—DFC—also stand for Distinguished Flying Cross, a deliberate or perhaps unconscious pun. Kornbluth thought this might be construed as a reference to Christ's agony on the Cross; for surely Garrard's experiences aboard the DFC-3 are a kind of crucifixion.)

Perception. The culmination of the story; the outcome of the passion of the protagonist. All that turmoil is not without result. Some fundamental change must come about, or the story leaves us with a sense of incompletion. Hamlet avenges his father's death, perishing himself in the process; but he sees at the end that the commonwealth has been purged of its ills ("I do prophesy the election lights on Fortinbras: he has my dying voice") and moments later the new king enters to begin the process of repair. Raskolnikov, having been convicted of his crime and shipped off to Siberia, contemplates at leisure his relationship to the rest of humanity and undergoes renewal and regeneration. Odysseus, after sweeping his wife's rascally suitors to destruction, achieves peace and reconciliation within the polity of Ithaca. Garrard not only figures out how to keep himself alive aboard his starship ("*Don't move*") but encounters alien beings of a superior kind and indicates to them that the people of Earth may be worthy of being taken into the community of worlds. And perceives his own human limitations thereby; for although he tells the clinesterton beademung that he hopes to return to them some day ("Yes, we-they will make a new wooing of the beademungen at some other radiant. With all of love.") he realizes, once he is safely back on Earth, that he will not go, "Not even, for all his dimly remembered promise, with all there was left in him of love." (Here, perhaps, is the story's one technical failing: for if Garrard had been explicitly defined at the outset, even with one single quick stroke, as a man whose urge toward exploration is insatiable, then his renunciation of star travel at the end would have more power. Virtually every story is built about some sort of explicit or implicit change of character; but the more profound that change of character is, the greater the story's impact. Blish tells us so little about Garrard's nature that we are left largely unmoved by its change at the end.)

Purpose, passion, perception. Of all the formulas for constructing fiction that I have heard, this seems the most useful. Like all formulas it is a simplification, but not, I think, an oversimplification, any more than the chemical formula for water or table salt or carbon dioxide can be called an oversimplification. Chemical formulas tell us which elements are contained in a molecule, and in what proportions. They provide useful reality-checks. ("If this stuff has carbon in it, it isn't salt, and it isn't water.") Not that writing stories is a great deal like doing chemistry, but there are some similarities. Burke's little schematic gives me a good way of testing the plan for a story to see if the essential elements are all there. If the story doesn't lead toward some culminating perception as a result of the chain of events that the fulfillment of the protagonist's purpose sets in motion, something seems missing to me. A story isn't a random bunch of happenings. It's a carefully orchestrated pattern—an *action,* in the technical sense of that word—designed to carry the protagonist, and through him the reader, through to some new and deeper understanding of one aspect of the universe. At least, so I think, and so I have tried to do for more than thirty years, with all there is in me of love.

"Hothouse"

The strangely transformed future, again, as in "Scanners Live in Vain". But Cordwainer

Smith's story takes place, it would seem, only some five or six hundred years from now, a thousand at most: lambchops may be forgotten, but people still live in cities and use telephones. The world that the formidably gifted British writer Brian Aldiss conjures up for us in "Hothouse" lies enormously farther down the line—millions of years ahead—and the transformation is nearly total. Huge vegetable spiders travel on cables between Earth and the moon, forests consist of a single enormous tree, humans wander like lost children through a terrifying toothy jungle, carrying their souls under their arms.

It is a kind of science fiction that has always held a special excitement for me: visionary fantasy, really, offering wild and vivid leaps of the imagination. It does not spring from close analysis of contemporary trends—as do, for example, such stories as Robert A. Heinlein's "The Roads Must Roll" or Arthur C. Clarke's *The Fountains of Paradise*—so much as it does from the free play of the unchained subconscious: a literature of dreams. The writer, peering into inconceivable depths of time, can hardly venture to say, "This is how it will be." He can say only, "This is my dream of the eons to come." What he offers are visions, not blueprints.

Some of my favorite science-fiction stories belong to this mode: S. Fowler Wright's *The World Below,* Olaf Stapledon's *Last and First Men,* Jack Vance's *The Dying Earth.* I attempted it myself in 1969 in *Son of Man.* I find in such stories the eerie clarity and power of sustained hallucinations. I find that in stories of the near future too: Heinlein's sliding roadways and Clarke's elevator into space are embedded deep in my memory, not far from the place where Vance's wizards and Wright's frog-mouthed horrors dwell. Any well-done stories of the future, even if they are set only thirty or forty years ahead—Orwell's *1984,* say—hold an almost hallucinatory intensity for me. But the story of the remote future, freed as it is from most of the constraints of realism, exerts a special kind of force.

One of the best of its kind is the Aldiss novel variously published as *The Long Afternoon of Earth* and *Hothouse.* Cast in the form of an odyssey—although Gren's long journey, unlike that of Odysseus, has no clear goal in mind, so that perhaps it might better be called a picaresque novel, endlessly stringing its story on the line of the hero's adventures—it carries us through a world that has undergone an astonishing metamorphosis, which is depicted in meticulous detail. Creating that vision of metamorphosis is the author's entire purpose, and it is magnificently realized. Heinlein, in a story like "The Roads Must Roll", was attempting to imagine with utterly plausible conviction the transportation system of the late twentieth century, down to the last rotor bearing and field coil, as he foresaw it in 1940. That our highways today don't look like the ones Heinlein imagined is beside the point: the story is a perfect self-contained prophecy based on the most careful possible analysis of the available data, and its power rises from the clarity with which Heinlein limns his near-future vision. The power of Aldiss' novel grows from the clarity of its vision too; but where Heinlein was seriously trying to invent a possible future, Aldiss nowhere asks us to believe that his fuzzypuzzles and flymen and dripperlips will some day come to inhabit the Earth. Both writers are sharing their dreams with us, but their intent is different, even if the ultimate result, which is the enhancement of our interior visionary furnishings, is the same.

Since *Hothouse* is a book-length work, you may have been wondering why I have included an extract from it in what is otherwise a collection of short fiction. Since one of the many purposes of this book is to offer my thoughts on the art and craft of writing the

science-fiction short story, a piece of a novel may seem out of place here, even if it does fit the *Worlds of Wonder* rubric. But in fact Aldiss first brought *Hothouse* to the reading public as five short stories, which *The Magazine of Fantasy & Science Fiction* published between February and December of 1961; and the following year the series received the Hugo award of the World Science Fiction Convention, not as a novel but as the collective winner in the Best Short Fiction category. "Hothouse", the story reprinted here, was the first of the group of five, which were combined into book form in the United States in 1962, somewhat abridged, under the title of *The Long Afternoon of Earth* and at last published complete in 1976 under Aldiss' original title of *Hothouse*.

"Hothouse" is here, therefore, not only for its intrinsic beauty and excitement as a segment of Aldiss' great visionary achievement, but because it demonstrates a significant aspect of the writer's craft: how to construct a work that is at the same time the opening section of a novel and a satisfying short story complete in itself.

In its form "Hothouse" differs considerably from the other stories collected here, most of which follow the efforts of one protagonist to deal with a single problem, and fit readily into the Kenneth Burke "purpose, passion, perception" framework that is my own basic structural device. In that sense "Hothouse" is not a complete story: it lacks the fulfilled dissonance/opposition/resolution sequence of the Burke formula, and there is no readily apparent central character. (Though the novel as a whole has one—Gren—who on the larger scale certainly does undergo the Burkean passion.) But "Hothouse", though only a slice of the whole, is so vivid that it works independently, all the same. We may be able to see that Gren is to be the protagonist of the novel, and therefore the journey of Lily-yo and the other elders to the Moon is merely a long digression; yet a unity of vision holds the story together even though the unities of plot are not visible. It is a small peep into the huge future, just as "Scanners" is in a very different way. Not all stories need fully rounded dénouements. Sometimes the promise of a fulfillment will serve in place of the real thing—as it does here.

Certainly the story opens swiftly and crisply. There is a one-paragraph prologue. Then comes jeopardy and response, and a death. There is no introspection and at first no explanation: the events unroll, statement by statement, Aldiss merely showing us what is happening, with scarcely any editorial comment. The effect is cinematic. (It doesn't stay that way, or we'd be hopelessly bewildered. But in the earliest pages he gives us only the smallest cues: the prologue, and then, pages later, that Lily-yo is weary and awaiting her time to Go Up. Everything else is implicit in the action, as it would be in a movie.)

The pace is extraordinary. Aldiss dazzles us with unflagging inventiveness: swiftly we meet berrywhisks, nuthuts, nettlemoss, dumblers, whistlethistles, trappersnappers. The unrelenting flow of strangeness quickly sets the scene for us, a steaming jungle where fantastic perils lurk on all sides and life is short. The names of the creatures are artfully chosen to minimize the need for explanation: without Cordwainer Smith's help we would have no idea what "haberman" or "cranch" meant, but we can make some sort of sense out of Aldiss' vegetable bestiary from the names alone, even though he does give us just enough description—the nettlemoss has poisoned tips, the berrywhisk is a sticky crimson mask, the dumbler is a fleecy umbrella with feathered spokes—to provide us with rich visual data. A flash of colour here, a bit of texture there, the sounds of slobbering in the darkness below: Aldiss works on all our senses in turn, a series of brief but telling strokes. His technical control is so tight that he carries us into the heart of his story within

moments, a breathless headlong tumble into a bizarre world the likes of which we have never seen or even imagined before. Only after that has been achieved does he slow down long enough to confide bits of background detail directly to us. When the tribe approaches the Tips, he allows himself a little essay on the evolution of the banyan tree—using our name for it, not the tribe's. When the fuzzypuzzle appears, he tells us that it is "a beautiful disorganized fungus". Now that we are snared, he can take the risk of outright Aldiss-to-reader exposition, and he will make more and more use of it as the story (and the book) goes along. But it is the cinematic method of the fast-paced early scenes that creates this work's astonishing initial impact.

Though one cannot find a conventional one-protagonist short-story plot, plot on a larger scale is present and is signalled, as it almost always is, in the earliest passages. The first two sentences after the brief prologue announce the theme of the entire work: "In the green light, some of the children came out to play. Alert for enemies, they ran along the branch, calling to each other in soft voices." Everything is there, tightly encapsulated. *In the green light* lets us know that we are entering an unfamiliar world. *Some of the children* immediately focuses on the protagonists, babes in the woods. *Came out to play* declares the fundamental nature of the world: there is no work to be done in our twentieth-century sense, only the free play of children in the jungle. *Alert for enemies*—yes, they are everywhere. *They ran along the branch.* This book will be about people in motion. *Calling to each other in soft voices.* Seeking to communicate, often against extreme odds. There it is. A beautiful but harsh and dangerous world; a band of innocents in a state of nature. The challenge is survival and the overriding purpose is to maintain the integrity of the tribe and of the human race.

Nearly everything that follows in "Hothouse" can be related to the thematic matter of those two sentences; and when we come to the story's final paragraph, we find that Aldiss has provided a passage which, while taking into account the events we have just been shown, is also a recapitulation of the opening:

> Except that deep in your core a little pack of humans use you as an ark for their own purposes. You carry them back to a world that once—so staggeringly long ago—belonged to their kind; you carry them back so that they may eventually—who knows?—fill another world with their own kind.

So the odyssey will continue, through strangeness after strangeness. Survival of the race, if not of the individual, remains the issue.

In the very last sentence of "Hothouse" Aldiss supplies a second recapitulation—not to the first scene, but to the prologue itself. "For remember, there is always plenty of time", he concludes, deftly taking us back to the statement of vast and unknowable spans of elapsed time that we find in the story's opening sentence, and at the same time aiming us onward to the next story in the sequence, which would be published two months afterward. (This sentence appeared only in the magazine version of "Hothouse". It was deleted in the book version, where it was not needed, since the reader needed only to turn the page to continue.)

An ending of this sort is what I mean when I say that the promise of a fulfilment can sometimes be used in lieu of a real dénouement. In such a journey-story as this one, there can be no cessation short of death: the point of it is that the characters are doomed to keep moving all the time. Therefore a closing passage that propels the story into a new set of episodes carries with it the sense, for the moment, of an ending: this phase is closing,

another is beginning, and we know that the road goes ever onward. We may realize that what we have just read is not truly complete, but, partial though it may be, it nevertheless has carried us from this place to that place, has given us rewarding vicarious experience along the way, and has set us down with the satisfying feeling that we have not travelled in vain.

Though Aldiss is not greatly concerned with the depiction of character in this segment of what will ultimately be a novel, it is necessary for him to bring on stage his protagonist-to-be, Gren, and establish him for later use. He does this with the same splendid craftsmanship with which he has so swiftly sketched in the jungle world. We see Gren, nine years old, "very brave already, and fleet and proud," knocking a tigerfly aside as he runs, without pausing in the errand he is carrying out. Then he vanishes from our view; the focus shifts to Lily-yo. When Gren reappears a few pages later, we meet him in jeopardy once again: this time a crocksock grabs his left arm. But "Gren was ready for it. With one slash of his knife, he clove the crocksock in two." When he climbs out of the crocksock's pool he grins "nonchalantly". Daphe calls out, "Gren, have you no fear? Your head is an empty burr!" He jumps about boastfully, winning mingled scorn and respect from his comrades. In just a few lines, then, we see Gren: strong, brave, competent, a little absurd in a virile way. As it happens, Aldiss will have no particular use for him in this segment of the novel. But Gren is there, beautifully established, for whenever he will be needed; and readers of the short story have had a lovely little vignette of burgeoning manhood to divert them.

As the shift from Gren to Lily-yo (and later, for a time, to Haris) indicates, Aldiss' use of viewpoint in this story is flexible and supple. Often it is omniscient: Brian Aldiss telling us about banyans, or fuzzypuzzles, or the changes in the intensity of the sun's radiation. Then he will dart briefly into the sensibility of one of the characters, but rarely very far. We get a glimpse of what Lily-yo is feeling, or Haris, or even a very minor character like Jury. ("A minute later she was sitting up, eyeing her deformities with a stoical distaste, breathing the sharp air.") These rapid shifts of viewpoint help create the story's fluid pace. In a way, they amount to a structural analog of the jungle's own shimmering swiftness of growth and change. Everything moves, and the camera's eye moves with it; now it is within this member of the tribe, now that one.

"Hothouse" is a stunning vision, as voluptuous a tale of the strange future as Cordwainer Smith's is claustrophobic and austere. Each in its own way is unique and unforgettable. By strikingly different methods these two stories create reality out of unreality, and plant themselves inextricably in the imagination of their readers.

"Light of Other Days"

This small, quiet, well-nigh perfect short story shows just how much science fiction can accomplish within a span of three or four thousand words. Beautifully it demonstrates how the best science fiction uses speculative science or technology to illuminate its human themes and human themes to illuminate its scientific speculations.

It is built around two interlocking cores: a troubled marriage and a technological wonder. The wonder is "slow glass", one of the most ingenious science-fictional inventions of the last twenty or thirty years—a substance so opaque that the passage of photons through it is vastly hindered, to the point where it may take ten years for a beam of light to travel the width of a single pane. The marriage is tense because an unwanted

pregnancy has interposed itself, causing economic and emotional strains. Shaw's handling of each of these cores is distinctive and elegant; but it is his use of each to cast light on the other that makes this story so memorable.

Slow glass, taken by itself, is the sort of notion that comes once or twice at best in a science-fiction writer's lifetime, the sort of thing that stirs his colleagues to lusty applause and bleak bileful envy. Like most brilliant ideas, it's a perfectly obvious one—to anyone with the wit to see it.

Ask any science-fiction writer, even one of those who pride themselves on their ignorance of science, to tell you what the speed of light is, and you'll get an immediate answer: 186,000 miles per second. (The more fastidious of them may give you the figure in kilometres per second.) But scarcely anyone will bother to add the small but vital qualification that that's the speed of light *in a vacuum*. Light passing through any other medium will move less quickly, which is what causes refraction effects: the velocity of light through water is slower than its velocity through air, which is why the twig in the stream seems to be bent. Light passing through glass is slowed even more—what we see through a window gets to us later than it would if there were no windowpane there—though the delaying effect is imperceptible to our eyes. Shaw simply—*simply!*—postulated the existence of a glass in which the velocity of light is slowed to an extreme degree.

His handling of the rationale for this is exemplary. He could have set it up the lazy way, merely saying, "Slow glass, a substance developed by Pilkington in 1997 that had the unique capacity of slowing beams of light down to a crawl . . ." Or he could have done it the cheap and sleazy way by stringing together some gibberish that sounds scientific, but isn't: "Slow glass, which is fabricated from polymerized molecules of plutonium hexachloride alloyed with an unusual isotope of silicon . . ." Instead—though Shaw's narrator is a poet and might legitimately be expected not to have the foggiest idea why slow glass works the way it does—Shaw has the man tell us that we should "visualize a pane of slow glass as a hologram which did not need coherent light from a laser for the reconstruction of its visual information." This is nicely done: holography was such a new concept in 1966, when "Light of Other Days" first appeared, that there is no mention of it in that year's edition of the *Encyclopedia Britannica* or the contemporaneous Webster's Third International, yet Shaw, keeping abreast of technology as a professional science-fiction writer should, was familiar with it even then. But invoking holography alone won't explain slow glass, and so we are told also that in these holograms "every photon of ordinary light passed through a spiral tunnel coiled outside the radius of capture of each atom in the glass." How is that achieved? We don't find out, because Shaw's narrator doesn't know and neither does Shaw; but if glass *could* be constructed that way, slow glass might be possible.

What this boils down to, then, is an artfully worded redundancy: slow glass works because it is constructed in such a way that light slows down as it passes through it. We can't ask Shaw for formulas and molecular models. If he really knew how to manufacture slow glass, of course, he'd be out cruising on his yacht right now instead of planning his next story about spaceships or robots. But at least he has taken care to give us something that sounds plausible and shows some knowledge of what actually happens when a beam of light strikes a plate of glass. The lazy writer, ducking the whole business of inventing a plausible rationale, is serving up a mere fable. The sleazy writer, hoping to fool us with

comic-book nonsense about plutonium hexafluoride and silicon, is feeding poisoned peppermints to his ignorant readers while losing the respect (and probably the attention) of those who know a little about chemistry. Shaw, though he is no more able to invent slow glass for us than are the scientists in the Corning factory, has worked at providing a plausible-sounding rationale, instead of merely wishing the stuff into being or tossing together whatever has come into his head. The extra effort lends conviction and substance to his story.

A single paragraph suffices for explaining the fabrication of slow glass. The story isn't about how to make the stuff, but about what it does, which is to create visual delay. What we see is light, reflected from the objects about us and converted into images by the miraculous mechanism that is our eye. If the light is coming from a great distance—say, from the galaxy we call the Andromeda nebula—a certain amount of delay must occur before it gets within processing range of our eyes. You can see the light of Andromeda in the night sky tonight; but what you see set out from Andromeda some 2,300,000 years ago. For all we know, the entire Andromeda galaxy was disrupted by a stupendous explosion while the Pharaohs were building their pyramids. The news of that cataclysm, though it has been travelling toward us at 186,000 miles a second, can't possibly reach us for millions of years.

The passage of light through slow glass causes delay too—months or even years: nothing so awesome as those created by the vast gulfs of intergalactic space, but significant enough in human terms. A window made of slow glass becomes a window into the lost and irretrievable past. Looking through slow glass, we see the light of other days; we see the scenes and people of vanished yesterdays, and they seem as real to ûs as the age-old light of Andromeda that glows in our sky this evening. It is a tremendously poignant and evocative concept, and from it arise any number of powerful fictional possibilities.

(Dedicated nitpickers have pointed out that slow glass is probably impossible: that impurities in the medium, or random movements of subatomic particles, would deflect and scatter the image long before it had completed its slow journey through the glass. Very likely that's so, but at some point the science-fiction writer has to shrug and ignore criticism of this sort, and I think this is the point. Bob Shaw's trade, after all, is fiction, not science. He is working in parables and metaphors, not in blueprints and formulas. Slow glass is simply too good an idea, one that arouses immensely rich and stirring fictional hypotheses; to discard it on the grounds that it probably couldn't be made to work is to go far beyond any reasonable degree of integrity and purity.)

All right, we have slow glass. How do we find an idea for a story to use it in?

One useful starting point is to think about possible uses (and consequences of the use) of slow glass. Decorative uses, certainly: hang a slab of it beside a Polynesian beach for a few months, then fit it into a window of a Scandinavian home, so that the occupants can look out on palm trees and a coral lagoon all winter long. Recording of entertainment events: viewers could look through slow glass to watch "live" performances of plays that were done years ago. Crimes committed behind slow-glass windows will come to light long after the fact, perhaps with complex effects on jurisprudence. The dying could speak to their unborn descendants. Complex business transactions could be recorded to guard against later challenge. And so on and so on. Many such ideas, and others besides, must have occurred to Bob Shaw as he began to sketch out what would become "Light of Other Days", and he set some of them aside for use in later stories. But for the very first slow

glass story he wisely chose a simple and compelling human situation: the power of slow glass to recapture for us a moment of the past that is otherwise forever beyond our grasp.

James Blish, in a valuable essay on his working methods published in the August, 1967 issue of the *Bulletin of the Science Fiction Writers of America,* declared, "Given the story which arrives in my head background-first, I find it works to ask myself next, 'Whom does this hurt?' The leading character comes out of the answer to this question." It's indeed a useful device for finding the emotional focus of a story. But sometimes, as we see here, the emotional focus of the story and the leading character are not necessarily the same person.

Who might be hurt by slow glass? Perhaps someone who has suffered a great bereavement, and who has years of his lost loved ones recorded on slow glass. The images coming through the glass would give him the illusion that the dead are still with him, which perhaps would be some consolation; but yet he must know that it is only an illusion, and he must live with the awareness that the time inevitably will come when the last of the images has worked its way through the spiral tunnels of the slow glass's atoms and then even the illusion would be gone. And Shaw has his tragic glassmaker, the Scots villager Hagan.

Wisely, though, he shows us Hagan at one remove. His narrator, the troubled husband Garland, has his own problems; and it is in the random search for some sort of peace from those that he encounters the glassmaker, and comes gradually to understand the man's true situation, and does indeed find peace in that understanding.

The story's gentle, understated nature is clear from the brief, lovely opening statement: "Leaving the village behind, we followed the heady sweeps of the road up into a land of slow glass." That one-sentence paragraph gives us an image of rural tranquility and then perhaps of mountain starkness, and leaves us finally perplexed by the mysterious phrase "slow glass". It propels us into a long and splendidly worked second paragraph which offers a richer view of the scenery and an even more puzzling glimpse of the slow glass. (It also provides us with one of the those offhand bits of background detail rendered in the throwaway manner pioneered by Robert A. Heinlein: "The car's turbine was pulling smoothly and quietly in the damp air." Cars with turbines belong to the future; the point is made but not stressed.)

The third paragraph leads us from the perplexing windows on the hillside to the conflict between Selina and Garland. There are problems in their marriage: she is pregnant, and angry about it. The accidental pregnancy has forced husband and wife to contemplate things about themselves, and about each other, that they had skillfully managed previously to avoid dealing with. All this is a rare touch of emotional realism in a science-fiction story, particularly in one that was written more than twenty years ago. Most science fiction in that time—and all too much of it today—is set in a neverneverland of bland emotions where such real-world matters as marriages, childbirth, and divorce are sidestepped entirely or else handled in a perfunctory and almost embarrassed manner.

As we have seen, there are stories in which such things would only dilute and distort the main business of the piece: in this book "Common Time", "Four In One", "The Monsters", "Colony", and perhaps several others would only be harmed if they dwelled on the private emotional problems (as opposed to the problems posed by the science-fiction concept of the story) of their protagonists. But in "Light of Other Days" the marital problems of the Garlands are inseparable from the science-fiction situation: this is

a story about love and the loss of love that comes with time. The love that the Garlands must once have felt for each other has been eroded by stress; the love of Hagan for his wife has been sundered more savagely, by a sudden accident. One loss is irrevocable, but has been cushioned by the miracle of slow glass. The other may yet be repaired; and here slow glass is instrumental in bringing that about.

It is only a little story—almost a miniature—built around an enormous concept. Yet in this one-incident tale the tension that exists between husband and wife is resolved by the climactic moment of compassion that springs from the uniquely science-fictional revelation of Hagan's sorrow that the slow glass provides. "Light passes out of a house", Garland tells his wife, "as well as in." It is an astonishing line, a poet's line, encapsulating in a few words the meaning of the whole story, and sending husband and wife away clinging to one another as they have not done for a long time. The effect is profound and moving. There is nothing new about stories of marital reconciliation, which is not a theme usually considered fruitful for science fiction; but this is the only reconciliation ever brought about by the slow movement of photons through a pane of dark glass. It is a story that could not have been told in any way than as science fiction. It is a story that is marvellously well conceived and marvellously well told.

"Common Time" was first published in *Science Fiction Quarterly,* August 1953, and appeared in Blish's collection *Galactic Cluster* (first published 1959). It has been anthologised many times, e.g. by Brian W. Aldiss in *The Penguin Science Fiction Omnibus.*

The "Hothouse" series began with "Hothouse" in *The Magazine of Fantasy and Science Fiction* for February 1961; the stories, which collectively won the 1961 Hugo for short story, were collected as *Hothouse* (1962), in the US *The Long Afternoon of Earth.*

"Light of Other Days" was published first in *Analog,* August 1966, and has appeared in many anthologies since Aldiss and Harrison's *Nebula Award Stories 2* in 1967.

Comment on Two of Silverberg's Worlds of Wonder

BRIAN ALDISS & BOB SHAW

Brian Aldiss:

My story of how the Hugo for *Hothouse* turned up with the morning milk on my girlfriend's doorstep has been told too often for it to bear repetition here. It was a pleasant surprise. I had already forgotten about the story, under pressure of a hundred other excitements.

In Silverberg's kindly remembrance, here's the same sort of pleasure all over again. Another doorstep, another award-giver, same old story. I do remember it now.

In 1962, I was only vaguely aware of the Hugo Awards, but acutely conscious of Robert Silverberg. Silverberg and I had already been spotted as Most Promising Young Writers, and we had met in 1957, when, as it seemed to me, Silverberg was being escorted round London by Forrest J. Ackerman, the notable who gave to the world the term "sci-fi". Indeed, I have a photograph of Silverberg being so escorted. He is already wearing a look of world-weary cynicism which I much admired at the time and have striven ever since to emulate.

Or perhaps he was simply baffled by an empoverished England in which bomb craters were still to be seen, gaudily-painted prostitutes hung about the Bayswater Road, and the effects of World War II were still plainly evident. Well, we're a nation which enjoys its poverty. Until that event in 1957—the first Worldcon to visit Britain—I was still wearing my "demob suit" (Historical Note: suit issued to soldiers upon demobilisation from army, generally of shameful style but durable quality); in order to look more presentable for the con, I bought a new sports jacket, which I still wear.

I know absolutely nothing about "Hothouse". I'm happy that Bob finds it unflaggingly inventive. All I can say is that I made it up as I went along. Not being able to remember the Aldiss of that time, I cannot gauge how much conscious technique was applied to the tale. It was written chancily, here and there, in absolutely wretched but enjoyable conditions.

Yes, I suppose it is visionary. Like Silverberg, I enjoy stories set in the far future. The time distance creates a special sort of story—mythical, to use a too easy word, or with mythical elements. Present day concerns like over-population, nuclear war, AIDS, deforestation, and politics (supposing all those things to be separable) vanish away, and one is left only with a dying fall. Aldiss territory.

As for that jungle in "Hothouse". I had tried to forget the jungles when I returned to the grey Britain of whores and bomb sites and demob suits. But they kept bursting out in my fiction, as murderers are supposed to see their victims popping up still alive from every bush. There's a jungle in *Helliconia Summer,* in Ch. XV. After the extent, grandeur, and order of it all have been described, comes a sentence it gave me joy to write: "The truth was that the whole intricate edifice, more marvellous than any work of man, had come

into being only a few generations ago in response to the elements, springing up like a jack-in-the-box from a scattering of nuts." So creativity unfolds, from a dry kernel of memory.

In a way, Silverberg's and my careers have run in parallel on either side of the Atlantic. He has been much more productive, of course; who could rival him? On the other hand, I've had no dry spells. He is immensely more successful. I understand that he has used his money wisely and is a rich man, whereas I currently am faced with tax demands I hardly know how to pay. It's almost as if we had been chosen by Fate or Destiny, or something awful beginning with a capital letter, to represent our respective countries! However that may be, of course I am delighted by praise from the author of *Dying Inside,* even when I suspect him of being too kind.

Bob Shaw:

Thank you for the opportunity to comment on Bob Silverberg's essay on my short story, "Light Of Other Days". For me one of the most important passages in the piece is: "All right, we have slow glass. How do we find an idea for a story to use it in?"

I occasionally teach creative writing, and one of the things I impress on students is the importance of *plot.* Strong plots may be unfashionable in the literary establishment. An "okay" writer may feel that inventing a compulsive story line is an admission of weakness, that if he is as good as he is supposed to be the interest in his work will be sustained by the sheer perfection of the writing, the insight into the human condition, etc.

I have two main objections to that stance. The first is that in my experience editors and readers *like* good plots, and that if you want to make money from writing that is the road to take. The second is that plotting is not incompatible with those other desirable elements. Why not combine them all? (I have an uncharitable feeling that the main reason for the demise of the O. Henry-style sting-in-the-tail stories is that they are so bloody difficult and labour-intensive to think up.) To me an idea for a story is like a diamond, and a plot is a device for holding that diamond up to the reader and turning it this way and that so that every facet will in turn fire its own little prismatic ray into the reader's eye.

Getting back to "Light Of Other Days", I was delighted with Bob Silverberg's reaction to the basic idea. We are in the same trade, and he understands the value of what had come to me as much as I do. I was determined not to waste it. I carried that idea around with me for *two years,* taking a huge risk, as I discovered when Larry Niven pipped me to the post with the first novel about worlds which encompass suns. During those two years I thought of numerous plots, any one of which would have produced a saleable story—but none of them was the *right* plot. (One of those I came up with was the exact plot which John W. Campbell suggested to me in a letter after he had accepted the original story, and which was later published in *Analog* as "Burden Of Proof".)

Finally, after two years of working on the idea while in the bath and waiting for trains and courting sleep, the plot of "Light Of Other Days" came to me. The actual writing of the story took two evenings—I was holding down a day-time job at that stage—but all the thinking paid off. That story has now been anthologised more than *thirty* times, and has made as much money as some novels.

Every now and then somebody in the movie or TV world senses its suitability for a visual medium and makes overtures, but nothing has yet come to fruition. I live in hope, and even though that hope is fading with the passage of the years I have the consolation of knowing that, as a writer, I once did something exactly right.

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Thrilling Structures? Science Fiction from the Early 'Amazing' and Detective Fiction

ELIZABETH KWASNIEWSKI

Literary historians and scholars have by and large ignored popular genres of literature. There have been several attempts to define the term "popular literature", but most of them are generally arbitrary and over-restrictive. The terms "low", "lowbrow", "trivial", and "subliterature"—used interchangeably—emphasize what is assumed to be the second rate quality of popular literature, its lack of aesthetic, moral, or cognitive values. According to the usual approach, the writers of popular or formulaic literature are not interested in social phenomena, in the condition and fate of humankind, or in the complexity of human existence. Instead of consciously aiming at "discovering . . . the ways of recording and interpreting experience,"[1] they wilfully explore the recurrent themes of love, hatred, crime or intrigue, in texts structured around the opposition of good-bad, known-mysterious, guilt-punishment, and so on.

It is hardly surprising that by their application of the critical methods of traditional humanistic disciplines to its content, scholars would locate popular literature somewhere on the margin of literary tradition. Such a judgement, after all, is an inevitable result of such methods. As John Cawelti observes, the concept of "subliterature",

> reflected the traditional qualitative distinction between high culture and mass culture . . . Even if one could determine where literature left off and subliterature began, a distinction that usually depended on the individual tastes of the inquirer, the term suggested only that the object of study was a debased form of something better. Like many concepts that have been applied to the study of popular culture, the idea of subliterature inextricably confused normative and descriptive problems.[2]

Yet the marginalizing which these traditional norms effect leaves criticism incapable of coming to terms with an indisputable fact: that the various types of formulaic literature—sf, the detective story, the western, the romance, etc.—constitute a large portion of the experience of literature for many contemporary readers.

That the mass media have increasingly contributed to disseminating formulaically structured "content" is by now virtually self-evident. This phenomenon, however, raises the question of what social and psychological functions formulaic literature performs—a question of primary importance both for understanding the enormous appeal of popular literature in general and for arriving at new insights into the patterns of contemporary culture. Simple extrapolations from content analysis cannot adequately account for that appeal, but examining formulaic literature from the standpoint of "the aesthetics of reception" perhaps can.

The mass popularity of formulaic literature presumably has to do with its carrying out of more social and psychological functions in a unified way than "high" literature does. Cawelti enumerates some of those functions in his study of literary formulas:

1 Formula stories affirm existing interests and attitudes by presenting an imaginary world that is aligned with these interests and attitudes . . .
2 (They) resolve tensions and ambiguities resulting from the conflicting interests of different groups within the culture or from ambiguous attitudes toward particular values . . .
3 (They) enable the audience to explore in fantasy the boundary between the forbidden and the permitted . . .
4 Finally, literary formulas assist in the process of assimilating changes in values to traditional imaginative constructs . . .[3]

Fully to understand and interpret the popularity of formulaic stories, however, it must be remembered that they are, first of all, created for the purpose of enjoyment and pleasure. In this regard, it is no accident that their plots are quite predictable, and thus are insignificant for their own sake; for their entertainment value lies precisely in their satisfying a demand of their readers, that of emotional reinforcement.

To illustrate how a formulaic structure performs this psychological function, we might consider as typical examples some of the sf short stories published in *Amazing Stories* between 1926 and 1946. Before getting to those stories, however, let us first note the socio-historical fact of the popularity of *Amazing*, along with other sf magazines that followed it. Billed by Hugo Gernsback as the first magazine devoted to "scientifiction", *Amazing* marks the real beginning of magazine sf in the US; and barely a year after its 1926 launching, the magazine could already claim to have 150,000 readers.[4]

At the risk of seeming overambitious, I would suggest that one necessary condition for the popularity of sf stories has to do with the structural elements in them which generate definite emotions in their readers. And it is here that sf and detective fiction intersect.

The affinities between sf and detective fiction are nowhere more astoundingly evident than in the sf short stories published in the earliest days of magazine sf. These stories follow a certain structural pattern derived from the detective story. The basic structural rule of a very large proportion of magazine sf is in fact very much the same as in the classical detective novel: both rigorously observe a chronological sequence of the narrative elements which may be called linear-retrospective. The content analysis of sf stories of this type indicates that all the episodes and incidents lead, in a direct or indirect way, to the explanation of the phenomena that disturb or threaten the initial status quo, much in the same way that the crime intruding into a fairly conventional and familiar world of a detective story is finally solved and thereby disposed of.

The unprecedented change introduced into the fictive world, such as an invasion of aliens whose motive and purpose are unknown or strange phenomena whose origin remains a mystery, is what Frank Cioffi calls an *anomaly*.[5] This anomaly threatens the

safety of an individual or a group of individuals, or even society at large. The chain of events, following one another from the moment the anomaly intrudes itself to that at which it is disposed of, is almost unvariably linear. Yet, though the plot develops logically, its logic is mad.

The phenomenon which "initiates" the action often originates in some unknown, usually dramatic, developments in the past history of an alien civilization whose members have been forced or have decided to invade Earth. In Edmond Hamilton's "The Comet Doom" (January 1928), for instance, the American scientists have noticed that Earth, whose gravity had been suddenly disturbed, is gradually being pulled into the head of an oncoming comet. The collision with the approaching celestial body would mean the swift asphyxiation of all terrestrial life. As the story develops, it turns out that the unaccountable behavior of Earth is caused by an intervention of the alien creatures, whose civilization is on the edge of extinction because they have exhausted their nuclear resources indispensable to the survival of their form of organic life. The purpose of their mission, therefore, is to draw Earth into the comet's body and to secure, in this way, the source of nuclear minerals for themselves.

D.H. Keller's "The White City" (May 1935), to give another example, tells the story of a New York whose inhabitants are in danger of being exterminated because all the essential functions of the city are being paralysed by a ceaseless fall of snow that keeps covering an entire area up to the roofs of skyscrapers. A similar meteorological anomaly is observed in all big cities throughout the country. Finally, the U.S. government is informed by the members of an alien civilization, whose spaceships hover above Earth, that the snow is produced artificially, and that they intend the destruction of the major cities as a monitory example of what will happen on a world-wide scale if the Earth's governments do not surrender to their rule.

The two stories, as I have briefly summarized them, exemplify a larger body of structurally similar texts. In them, the narrative not only unfolds the plot in linear fashion but also gives pertinent details of the past history which underlies the ongoing sequence of events. To put it differently, the writer gradually provides information allowing the reader to reconstruct, at least fragmentarily, the past history of an alien civilization and to learn about its final stages of development, the period during which its denizens decide to invade Earth. This basically makes the narration retrospective. Obviously sf stories offer an almost unlimited variety of openings, whereas the detective story usually begins with a murder. Yet, in either case, the principal organizing element of the linear-retrospective structure seems to be the same—i.e. the story devolves from the initial mystery.

Of course, not every conceivable puzzle or mystery is able to shape and decide the structure of the story. The puzzle must comprise something serious and decisive, something that is powerful enough to make the action, which naturally goes forward, stop and go back—a sudden death, for example, or a mysterious, unintelligible, and threatening phenomenon. The object is to draw the reader on, not by immediately affording comprehension of what is happening but by immediately withholding it. Precisely because the reader does not understand, he or she is motivated to learn what or who stands behind the surprising and incomprehensible anomaly (in most cases, a result of a vicious act or inextricable from it).

This kind of sf thus closely resembles the detective story in the way that R. Caillois in effect suggests when he says of the latter:

> It does not seem that the audience is willing to spend the time and pay the attention to thieves, swindlers, incendiaries. The audience demands a murderer, the guilty one who killed and takes a risk of the highest sentence. If there is no death of a man in the beginning and if the executioner is not waiting for the criminal at the end, the process of perfect deduction will not prevent even the most abstract mind from disappointment.[6]

The mysteriousness of the anomaly is initially a source of only a slight uneasiness—of moderate emotional tension—for the reader, who comes to the story expecting to find a description of "something unusual" at the very outset. Yet as the reader witnesses in the course of action the succeeding stages of struggle between the two thorough-going opponents who invariably figure in such a story, his or her interest, curiosity, and emotional tension increase. These feelings result from the progressive "crowding" of events and information, the growth of evidence that, through a prolonged period of intensifying or playing with the reader's curiosity, leads him or her to perceive the terrible mystery. Thereupon the reader can enjoy the catharsis of the moment that is the climax of the story, when the puzzle is solved (usually by liquidating the anomaly and reconstructing a distorted reality).

Hamilton's "The Comet Doom" may serve to illustrate this process. According to the scientific calculations of the speed and movements of the approaching comet, its collision with Earth and the extinction of human race are inevitable. The reader is led to believe that nothing can be done in the face of such an omnipotent force of nature. His or her anxiety is increased by the lack of information about this phenomenon (something the reader shares with the characters of the story) and also by the growing imminency of the catastrophe. When the aliens, who had orchestrated that event, land on Earth to begin the final preparations for accomplishing their mission, the reader, who is by now in possession of some clues as to their ultimate intentions, "joins" the attempts of three young men who have decided to baffle the aliens' efforts. Yet the more information the reader obtains about the intent of the comet-creatures—about the technological advances of their civilization over Earth's and the helplessness of homo sapiens in the face of their power—the more his or her curiosity increases, along with emotional uneasiness (and also uncertainty) as to the chances of defeating the aliens. The intensity of the psychological involvement of the reader in the story reaches its peak during the decisive struggle between the two opponents. In formulaic, not necessarily rational terms, the outcome of that struggle is predictable: the individuals with whom the readers empathize must succeed, contrary perhaps to any logical conclusions to which the elements of the narrative might have led. To a fastidious reader, the efforts undertaken by three young men to defeat the all-powerful comet-creatures must seem doomed to failure from the very start. Surprisingly, the protagonists win the battle—which only exemplifies the general rule that the implausible and the improbable are built into the structure of such sf stories, as is also the case with the formulaic structure of a murder mystery; logic is not what the readers are looking for in these texts.

Aydelotte's observations on the reception of the detective fiction formula can likewise be applied to the reception of the early sf stories: "(we) read (detective stories) not to have a new experience, but to repeat in slightly different form an experience we have had already. Thus, for example, the "surprise" ending is not really a surprise. It is the ending we expect and demand, and we would feel outraged if any other kind of ending were offered to us."[7] Hence the predictable result of the struggle between the two opponents in "The Comet Doom", for instance, does not seem to diminish the authenticity of the

feelings the reader experiences "participating" in all the preceding, dramatic developments of the narrative.

There is, however, a slightly different kind of sf story—somewhat analogous to the thriller, in which chase, or pursuit, is dominant. Here the reader is permitted to know the nature of the anomaly from the very beginning. His or her participatory interest is accordingly shifted from the question of who, or what, stands behind the mystery, towards a different one: whether or not the agents of the anomaly will outwit the protagonist and escape. The chase itself abounds with many unexpected events, surprises, violent fights, or ingenious traps. The process of following this dynamic chain of events, during which the lives of many people are in continuous danger, is inseparably accompanied by anxiety, fear, and tension. These feelings are intensified by the description of dark nooks and corners of the opponents's psyche and the setting.

In Bob Olsen's "The Space Marines and the Slaves" (December 1936), for instance, the crew of a space-ship patrolling the galaxy encounters a desolated planet whose inhabitants had been either killed or, presumably, kidnapped. All characteristics of the disaster point, beyond a doubt, to the villainous ruler of Mars, Zurek, as its perpetrator. He is known to invade planets and abduct their inhabitants, who afterwards are forced into slave labour in his mines. The nature of the anomaly is thus made clear at the outset of the story, and what follows is a dynamic account of the salvage operation performed by the Space Marines—a chase after Martian spaceships, several unsuccessful raids on Zurek's forces on Mars, secret preparations for a slaves' revolt, and the final victorious battle.

Frequently we find an intellectual rather than physical pursuit of the enemy—a mental struggle between antagonists of equal abilities, shrewdness, and inventiveness. In the future world of N.R. Jones's "Suicide Durkee's Last Ride" (September 1932), for instance, the "rocketmobile" race has become the most popular form of mass entertainment. Since human sensory perceptivity is too slow to control the vehicles, which move at enormous speed, they are operated by radio-control. During a race, two of the cars, belonging to rival teams, compete for the first place, but in the meantime the functioning of one of them becomes disturbed by radio interference of an unknown origin. The protagonist, Suicide Durkee, decides to drive the malfunctioning vehicle himself. From then on, the story depicts in detail the struggle between the two equally cunning and inventive opponents and gradually leads the reader to the climax of the narrative.

Both Olson's and Jones's stories typify "thriller" sf in this respect: that as the action approaches its climax, the reader is supposed to be wondering what the last, decisive encounter between the enemy and the hero will look like. More precisely, they invite the reader to ask *how* the enemy will be defeated—for in the magazine sf stories there is a strong presumption, stemming from the demand that the story end happily, that the enemy will succumb in the end.

Even from a quick glance at sf magazine narratives, it is clear that if a story is to be enjoyed by the readers it must, first of all, generate a sensation of fear. In order to perceive fear as a pleasurable experience, however, two conditions must be fulfilled: a dosage of fear cannot be insupportable and it should be immediately followed by the retreat to safety. In his analysis of detective fiction, Porter observes that,

> the idea of a given level of tolerance to fear suggests that the reason why fans of detective fiction return again and again to a favorite author is that they are certain to find in his works

the dosage of fear they know they can enjoy. The movement from exposure to fear and a return from it is characteristic of most popular literature from fairy stories and tales of adventure to gothic novel, mystery story, melodrama, and spy thriller.[8]

In sf magazine stories the protagonist frequently comes under the influence of strange, inexplicable powers, signs, and phenomena which incite a sense of insecurity, then danger, and eventually the feeling of an approaching catastrophe or death. The danger, felt intuitively, "hangs above" the hero and can hardly be interpreted in any rational terms. It may be manifested in the most innocent gesture, object, or person. This situation frequently makes the protagonist distrust his reasoning, the state of his mental powers (by invariable convention, the protagonist is always male). The hero has a strange urge to submit to danger which counterbalances his urge to resist it—an ambivalence which the reader, too, must feel to be prompted to read on; so that in identifying with the hero the reader likewise becomes a subject within grasp of the hidden powers.

The hero tries to impose a certain order on the unaccountable events and the surrounding hideous chaos. He analyzes the situation in search of the elements which might convince him about some hidden regularity which governs the seemingly unrelated incidents. This period of a deliberately prolonged tension is always followed by "the return from fear" as the hero manages to suppress the causes responsible for disturbing the status quo of the fictional reality.

Complementing the vast range of emotional feelings stimulated by the structural elements of the sf story are others resulting from the mechanism of projection and identification, by which the reader becomes absorbed with the fictional characters.[9] It may be assumed that readers derive a peculiar kind of psychological satisfaction from the hero's activity: his success creates an illusion of protection and certainty in the fictive world extendable to empirical reality. The protagonists, though obviously stock characters, are presented as shrewd, intelligent men, analytical thinkers whose power of reasoning—of penetrating reality—is overwhelming. The author, however, must be careful to maintain a certain level of non-complexity of characters. As John Cawelti observes, "(m)any works fail rather badly because they develop characters and situations too complex for the formulaic structures they are part of, without becoming sufficiently individualized to support a nonformulaic structure of their own."[10]

The attractiveness of the sf story's hero seems to be the principal component in the process of identification. The character who lacks vices and is endowed with a strong individuality and "super human" intelligence stimulates the average imagination by offering a model that invites and inspires emulation. At the same time, the attractive personality remains hollow enough for the reader to fill it with his or her own views, thoughts, and feelings. In other words, it must allow for the reader's construction of an idealized self-image.

A division of characters and moral attitudes into "black" and "white" is evident. This clear demarcation line between good and evil becomes blurred in a good many sf novels, making the process of identification more complex if not impossible; but in the magazine sf of the 1930s and '40s there seems to be no place for such moral ambiguities. The evil characters are usually represented by the aliens (e.g. in "Peril from the Outlands", June 1945), mad scientists (e.g. in "The Raid from Mars", March 1939), or ordinary criminals (e.g. in "Suicide Durkee's Last Ride", September 1932).

Several attempts have been made to analyze the relationship between this type of

character and the reader.[11] It may be assumed that apart from a reader with a disturbed personality, the process of identification with fictional characters who embody the values hardly acceptable in the reader's empirical world does not take place. Instead one can speak about the process of projecting the inward, subjective feelings of the reader onto outer reality, of endowing the "bad guys" with those features and emotions the reader does not accept in her or his own personality. This enables the consumers of these stories to justify or act out their aggressive fantasies vicariously, get free from them, and experience a peculiar state of release from the tensions of their own lives.

Unfortunately, the psychological theories which would oppose this last statement are almost equal in number to those which would support it; so that the problem (of identification/projection) remains open from the scientific point of view. It may be suggested, however, that the source of the peculiar pleasure and frequently intense emotions incited by fictional violence and aggressiveness is an awareness of the clash between the personal safety of the reader and the danger to which the fictional characters are exposed. Such fictions, in other words, perhaps offer the possibility "to explore in fantasy the boundary between the permitted and the forbidden and to experience in a carefully controlled way the possibility of stepping across this boundary".[12] In his *Poetics,* Aristotle coined a term for this kind of psychological impact a work of art is capable of exerting on its readers: catharsis, understood as a purification of the emotions which are projected onto the fictional object—a process which brings about spiritual renewal or release from these emotional anxieties. Nevertheless, the advocates of a functional approach to the study of literature still await the scientific verification of this concept.

Undertaking to locate the source of the entertainment value of sf stories, I have been pointing to particular psychological responses which certain structural elements of sf narratives are capable of generating in their readers, as well as to a similarity between sf and detective stories in this respect. These responses resulting from the reader's imaginative ability to enter into the spirit of fictional reality may explain the enduring and widespread popularity of formulaic genres among the mass reading public. In their structure, sf stories of the 1930s and '40s by and large contain a mixture of two elements: the conventions of the detective story, plus a scientific "discourse (which) generates . . . an entirely new set of rhetorical stances."[13] The latter seems to account for a basic difference between sf stories and those belonging to adjacent genres of formulaic fiction in regard to their reception process: sf is capable of challenging the reader intellectually. This ability, however, which cannot be ignored in any theoretical assessment of the reasons for their popularity requires a separate analysis.

Notes

1. R. Nye, *The Unembarrassed Muse: The Popular Arts in America* (New York: The Dial Press, 1970), p.3.
2. J.G. Cawelti, "The Concept of Formula in the Study of Popular Literature", in *Popular Culture and the Expanding Consciousness,* ed. R.B. Browne, (Bowling Green Ohio: Bowling Green University Press, 1973), p.110.
3. J.G. Cawelti, *Adventure, Mystery, and Romance. Formula Stories as Art and Popular Culture* (Chicago and London: The University of Chicago Press, 1976), pp.35-36.
4. J. Gunn, *Alternate Worlds; The Illustrated History of Science Fiction* (New York: Prentice-Hall, Inc., 1975), p.120. S.E. Finer in his article "A Profile of Science Fiction", *Sociological Review,* 2 (Dec. 1954), p.239, provides the following data: "(T)he number of magazines . . . increased from 4 in 1937, to 13 in 1939, to 22 in 1941 . . . and in 1954 it stood at approximately 30 . . . with total readership (about) six millions."

5. F. Cioffi, *Formula Fiction? An Anatomy of American Science Fiction, 1930-1949* (Westport, Conn.: Greenwood Press, 1982), p.11.
6. R. Callois, "Powiesc kryminalna", in *Odpowiedzialnosc i styl* (Warszawa, 1967), p.195 (trans. mine).
7. W.O. Aydelotte, "The Detective Story as a Historical Source", in *Dimensions of Detective Fiction*, eds. Larry N. Landrum, Pat Browne and Ray B. Browne (Popular Press, 1976), p.69.
8. D. Porter, *The Pursuit of Crime. Art and Ideology in Detective Fiction* (Yale University Press, 1981), p.102.
9. E. Morin in his analysis of mass culture regards these mechanisms inevitable in the reception of all the contents of mass literature. See E. Morin, *Duch Czasu* (Krakow, 1965), p.11.
10. Cawelti, *Adventure*, p.12.
11. A detailed analysis of the cathartic theory of represented violence can be found in L. Berkowitz, *Aggression: A Social Psychological Analysis* (New York: McGraw-Hill, 1962).
12. Cawelti, *Adventure*, p.35.
13. S. Delany, *Triton* (New York: Bantam Books, 1976), p.338.

Professor Hammerton first studied physics, worked for some years as a weapons designer, was "painlessly transmogrified" into a psychologist, and now heads the Department of Psychology at Newcastle University. He offers us a rest from our normal windbaggery (see his letter in our last issue) with this refreshing reappraisal of Verne.

Verne's Amazing Journeys

M. HAMMERTON

Jules Verne (1828-1905) has been variously estimated as a writer of poetic force,[1] the father of Science Fiction[2] and "a typical little bourgeois". ("Bourgeois" should really be spelled "B_____", now that it has superceded "bugger" as "a vague term of abuse".) It is still the case that his purely literary reputation stands higher in France than in English-speaking countries; but the reasons for this are not his fault, and not far to seek. Briefly: Verne has been wickedly served by his translators.

His books were first translated, usually within a few years of their first appearance, by various hacks who seem to have known little English, less French, and no Science. Some of their renderings would make a schoolboy blush. I think my favourite howler is in *Vingt Mille Lieues*, where an irate captain calls for *someone more skilled* and is made to demand *another, more to the right*. (Ch. 6: "'A un autre plus adroit!' cria la commandant . . .") There are comparable gems, however, in almost every chapter of every book, besides blunders in elementary arithmetic. Subsequent hacks copied from the earlier ones, unless by some miracle they happened to make exactly the same arithmetical blunders;[3] and his most recent editors, though properly respectful, have tended to cut out the very passages which, though they may give pause to the unenlightened, delight the connoisseur (such as the minute account in *L'Ile Mystérieuse*, of how to make nitroglycerine from the rawest of raw materials).

By this time, the reader may have surmised that I am something of an admirer of Verne. I do not deny it; and will attempt to offer some defence of this position.

Certainly he had failings, some of which are regarded more sternly now than in his own time: for example his racial prejudices read offensively today.[4] But Victorians—Lincoln as well as Verne—could believe in the natural inferiority of some races whilst regarding their oppression with genuine horror. (There is no logical fallacy there—far less is there hypocrisy. Oppression is a moral act, which can be condemned irrespectively of any conclusions about abilities, which are an empirical matter.) His xenophobia, usually mild, could be unpleasant at times. This, however, did not prevent him creating heroes and heroines—some of whom are surprisingly "modern" and "liberated"—who were English, Dutch, American, Russian, Indian or Chinese. And his humour was a saving grace.

A quality almost wholly lost by his translators is the ironic wit which pervades his work, especially the earliest books. Nevertheless, though his manner is light, his intentions were pervaded by a deep seriousness. His publishers produced his books in a series—collectively called *Les Voyages Extraordinaires*—explicitly dedicated to education as well as to entertainment; and Verne had no doubt that he intended to instruct as well as to amuse.

He was typically Victorian in this at least: he wished his instruction to be moral as well as factual; and his heroes are sometimes rather tryingly virtuous. They are brave, honest, determined, generous, kindly, and cheerful in the face of danger—and whilst twentieth-century men smile cynicallly at the string of adjectives, can they deny that they are indeed desirable qualities? Cynicism might equally be aroused by the prodigious learning of some of his heroes; but some astonishingly well-schooled persons do exist, and why not have one as the hero of an adventure tale?

The term "adventure tale" was used advisedly. Although Verne is mainly remembered for his science fiction—and it is with that that we are naturally most concerned—such works constituted less than a third of his enormous output. Out of over seventy volumes, altogether only a score or so are properly "sf": the remainder are adventures, packing a great deal of geographical and other information and favouring a "with-one-bound-Jacques-sprang-free" method of escaping from tight corners.

It was, perhaps, his high Victorian morality which lead Verne to take the care he did over his future technology. It was not acceptable for him to deceive the aspiring young with vague phrases and graceful evasions. If he wanted to go to the moon, he checked on the Earth's velocity of escape (though, as we shall see, he made some mistakes in that area). If he wanted a balloon to remain airborne for weeks, he at least devised a theoretically workable method for doing it. If he wanted a submarine, he calculated its dimensions faithfully.

In various novels, Verne sent his heroes in navigable balloons, under the oceans, to the moon, in aircraft and in a flying-submarine-car. Another, though a villain rather than a hero, unintentionally launched an unmanned satellite, and yet other villainous wretches were armed with guided weapons, and a variety of assault VTOL machines. This makes a rather impressive list, the more so as many of these devices are described in enough detail to invite serious criticism.

Verne's first novel, and one which set the pattern for many to come, was *Cinq semaines en ballon* (1862). In this, three Britons cross then unknown Africa in a balloon,

on the way establishing the source of the White Nile, discovering a gold mine, rescuing a missionary, eating an elephant, having an air-battle with some vultures, dispensing large dollops of geographical information for youthful readers, speculating on the future of the world, saving one-another's lives and generally behaving as true Verne heroes always would.

The problem with balloons, grasped within a very short time of their invention in 1783, was that they would only go where the wind happened to blow them. By Verne's day, it was known that winds often blow in different directions at different altitudes; so, in principle, the problem could be solved by probing at various altitudes until the right wind was found. However, in order to rise, ballast must be shed; and to sink gas must be valved away; and a very few vertical sweeps soon exhaust the reserves of both. Verne's way round this impasse was at once ingenious, odd, and terrifying.

Suppose a balloon, in shape a prolate ellipsoid, is completely closed, and contains exactly enough gas to be, with its payload, precisely in equilibrium with the surrounding air at ground level. Now warm the gas: it will expand, and the balloon will rise; let it cool again, and the balloon will sink. In order to achieve this happy result, Verne suggested what was, in effect, an electric central-heating system. A pipe was to lead from the lower part of the balloon to the heating system, another from thence to the upper segment. Thus, as heat was supplied, a circulation would be set up, and the whole body of gas eventually warmed.

Thus far his ingenuity: the oddity lay in the heating system itself. A battery was used to separate the constituent hydrogen and oxygen in a tank of water; the gasses were to recombine in an oxy-hydrogen flame heating the inside of a metal cone, the other side of which convected heat to the gas itself. Now why the complexity? You must, according to basic thermodynamics, recover *less* energy from the combustion of the gasses than you put into the water to separate them. Therefore, it were better and simpler to use the electricity directly in an element built into the inside of the cone.

It is, alas, decidedly possible—as we shall have cause to see again—that Verne quite simply never understood the ineluctable limitations of the laws of thermodynamics. More than one of his ideas depends on forbidden cheating of this kind; including precisely the above mistake again, in an aside in *L'Ile Mystérieuse*.

To justify the adjective "terrifying", I will merely observe that the reader is welcome to play with a flame near a balloon full of hydrogen—even a supposedly hermetically sealed one—but that I want to be a long way away when he does it.

A little arithmetic casts some further interesting light on Verne's ideas.

He carefully tabulates the mass of balloon and payload; and we readily compute (in close agreement with him, by the way) that the mass of the gas in the balloon was just under 130 kg. To attain an altitude of 300m—no great height—would roughly (necessarily roughly: the exact value would depend on the local temperature lapse-rate and other unknowns) require a 10°C increase in temperature. Since hydrogen has the rather high specific heat at constant pressure of 3.4 cal/gm/°C, this operation would require roughly 4 kw hr from the battery, making no allowance at all for inefficiency or loss. Making reasonable assumptions (many years ago, as a young heat-transfer engineer, I learnt to introduce that golden phrase every few lines) the batteries would have needed to supply at least 500 Kw hr during the journey. In 1862, that would have been a very remarkable battery indeed—and not a negligible one today. But Verne had a weakness for super-batteries.

It is worth noting this curious point. For Verne always seems to have shown the same two failings: he rarely solved the energy equations; and he never allowed for development—for the "ironing out of bugs" which is so invariable a part of making a new machine work. The power requirements of *Cinq Semaines* are typical as the assumption that the very first flight of the balloon is also its voyage: there is no test programme, no need for modification in the light of trials.

The second of these failings we might ascribe to an excess of Victorian confidence; but the first must be due to mere lack of knowledge. Let us not complain too much: at least four of his most enjoyable tales would never have been written if he had been too tender about power sources; and he always produced an ingenious and theoretically sound means of using the power he so blithely assumed.

Usually, the power he assumed was electric. Indeed, Verne may, with some justice, be called the Erasmus Darwin of Electricity, for the following lines can surely be compared with the famous ode to 'Unconquer'd Steam':

> "Listen", said Captain Nemo . . . "A powerful, controllable, and flexible form of energy is used for every purpose, and really runs my ship. It is used for everything: lighting, heating and power for the motors. I refer to electricity."[5] (my translation).

The narrator expresses astonishment, reflecting how little anyone had achieved, at that time, in electrical engineering. And indeed, it was so: no electric motor was commercially available in 1870 with the power output of a good Watt beam engine, far less one which could compare with the best high pressure steam engines of the time.

The principle of the electric motor had been demonstrated by Faraday as early as 1821; but it remained a principle only. Gramme did not demonstrate his D.C. motor until 1873, nor Siemens his little (2 h.p.) traction engine until 1879. Also, the problem of supplying current was only being satisfactorily solved when Verne wrote: Gramme was building his generator whilst Verne was working on *Vingt Mille Lieues;* though some rather less satisfactory machines had been produced a few years before. Otherwise, if you wanted electricity, you had to use chemical means: in other words, batteries. A lot of effort was devoted, during the nineteenth century and since, to finding better and more powerful kinds of batteries; but with only modest success. The re-chargeable battery (accumulator) was being developed by 1870; but the best of these today cannot supply the kind of energies for the kind of weight that Verne demanded and confidently, if wrongly, expected.

He was not in the least inhibited by the "state of the art". His submarine—the splendid *Nautilus*—incorporated many features that had already been tried by brave, if not very successful pioneers (e.g., in *La Plongeuse* of 1864), or which were obvious enough. Any thoughtful engineer of the time would have agreed that such a craft would need ballast tanks to submerge it, horizontal rudders to control it in a vertical plane, a pressure hull, and, above all, a form of motor which was not air-breathing. Verne realised that an electric motor would satisfy that requirement, and contributed to the whole a stupendous zest and confidence.

Nautilus is described as a 1500 ton boat, 70 m (230 ft) long and 8m (26 ft) in maximum diameter. It would therefore be comparable to a modern nuclear attack submarine, though rather smaller and slimmer. No nuclear submarine, however—indeed, no millionaire's yacht—boasts the luxurious splendours with which Verne endowed his creation: a library of 12,000 volumes (no less), a saloon 10m by 6, "truly a museum . . . (containing)

all the treasurers of Nature and of Art", and an organ, whereon the enigmatic Captain Nemo was wont to extemporise melodies in the Scottish style.

To descend from Verne's exuberance to numbers, it would require roughly 400 h.p. to drive such a craft at 10 kt[6]; and to drive it at its full speed of 50(!) kt would require about 10,000 hp. During a journey of 80,000 km the batteries were only charged once; so assuming the lower speed for cruising, and only a small margin for high-speed bursts and contingencies, the batteries would have needed to hold a charge of the order of a million kilowatt hours.

Today, the motor would be no problem; but even if the hull were so full of batteries as to reduce the accommodation to a very spartan level, it would be impossible to run for more than, at most, a few days without re-charging. (Consider the performance of the best type of "conventional" submarines.)

Evidently, then, Verne was both reasonably confident and right about electric motors; but was his confidence in a new generation of super-batteries defensible, even though wrong as it turned out? Unfortunately, the answer is no, given that he could not have forseen nuclear energy. Fuels offering the most energetic chemical reactions known, even if that energy were converted into electrical energy with 100% efficiency would have required more mass than the *Nautilus* could have carried, even without engines and crew, to provide the charge he needed.

Nevertheless *Vingt Mille Lieues* is a great piece of technical prediction. Even though designers would have to content themselves with shorter voyages between re-charging, it summarised all the hints and suggestions of the pioneers, boldly provided them with a suitable motor (which was a bullseye) and transmuted the whole, with a soaring Victorian confidence, into a tale of assured wonder and great fun.

The element of Great Fun was present, if sometimes with a faintly gruesome tinge, when Verne temporarily deserted the sea for interplanetary space *(De la Terre à la Lune* and *Autour de la Lune)*. The instigators of Verne's Moon-trip are a peace-weary (truly!) group of firearms fanatics, who have formed themselves into the Gun Club of Baltimore —a body comprising 1833 full members and more than 30000 corresponding members, despite the criterion of entry being to have made some contribution to the design or development of weapons. As a result of practical experience on the battlefields of the American Civil War and sundry disasters in testing they are a somewhat battered lot, having "One arm between four members, and two legs between six".

To keep these bloodthirsty cripples out of mischief, and for the sheer glorious fun of the thing, their (intact) president suggests firing a projectile at the Moon. Later, a splendid and eccentric Frenchman, Michel Ardan (actually an affectionate portrait of Verne's old friend Felix Tournachon—who was among other things, the first man to take an aerial photograph from a balloon) insists on travelling in the projectile, taking with him the club president, and a rival engineer.

To achieve these noble ends, Verne's heroes fire an aluminium shell 9 ft in calibre (he gives all the dimensions in English measure) out of a gun 900 ft long, which has been cast *in situ,* in a specially prepared excavation on top of a hill in Florida: the muzzle is at ground level. A charge of 400,000 lbs of gun-cotton expels the projectile, which, for fine control in space, is equipped with steering rockets.

It is easy enough to laugh at this scheme. It was evident at the time that Verne made no allowance for air resistance: indeed, the shell would be vaporised before it even left the

gun muzzle. Evidently also, the acceleration would have spread the heroic voyagers over the base of the inside at the initial shock. Nevertheless, it seems to me, the whole idea is worthy of the greatest praise.

Verne was not the first to write of travel to the Moon; but he was the first to talk about it as a great engineering problem, to be discussed in terms of quantity and material: he brought it from the merest fantasy to calculation. That he gave the escape velocity correctly is not, by itself, remarkable: the value had been estimated by Newton, and derived closely after Cavendish's work at the end of the previous century. Verne was the first to make any sort of serious suggestion of how such a velocity could be attained, and (for once!) his energetics were in the right bracket. A body travelling at escape velocity has an energy of rather less than 16,000 calories per gramme of its mass; gun-cotton yields around 1500 cals/gm; and, of course, not all the energy of the charge is conveyed to the projectile. In allowing 20 kg of propellant for each kg of projectile he was very reasonable. (Apollo did rather better a century later.) He realised that rockets would work in vacuum, and made the brilliant suggestion of using them for what is now called vernier control. (Why, one wonders, did he not take the next step of using rockets for the whole job?) Above all—it is worth repeating—he treated the project as a vast engineering enterprise, which indeed it was to be. Not for him the solitary genius and his one assistant fabricating a space-ship in a back yard—an improbable supposition which recurred again and again over the following decades. Reaching the Moon was a goal, he rightly saw, which would require the labour of thousands and the expenditure of millions.

Certainly, he made a lot of minor errors, some of them surprisingly silly ones. For example, his heroes encounter a tiny, hitherto-unknown close satellite of the earth; and the values Verne gives for its orbit and period do not match—although the computation is very easy. But these are trivial failings in the light of the major mental saltation he achieved: he made space-flight something to be rationally talked about.

Also, let this be noted: for him space-flight was a glorious and soul-stirring enterprise. He would have scorned our mean-minded contemporaries who merely sneered and carped about the expense. Nothing, indeed, could be further from such baseness than the fictional welcome he planned for his astronauts, who, owing to unforseen perturbations, had orbited the Moon, and returned to splash down in the Pacific. They toured the U.S.A. in a special train, whilst, at each station upon the way, local inhabitants dined on the platform, everything being so timed that they could toast the heroes as they came through; the dauntless three were thus enabled to drink with almost the entire population of the States. What a pity that N.A.S.A. did not take up this superlative idea!

Even today, space-flight remains worthy of remark; but flying has become such a commonplace that it needs some effort to remind ourselves that, within the life-time of persons still living, an aircraft was a sign and a wonder. Verne's story *Robur le Conquérant*—always known in English-speaking areas by the title *The Clipper of the Clouds*—when published in 1886 was considered almost as daring as his earlier Moon journeys.

It is, I hope, no denigration of a number of distinguished pioneers to say that the decades from the death of Cayley in 1853 to the work of Lilienthal in the '90s were unhappy ones in the story of powered flight. Cayley's own work might never have been done, for all the notice that was taken of it; and failure followed failure as one designer after another tried to start from scratch. One of the greatest physicists of the century,

Lord Kelvin, went on record as believing that heavier-than-air flight was impossible; and such minor successes as there were came in the realms of lighter-than-air flight, i.e. with airships. Giffard, the Tissandiers and others, mostly in France, could justly claim that they had at least got off the deck; and if their craft were somewhat flattered in being called "dirigibles", at least they had some finite capacity for movement and control. In these circumstances, disputes between confident airship men and hopeful aircraft designers could become somewhat heated—though not, I imagine, quite as heated as Verne makes the row between his Philadelphia balloon enthusiasts and his hero Robur.

Verne came down firmly in favour of machines which were heavier than air. As he clearly stated, to be stronger than the air, it is necessary to be heavier; and he quoted with approval the indisputable observation of another pioneer that, after all, birds fly.

The Clipper of the Clouds is thin as a story. Two balloonists, arguing fiercely amongst themselves about the design of an airship they are planning, and more fiercely with a mysterious engineer named Robur, who interrupts one of the meetings of their club to tell them (rudely) that they are wasting their time, are kidnapped by their mysterious opponent, who takes them on board his helicopter, and demonstrates its paces in a world cruise. Subsequently they escape, obstinately finish building their airship, which bursts when challenged to a climbing-match by Robur in his machine, who concludes by reading everyone a lecture and flying off into the unknown.

Somehow the magic, which remains in *Vingt Mille Lieues* despite our familiarity with submarines, has disappeared. Perhaps also the character of Robur does not help: he is less credible than Nemo and much more offensive. However, *Albatros*, the helicopter (the word coined by Verne is "Aeronef", which never won acceptance: it was in fact a helicopter), is described in considerable detail.

The fuselage of the *Albatros* is exactly the shape of the hull of a small clipper ship complete with three deck-houses: it is 30m (98ft) long by 4m (13ft) in beam. Whereas modern helicopters generally have one large rotor, the *Albatros* boasts no less than 37 contra-rotating pairs of small ones, in three parallel rows: 15 on each side and 7 rather larger ones on the centre-line. These rotors are purely for lift; they are not tilted to provide translational movement. Instead, a 4-bladed tractor propellor in the prow, and a similar pusher in the stern suffice for a maximum speed of 200 km/hr (124 mph). The machine is built of a compressed, chemically bonded paper—apparently rather like Tufnol. The engines, one need hardly say, are electric; and power is drawn from batteries and accumulators. There is a crew of eight and the craft is armed with a 60mm gun, which comes in handy for rescuing sacrificial victims from anthropophagous celebrations in Dahomey. *Albatros* makes a complete circuit of the earth without re-charging.

Once again, the batteries are simply absurd. Electric motors would be worth considering for aircraft—their power-to-weight ratio can be quite reasonable—were it not for the problem of power sources. In effect, Verne was compelled to imagine it solved because no type of motor was then known which yielded enough power for sufficiently low weight: the internal combustion engine was in its infancy, hot air engines were manifestly too feeble, and steam required massive boilers, condensers and fuel supplies.

For the rest, the multiple small rotors would be less efficient than one very large one; though no one knew that at the time. Contra-rotation was a splendid idea, as it would obviate the need for the counter-torque rotor which is a feature of the modern helicopter, although it is not evident that Verne realised this; probably it should be put down to a fine

stroke of intuition. The 60mm gun is quite acceptable: during the Second World War some marks of Mosquito aircraft carried a 57mm piece, and 75mm ones were mounted in some Mitchells.

Verne's main contribution, once again, is the utter confidence he manages to convey. The thing can be done, he says, given only a lighter prime mover than we have at the moment. And, of course, he was right and the sceptics were confounded.

The predictions of his later years tend to be less explicit, and, it must be admitted, less consistent and less carefully thought out. Probably the aging writer, maintaining a tremendous output, found it increasingly difficult to keep abreast of technical developments, and to work out the details of contrivances as he devised them. For example, I am unable to make sense of the description of the aircraft (called "planeurs", though they are not gliders) in the posthumously published *L'Etonnante Aventure du Mission Barsac*. It is, of course, the case that some parts of this book were only partially completed, and that it suffered from the editing of lesser hands. In any case, it contains the world's first radio-guided missile. The missile, apparently in the form of a model aircraft, is controlled—admittedly, over short distances only by means of Herz's electromagnetic waves, it being explained that an Italian named Marconi has recently discovered how to send them efficiently.

So evidently Verne had managed to keep track of one growing aspect of technology. However, the description of the flying-submarine-car with which the disagreeable Robur, now gone quite crackers, returns to attempt the conquest of the world in *Maître du Monde* includes some decided oddities.[7]

> The machine was spindle shaped, sharper for'ard than aft, the fuselage being aluminium, though I could not decide what material was used for the wings. It rested on four wheels . . . the spokes being broadened into paddles, which helped the *Epouvante* along when on or under the water. But . . . the principal drive comprised two Parson's turbines, one on either side of the keel. Driven with extreme rapidity by the machine, they acted as propellors in the water; and I wondered whether they were not also used in flying (my translation).

It really seems that Verne did not realise that Parson's turbines were *steam engines*; particularly as the narrator (predictably) goes on to say "The force which drove all these mechanisms could only be electricity"

I, at least, am baffled here. Had he read of Parson's turbines driving generators—a set often being called a "turbo-alternator"—and, when he read of their use in ships (*Turbinia* made her famous demonstration in 1897), assumed that the alternator was being used as a motor? It seems scarcely credible, yet I cannot think of another explanation.

Confusion likewise appears in *Les 500 millions de la Bégum*; though, in this case, the book as a whole is, perhaps, too lighthearted to warrant too nice a critical study. A Frenchman and a German each inherit half of a vast fortune left by an Indian Begum; and each decides to use his new wealth to found an "ideal city" in parts of the newly opened lands of the American West. Verne, no doubt getting something of his own back for the Franco-Prussian War, has his French hero found a Home of Culture and the Arts; whilst the German (surprise!) sets up an enormous armament works. Finding the close proximity of this model of French civilization offensive, the German (Herr Prof. Schultze) decides to eliminate it by firing a single enormous poison-gas shell from a monster cannon of his own design. What the Federal authorities were doing about this is nowhere made clear; but, although the gun is built, loaded and fired, all is well: the muzzle velocity is even greater than intended, and the deadly shell passes into orbit as an unintended artificial satellite!

Of course, this is nonsense—though such cheerful nonsense that one suspects that Verne knew it. It is not possible to fire a projectile straight into closed orbit from the surface of a planet: it would necessarily return to the surface. (Rocket-launched satellites receive their final urge whilst in flight, and roughly parallel to the surface.) Even forgetting this ineluctable conclusion of orbit mechanics, however, Verne—for once—gets the actual numbers wrong. He gives the final velocity of the shell 500 m/s; which is absurdly low.[9] Concorde is about as fast; and whatever its fate may be, that beautiful aircraft stands no risk of going into orbit. This is very odd, since the man who wrote *De la Terre à la Lune* must have known that circular orbit velocity is escape velocity divided by $\sqrt{2}$, or a little less than 8000 m/sec.

Let us regard *Les 500 millions* then, as a farce. Overall, how does Verne stand in the sf pantheon?

Obviously, he must stand very high indeed as a predictor. His major ideas—aircraft, submarines, and flight to the moon—have all been fulfilled. Certainly, he was almost always wrong in detail; and certainly, too, he wildly overestimated the future of electric storage. It must also be allowed that other men before him had thought of, and tried to construct, both submarines and aircraft; although, as has been remarked, he was the first to do serious sums on space-flight.

As a writer he had lightness of touch, sparkle and verve. If his characters often lack depth, his narrative, at its best, carries the reader along with an infectious gusto. Above all, he propagated a vibrant confidence and enthusiasm. It is impossible to guess how many readers he inspired into, or reinforced in, a decision to devote their lives to science and technology: it must, one feels, have been a lot. We could do with a new Jules Verne today.

Notes

1. Corday, Michel, *Confessions d'un enfant du siège.*
2. An honour also accorded to Lucian of Samosata, Cyrano de Bergerac, Dean Swift and Mary Shelley amongst others.
3. For example, the *Nautilus* in *Vingt Mille Lieues* is 70m long. 70m is 229.6ft, or 230ft to the nearest unit. The first hack made this 232 (how?) And every edition that I have seen reproduces the same mistake. There are plenty of other instances.
4. "Of course, he was a member of an inferior race, but a good man in his way . . .": in *Aventures de trois Russes et de trois Anglais dans l'Afrique australe,* 1872.
5. *Vingt mille lieues sous les mers,* Ch.XII ". . . dit le capitaine Nemo 'Veuillez donc m'écouter . . . Il est un agent puissant, obéissant, rapide, facile, qui se plie à tous les usages et qui règne en maître à mon bord. Tout se fait pàr lui. Il m'éclaire, il me chauffe, il est l'âme de mes appareils mécaniques. Cet agent, c'est l'electricité."
6. I am indebted to Dr E. Glover, of the Department of Marine Engineering, University of Newcastle upon Tyne, for computing this value.
7. *Maître du Monde* pp. 165-5. "L'appareil était de structure fusiforme, l'avant plus aigu que l'arrière, la coque en aluminium, les ailes en une substance dont je ne pus déterminer la nature. Il reposait sur quatre roues . . . Leur rayons s'élargissaient comme des palettes, et, alors que *l'Epouvante* se mouvait sur ou sous les eaux, elles devaient accélérer sa marche. Mais . . . le principal moteur . . . comprenait deux turbines Parson's, placées longitudinalement de chaque côté de la quille. Mués avec une extrême rapidité par la machine, elles provoquaient le déplacement en se vissant dans l'eau et je me demandai si elles ne s'employaient pas à la propulsion à travers les milieux atmosphériques.
8. *ibid* ". . . l'agent qui mettait en action ces divers mécanismes . . . ne pouvait être que l'électricité."
9. *Les 500 millions de la Bégum,* Chs XII & XIII.

David Lake's last appearance was in Foundation *36, with "A Theory of Errors". Recently he has become a successful fantasy (as well as sf) author with his novel* The Changelings of Chaan *(Melbourne: Hyland House, 1985) which has earned him a Commendation for Australian Children's Book of the Year—plus $500. The book, set in an imaginary country in South-East Asia, based mostly on Thailand together with real elements from David Lake's early life in India, has sold very well in Australia.*

The Making of Meldilorn: A Poetics of Imaginary Names

DAVID LAKE

I want to consider one problem which faces the author of an imaginary world: the problem of inventing names. It matters not at all whether the world is a planet in Science Fiction, or an area of para-Earth in Fantasy: in both cases there will have to be a map (if only in the author's head) and people (human or para-human) moving over it. The places and people call for names, usually in large quantity. How should these be devised, and what are the pitfalls?

These matters, of course, have been treated before; notably by Lin Carter, in Chapter 10 of his chatty but useful book *Imaginary Worlds.*[1] As Carter says, the very worst way to go about naming is just to coin names at random, as they are needed, during the actual composition of the story. It is true that you may find, during composition, that you suddenly need a new name; but if you have done the needful preparation in advance, this will be no great problem. You will refer to the language(s) you have previously devised, and pick a name that is both *suggestive* and *systemic.*

By "systemic" I mean that for every imaginary world (unless for some reason the people can speak English)[2], you must invent one or more imaginary languages. The fictional names must look as though they belong together, just as names in Germany look German and names in France look French. This is a matter of realism, and rhetorical effect. It is true that in our real world, with its Babel of languages, you can find an enormous variety of names, and since migration this is true even within some single countries (see any Australian phone book). But this will not do for an imaginary world. Fiction must be tidier, more unified than reality. Our present real-world situation is due to a messy mingling of cultures; but to be effective with the reader, the cultures of imaginary worlds must be more homogeneous. Usually an imaginary world will be based on no more than two or three languages; in many good examples, on only one.

The requirement to invent a language (or two, or three) need not be daunting. You don't need to do a Tolkien, unless you want to quote whole sentences in your language. If you refrain from that, a few pages of nouns and adjectives will suffice. But those nouns

and adjectives must be backed by a systematic phonology and spelling. The words must look as if they come from one language. It will look even better if the names are clearly composed, in some cases, from "native" roots.

An excellent example of doing this well with only a few invented words, is C.S. Lewis's *Out of the Silent Planet.*[3] Lewis's "Mars" has three languages, of which one is dominant: the language of the Hrossa, which the hero Ransom learns. This language is strongly characterized by words and proper names beginning with *h*. Thus the first hross that Ransom meets is named Hyoi, and others are named Hnohra, Hrikki, and Hleri. Composition from native roots is shown by the following words: *Malacandra* (the planet Mars), *handra* (earth, planet), *handramit* (low land, canal), *harandra* (high land). It must be admitted, though, that Lewis does not take enough trouble to satisfy the purist. There is no need to spell *Malac*-(andra) with a *c*, since Lewis uses *k* elsewhere in Martian names—Ransom's remark "H disappears after C" (p.65) would make a phonetician shudder. And one hross is called *Whin* throughout Chapter 13, when he would be more consistently called *Hwin*. "Whin" is too much like English.

However, Lewis does pretty well with only a few words. They do suggest a real language. Another point illustrated by Lewis's names is *suggestiveness*. His three races—hrossa, sorns, pfifltriggi—have types of names which suggest their racial characters. This point is made explicit by the first pfifltrigg whom Ransom meets:

> The *sorns* have big-sounding names like Augray an Arkal and Belmo and Falmay. The *hrossa* have furry names like Hnoh and Hnihi and Hyoi and Hlithnahi . . . But my people have names like Kalakaperi and Parakataru and Tafalakeruf. I am called Kanakaberaka. (p.133)

The speaker does not specify what quality is suggested by *his* people's names; but he himself has been described (p.131) as "insect-like" because of "the speed and jerkiness of its movements". I take it that Lewis has devised names such as *Parakataru* to suggest "jerkiness", through the staccato sound-effect of many short syllables, a lot of them beginning with the voiceless stops *p, t, k*. I don't know if the sorn and hross names do genuinely suggest bigness and furriness; it probably helps that we already know that hrossa are furry and sorns big. But the interesting thing about this passage is that it invokes suggestiveness entirely by direct sound-symbolism: a "big" vowel such as long *a* (made with a big gap between tongue and palate) is to suggest a big person, and so on. There is a certain amount of sound-symbolism in real-language words: thus "large" really sounds l*a*rge, because of the long wide-open vowel *a*, and "little" may sound l*i*ttle because of the short close vowel *i*. Invented names ought to do at least as well as these instances.

But direct sound-symbolism is the lesser channel of suggestiveness. More commonly, invented names are suggestive by association with words in actual languages known to the reader—such as English. We may call this, for short, *real world association*. It is crucial.

Real world association can be either a hindrance or a help. In Lewis's name *Kanakaberaka* I perceive a hindrance: the first part of the name suggests *Kanaka,* i.e. a Polynesian; which is surely irrelevant. The pfifltriggs are hardly at all like Polynesians: they are not humanoid and don't live on islands. Another awkward suggestion, in the same novel, comes in the name for God, which is *Maleldil*. This has one point in its favor, in that it is clearly derived from *eldil,* the name of the race of angel-like beings who rule over Mars and other planets. *Maleldil* may signify "creator of eldils". This is therefore usefully systemic; but unfortunately *Mal-* suggests the English (from French and Latin) *mal-* = "evil", as in *malformed, malevolent,* etc. Lewis would have done better to avoid this.

A good way of dealing with hindering suggestions is this: vary the form of the name slightly, so that it will still get the effect you want, but avoid the wrong association. Thus Lewis might have written *Moleldil* or *Mileldil,* and so have avoided "mal-". It is to this process of evasion, probably, that we owe one of the most resounding names in fantasy: Merlin. Merlin, as we know him, was invented by Geoffrey of Monmouth, in his Latin fantasy *Historia Regum Britanniae* (c.1135). Before Geoffrey, there had been a real minor Welsh bard of the sixth century named *Myrddin* or *Merddin*; and these are the forms we find in place of "Merlin" in medieval Welsh manuscripts of Geoffrey's opus. Geoffrey, almost certainly, changed Welsh *Merddin* into Latin *Merlin-us*. Why not *Merdinus*? Because the French-speaking Normans for whom Geoffrey wrote would certainly have sniggered, *merd-* having for them the same meaning as modern French *merde*.

But to return to Lewis: he makes excellent use of "good" associations in the word *eldil,* and the name of the eldils' paradisal capital, *Meldilorn*.

The richness of *eldil* can be shown without going beyond English, though there are really two or three other languages ultimately involved, and readers may be expected to know some of them. *Eld-* may suggest "elder"; after all, the eldils do behave like benign elders to their subjects on Mars. But more important is *el-*, which is echoed in the near-rhyme of -il. This suggests at once *elf,* and the angels whose names end in *-el*: Michael, Raphael, Gabriel. This root is actually the Hebrew *'El* (God). For readers who (like Lewis) know Latin, *-dil* may suggest *diligo* (choose, love). Thus the eldils are themselves "gods", and are "chosen by God" or "lovers of God". Actually, I suspect Lewis may have been influenced by the Old Norse *eldr, eldi-* (fire);[4] the eldils have bodies of light, and in Hebrew the Seraphim are the "burning" angels, God's ministers who are "flames of fire".

And then there is *Meldilorn*. This is both systemic (presumably derived from *eldil* or *Maleldil*) and highly suggestive of romantic beauty. (Compare Tolkien's paradisal *Lothlorien*.) There is natural sound-symbolism of softness, in that every phoneme in the word is voiced, all the consonants except /d/ are continuants, and the word ends in the long, lingering *-orn*. But more important are the real world associations. *Mel-*seems much better than *mal-* because it suggests *mellow, mellifluous,* and *melody* (ultimately, native English for "soft, ripe", Latin for "honey", and Greek for "song"); and *lorn* is one of the most Romantic words in English. Keats's "perilous seas, in fairy lands forlorn" spring to mind here. (And Keats's "perilous", with its suggestion of romance quests, was surely echoed in Lewis's name for Venus: *Perelandra*.)

Now when an author produces a name redolent of real-world suggestion, like "Meldilorn", he is usually playing a double game. On the one hand, the name must evoke suggestions through real languages; on the other hand, the name probably does not carry quite these suggestions in the imaginary language to which it belongs. We are not told by Lewis, but I would be very surprised if *-lorn* in the language of the hrossa meant "romantically lost", or if *mel-* meant "honey", "soft-ripe", or "song". If it did, it would be a surprising coincidence between unrelated languages. What the author usually does, in devising such names, is to arrange a different sort of coincidence: a series of letters which *mean* one thing in the invented language, but coincidentally *suggest* something different, but appropriate, in English or other real world languages.

We can see this double game played very well by the supreme practitioner of fantasy naming: Tolkien. He does it again and again in *The Lord of the Rings* and *The*

Silmarillion. Let us take, first of all, three of his most important names: Sauron, Mordor, and Numenor.

These names, of course, are vividly suggestive in English, with strong emotive charges for evil or good. The nearest English words are *saurian, murder,* and *numinous.* Behind these stand the roots *saur-* (Greek, "lizard"), *mort-* (common Indo-European, "death") and *numen* (Latin, "divine power").[5] Sauron therefore sounds like a nasty reptile, perhaps a dino*saur;* Mordor is the land of death and murder; and Numenor is a place of divine glamour. But none of these meanings is precisely justified in Tolkien's Elvish languages, Quenya or Sindarin.

Handy sources for explication of Tolkien's Elvish words are Jim Allan's *An Introduction to Elvish,*[6] and the Index and Appendix to *The Silmarillion.*[7] From these we see that *Sauron* is the Quenya form of earlier *Thauron,* and the root *thaur* means "abominable, abhorrent", but with no hint of "reptile" (*S*, p.364). *Mordor* is a compound of *mor* "dark" and *dor* "land" (*S*, pp. 362, 357). And *Numenor* is from Quenya *numen* "west" plus *nor* "land" (*E*, p36). For good measure, we are told that after Numenor was swallowed by the sea, it was called in Quenya *Atalantë* (= "the Downfallen", *S*, p.281); which "just happens" to sound like the Greek *Atlantis* (derived differently, from Atlas and Titan).

This, most of us would agree, is a fine playing of the double game. *Numenor* is especially felicitous, because in the end the Quenya derivation comes to much the same thing as the English-Latin suggestion. For the West is Tolkien's holy direction, and so Numenor, the West Land, is also numinous.

An imaginary map is a good test of an author's skill in this double game of coining place-names. Most important are the names of countries and cities. In the majority of cases, one doesn't need to be quite so pointed as in "Mordor" or "Numenor", but in general the names must be evocative of the right flavour. The usual trick is to echo place names of the real world or of ancient legend. Occasionally you may want a name to sound harsh or repulsive (I shall look at some examples later); but for the majority of names you will want a "romantic" flavour, exotic or prestigious. The main sources of such are names which are Classical (Greek or Latin), Hebrew, Celtic, or (for greater exoticism) Middle Eastern or Meso-American. But normally you must avoid actual names.[8] To call an invented city "Athenai" would be absurd, since this is the Greek form of actual Athens. But a little swapping around of letters is quite in order. Thus in my sf novel *The Man Who Loved Morlocks*[9] I had a classical-type city-state named *Anathai,* which is only "Athenai" modified, plus a suggestion of the Greek prefix *ana-* to give extra flavour.

Most place-names can be divided into a body (or root) plus an ending. Both parts are important for evocation; perhaps slightly more crucial is the ending. One way to coin a good fantasy name is to take two actual names of the same flavour, and swap bodies and engings. Thus in the Celtic-Arthurian area there are two almost adjacent names, *Belerion* (ancient Greek for Land's End, Cornwall) and *Broceliande* (the Breton forest where Vivien disposed of Merlin, in Tennyson's poem "Merlin and Vivien"). From these one could get *Brocelion* and *Beleriand*—and in fact Tolkien coined the latter name, using it for the west part of Middle Earth in the First Age, alongside *Ossiriand.*

This ending *-iand* is typical of Tolkien's practice: his endings are almost invariably evocative. The general effect of names like *Arnor, Gondor, Beleriand, Doriath, Rhovanion, Ithilien, Umbar,* and *Khand* is highly "romantic"—but in precise and

differing ways. The endings are not interchangeable, though they all "mean" much the same thing in Tolkien's languages: "country" or "place". *Gondor,* for instance, could equally be "Gondobar" in Sindarin (*E,* p.80): both forms mean "stone country". And *Umbar* could probably be renamed as "Undor". But those forms would have the wrong associations for their roles in Middle Earth. In the real world, *-bar* occurs in coastal place-names round the Indian Ocean: Zanzibar, Malabar, Nicobar. So *-bar* suggests Eastern and "barbaric" shores. Therefore *Umbar,* which lies on the sea to the south-east of "our" country, is just right; and conversely, Gondor is too much "our" country to have the *-bar* ending. *Khand* is another such "Eastern, barbaric" name: compare the real world's *Rohilkhand* (in India), *Kandahar,* Samar*kand,* and Mala*kand,* in and around Afghanistan. (There is, indeed, a long-standing fantasy tradition about such names, which Tolkien is here following.)

But for the other names, the ones sprinkled around "our" part of Middle Earth, it is interesting to notice the associations of the endings. The *-or* ending (in Tolkien, either *-nor* or *-dor*) probably sounds vaguely Classical to many readers, though in fact it is not a *place* name ending in Latin or Greek. The history of the *-or* ending in fantasy is a long and curious one (which I shall discuss later). If Tolkien was not drawing on earlier fantasies, he may have been influenced by Hebrew: familiar place-names with this ending are in Israel (Endor, Tabor, Hazor), but also Egypt (Luxor), and even Wales (Bangor, Radnor). Indeed, Middle Earth place-names often do sound Welsh or Hebrew, or both at once. It is of course well known that Tolkien modelled Sindarin on Welsh (*E,* pp.49-50): hence the effect of names ending in *-iath* and *-ion* (though *-ion* could also be Greek). The ending *-ien* (Ithilien, Arvenien) to me suggests the Arthurian romances, where we find names of persons such as Urien and Vivien. I don't know any Arthurian *place* name ending in *-ien,* but there are somewhat similar French place names, e.g. Guyenne, Vienne; Scottish, Lothian; and French is mixed with Celtic in the "Matter of Britain".

As for Hebrew: Tolkien surely uses Hebrew associations in his many names ending in *-ith* and *-oth.* Judith, Ashtaroth, Anathoth, Succoth . . . the Biblical names in *-th* are plentiful. In Hebrew, *-oth* is the regular feminine plural ending, and the suggestion of this is very strong in Tolkien's place-name *Gorgoroth,* the dreadful plateau of Mordor. Another Hebrew echo occurs in "people" names such as *Rohirrim* and *Naugrim,* since these are plurals, and *-im* is the regular Hebrew masculine plural (as in *Cherubim, Seraphim*). In Sindarin, however, the ending is "really" *-rim* ("great number, host": *S,* p.363), so Tolkien manages without having to explain how Hebrew got into Middle Earth. But the "coincidence" is very striking.

In fact, taking Tolkien's whole nomenclature, one wonders if there aren't too many coincidences. Should we have so many resemblances to Latin, Greek, Welsh and Hebrew in a period supposed to be myriads of years before our era? Some writers of fantasy might wish to be generally suggestive in their names, without being quite so nudging as Tolkien. Especially when the imagined world is supposed to be totally separate from ours, coincidence ought not to be outrageous.

What sort of names, for instance, should we wish to imagine on alien planets? Of course it is easy to suggest mere alienness. One can write jawbreakers such as *Qtux-shrp* or *Z'xnydrr* or *Pgl!mbr* with no trouble at all. But such names have no resonance of association. I am concerned now with "alien" planets which are really metaphors or likenesses of our own Earth. What sort of place-names could they have?

Science fiction (and "science fantasy") has actually a long tradition of such names. It is impossible to be exhaustive; but one very influential coiner of names was Edgar Rice Burroughs, especially in his series of "Martian" novels, beginning with *A Princess of Mars* (1912). A useful (partial) list of Burroughs' Martian names can be found in the Glossary appended to the fourth novel, *Thuvia, Maid of Mars.* [10]

Burroughs' Mars has only one language, and on the whole the reality of this language is well maintained through related words, such as the series: *jed* ("king"), *jeddak* ("emperor"), *jeddara ("empress").* Burroughs also invented some evocative names for Martian cities. Unfortunately the most important city of all, the hero's city *Helium,* is not well named, because it is too close to Earthly reality. "Helium" is a gas, and the name is Latin in form, with *-ium* (cf. in the real world *Antium, Londinium,* etc.). Latin endings in *-ium* or *-ia* are not good for fantasy, because they are too familiar. [11] But Burroughs has much better city names, among them several in *-or: Asanthor, Manator, Xanator,* [12] *Hastor.* These look vaguely Classical, without being actually Latin or Greek, and so are excellent for Burroughs' purpose, which is to suggest a world of "heroic" ethos, with city-states that often make war on each other. *Hastor* is a slightly altered version of Latin *Hasta* (= spear; also the name of a city in Etruria). Interestingly, *Hastor* is one of "our" cities in the empire of Helium; but foreign cities can sound much more exotic/barbaric. The list includes *Zodanga* (cf. Zamboanga, a city in the Philippines); *Ptarth* (pseudo-Egyptian?); and *Dusar, Lothar, Jahar.*

Here it seems to me that the *-or* names contrast with the *-ar* ones. Cities with names ending in *-ar* are more exotic, barbaric, possibly dangerous. *Jahar,* in fact, is the great enemy empire in *A Fighting Man of Mars* (1930); the name sounds positively Indian, suggesting Shah Jahan (the Mogul emperor), the Indian province of Bihar, and the Indian towns Rupar and Nakodar (all, I assure you, real). Burroughs has been skilful here, because *-ar* (apart from *-bar*) does occur in many fairly well-known names of Asia (Qatar, Gwadar, Kandahar) and of Africa (Dakar). Burroughs also has some cities whose names end in *-ol: Kaol, Gathol.* These are foreign but friendly. I suspect that the origin of the *-ol* ending is the Chinese province of *Jehol,* with possibly a touch of the Hebrew *Sheol* (= Hades). It needs, in fact, only one or two famous names from the real world to launch an influential fantasy ending. Tolkien's place-names in *-ond* (*Nargothrond, Mithlond,* etc.) surely reflect just one real place: the Turkish city of Trebizond.

But the greatest of these endings is *-or.* I don't know who started the long series of *-or* names; possibly Rider Haggard, who placed "She" in the lost city of Kôr (1887). Certainly, Burroughs helped. And after him but still before Tolkien there have been a great number of science fiction cities and planets with names in *-or* (notably the planet-city of *Trantor* in Isaac Asimov's influential *Foundation,* 1951). It may be that the whole thing started with an adaptation of Latin *-or* for agent-nouns (e.g. *actor, sponsor*), or Greek *-or* in personal names (Elpēnor, Mentor, Stentor); but certainly by the 1950s the *-or* tradition for romantic place-names was old in sf/fantasy. For this reason, many people like myself felt that they were in familiar territory when they first opened the volumes of *The Lord of the Rings* and noticed on those red-and-black maps the names Arnor, Gondor, Mordor. By this time, such names had become self-generating: the romantic flavour depended on previous uses in fantastic fiction.

So now the recipe for place-names in strange worlds has become: Use *-or* for as many names as possible; but *-ar* for the more barbaric or hostile places. Tolkien's *Gondor* and

Umbar were just right (*Mordor,* of course, was a special case, where the *ending* didn't matter). I suspect that in these *-or,* and *-ar* names we have the effects of both association and direct sound symbolism; for both *-or* and *-ar* have long open vowels, and in south British and Australian pronunciation the words end in the vowel. Such sounds can well express romantic yearning for whatever is strange and far. Indeed, *-ar* rhymes with the word "far": another effective but hidden association. (How *far* is Acher*nar,* that st*ar*!)

Anyway, when I came to write science fiction novels myself, about ten years ago, I was well aware of these traditions. My first truly "alien" world was a semi-parody of Burroughs' Mars, in the novels *The Gods of Xuma* and *Warlords of Xuma.*[13] For my Xuma I invented city-names in *-or* and *-ar*, plus some in *-ai* and one place in *-ol.* I needed the ones in *-ai* to give a touch of Far Eastern flavour (cf. Shanghai), so *Yelsai* and *Aosai* were the centres of action in the two novels, the "home" cities. In addition there were *Ulor, Xenor, Anakhor, Dlusar, Tlanash,* and *Svityol.* It may be seen that *Dlusar* is an adaptation of Burroughs' *Dusar,* and *Tlanash,* I hope, sounds a bit Aztec.[14] Of course I had to fix my invented Xuman language to yield plausible etymologies for these names; thus I arranged for *(h)or* to mean "city", and *-ol* to be an adjectival suffix. I was happy to have some names sounding rather Classical (*Xenor*), but I avoided traps like "Helium". I did have some city-names ending in *-a*, but I hoped they might sound as much Aztec as Latin (*Lylaxa, Xulpona*). And I made sure they all fitted the phonology I had decided on for my language. (Thus, no name included the letters *b* or *j,* since these sounds did not exist in the language; Early Xuman /b/ had become /v/.)

But invented names do not always have to sound romantic or even euphonious. Positively ugly names are sometimes required; and these too are an old tradition. Swift, in *Gulliver's Travels,* is the founder-master here. In his Book II, the long and ugly names express the traditional notion of giants (both big and coarse). Thus the land is "Brobdingnag", the capital city is "Lorbrulgrud", and a main character is the girl "Glumdalclitch". Swift uses similar names also in Book III, where giants are not in question: there are the islands of "Glubbdubrib" and "Luggnagg", and in the latter place are the horrible old immortals, the "Struldbrugs". One can see here that ugliness is mainly achieved through elements of the word *ugly* itself (an association), plus a lot of consonants (sound-symbolism: difficulty of pronunciation seems ugly). "Struldbrug" is the acme of ugliness: it shows the worst that the *English* language can do—for the form of the name is typically native-English. Each syllable has the pattern: consonant cluster + short vowel + stop consonant or cluster. Compare real English words such as "struck" and "crud". (This is one reason why English-type names will not do for a "romantic" flavour: English is not a euphonious language. It is far too consonental.) "Struldbrug" is an excellent name for its purpose—to express revulsion at these dreadful old people who can't die. Swift's names have lived, and on their merits. (Another good one, in Book IV, is "Houyhnhnm" for "intelligent horse"—nicely expressive of a horse's whinny.)

Similar deliberate ugliness appears in the speech and names of Tolkien's Orcs. One of them is called *Uglúk,* and they know the Dark Tower as *Lugbúrz.* Shades of Swift's Luggnagg! *Uglúk* is almost a portmanteau of English "ugly, look!" And then of course there are the *Nazgûl* (Ringwraiths). The last half of this word is a striking "coincidence" with English ghoul, which in turn is from Arabic *ghūl,* of the same meaning (*E,* p.167). Behind all these names stands Tolkien's Black Speech—which I for one find an admirable language, very clear in structure, and just "coincidentally" a blend of Arabic vowels,

Persian consonants, and Turkish morphology. Ah, those wicked Saracens, enemies of the good West! But I am not going to discuss the poetics of whole invented languages: that would call for another article.

I also, in my small way, once used ugliness deliberately, in my sf novel *The Fourth Hemisphere.*[15] On my planet I had two continents with rather different societies: one capitalist-industrialist, the other magical-idyllic. The first had countries such as *Grepchet* and *Yoxunchet,* and a capital city named *Krasp.* The second had the countries *Kanthilvan* and *Velurvan,* and Velurvan had the cities *Lurenthor, Titurei, Ylionur, Neluvioi,* and *Flelanthor.* (There was also a para-African continent called *Jubar.*) I enjoyed inventing *Lurenthor* and so forth; but I am proudest now of *Krasp.*

One writer of fantasy and sf who tends to the Kraspish in her names is Ursula Le Guin. In *The Left Hand of Darkness*[16] she has the planet Gethen, on one continent of which are two nations, Karhide and Orgoreyn. The two languages differ in that Karhidish has no *l,* only *r,* whereas Orgoreynish has both. This is symbolically appropriate, since /l/ is a softer sound, and the Karhiders are of a more rugged individuality. (And their culture is a bit like that of the Japanese, who also have no /l/.) Thus a typical surname in Karhide is *Harth,* whereas a typical one in Orgoreyn is *Slose.* The Karhidish names of days include these: *Odharhahad, Odguyrny, Opposthe, Ottormenbod.* So far, so rugged, and impressive. Karhidish certainly sounds like a real language, perhaps like German crossed with Hungarian.

But there are some snags to Le Guin's names. First, *Karhide* itself drags up a wrong association: one American sf writer told me it reminded him of a job for automobile repair work. Secondly, there is no way to be sure how to pronounce such names as *Karhide* and *Slose.* Should the final *-e* be a separate syllable or not? There is a villain called *Tibe*; should his name be pronounced as one syllable (tigh-b) or two (ti-be), i.e. like English or like German?

This problem arises from the wretchedly muddled nature of English spelling. In my fiction I have avoided it by almost never having a name which ends in *-e.* But a fine solution is Tolkien's: in Appendix E to *The Lord of the Rings* he explains how his names are to be pronounced. Basically, as in the continental European languages, not as in English; and to make sure of this, he marks nearly every sounded final *-e* with the dieresis, *ë.* In addition, he marks long vowels with the acute or circumflex accent. I would recommend these practices to all writers of fantastic fiction; though details will depend on particular purposes. I often prefer to indicate a long vowel by a double letter, as in Dutch or Finnish; thus my cities of Xuma include *Nakaan, Yasaan, Idavaan.* But the effect is slightly "barbaric"; and it is dangerous to write *ee* or *oo;* because most readers will pronounce them wrongly, as in English *keen* and *boot.*

Exact attention to spelling is vital in coining names, because associations come as much through the eye as through the ear. *Selidor, Celadore* and *cellar door* all sound much the same, but carry very different associations. Coleridge's River Alph could not, without loss, be re-spelled *Alf*! We can see this principle also in the spelling of the name of Tolkien's wicked archangel, *Melkor.* The name is certainly Quenya (*S,* p.340), and therefore would normally be spelt *Melcor,* since Tolkien's Elvish languages do not normally use *k.* So, why *Melkor,* not *Melcor*? Because in English, *k* before *o, a, u,* is unusual, "barbaric", whereas *co-* is normal, also "classical" in Latin, and in Greek words borrowed in Latin form. *Melkor,* the original barbarian, must be spelt with a *k* so that we can hate him.

I now want to protest against the practice of some writers who have used *-oo-* in outlandish names to express the vowel of *boot*. Dunsany, in his *The Gods of Pegana*[17] has a god MANA-YOOD-SUSHAI (always capitalized) and a drought (sic) Umbool, not to mention gods Kilooloogung and Zumbiboo, alongside names like *Pitsu,* where the same sound is written *-u*. Dunsany should have known better. The confusions of English should be banished from sf/Fantasy. Burroughs is also guilty, for he calls his Mars "Barsoom". It would be better as *Barsûm* or even *Barsuum*. Since Tolkien, there is no further excuse for this sort of thing.

I also think that ugliness should not be inflicted wantonly. Important "good" characters should not have names which taste too sour in the mouth. Le Guin, I think, is somewhat faulty in her Earthsea trilogy (1971). Here the main language is "Hardic", which is rightly named, because it seems on the whole to be as rugged a tongue as Karhidish. Since the phonology of Hardic names seems much like English, one presumes that the final *-e* in names like *Roke* (an island) and *Nemmerle* (a magician) should be silent; but one can't be sure (same problem as *Karhide*). For that matter, Hardic does not convince as a unified language: its names are as various as those found in English, and that, as I have said, is not a good model. Thus we have islands with euphonious romantic names in *-or: Havnor, Pendor, Selidor,* but also rugged Germanic ones such as *Barnisk, Holp, Tok,* and *Iffish*. All this sounds rather iffish to me: the linguistic style of Earthsea is not impressive. Worst of all, the hero is *Ged* from the island of *Gont*. "Gont" might just pass, but I have never liked "Ged". There is a grim idol of that name in Dunsany,[18] and that may have been the source from which the name got into Le Guin's subconscious. But she would have done better to reject it. The Muses are Greeks, and not all their gifts are safe: some are wooden horses. "Ged" reminds me too much of "git", not to mention "gad" or "god". But we are stuck now in magical Earthsea with this Git from the island of Grunt.

I think this illustrates one problem for present-day fantasy/sf writers: it is difficult now to come up with a name you like, and be sure that it is original. You may have met the name in reading, and your unconscious may be stuffed with borrowed gems. As an instance: I have noticed a tendency in myself, lately, to use "country" names ending in *-mar*. I checked for the source of this, and sure enough, it has been used before by at least two well-known authors. The earlier was Fritz Leiber, in his fantasy stories of Fafhrd (sic) and the Grey Mouser, which began in 1939.[19] The setting for these stories is the country of *Lankhmar,* and sometimes the city of the same name. The other user of *-mar* is Tolkien, who probably coined the ending independently, since it means "home, dwelling" in Sindarin (*E,* p.83). Anyway, Tolkien's *Valimar, Eldamaar,* and *Angmar* are important places in his works, and I probably caught the *-mar* bug from them. The real world provides only *Braemar, Colmar,* and *Shalimar,* I think, all small locations; so if we find a lot of *-mar* countries turning up in sf/fantasy from now on, we'll know where they came from. From the earlier tradition, that's where, along with *-or*.

Well, it's a great tradition, that spins values in this way out of its own guts. Let's hope it may produce many more resounding and magical names.

See you, then, in Alphmar—or Xanakor—or . . . well, you name it!

Notes

1. New York: Ballantine, 1973.
2. In children's fantasy the language problem is often ignored, and even the most outlandish

beings speak English. This is the case in C.S. Lewis's Narnia books; e.g. Queen Jadis of Charn, in Chapter 5 of *The Magician's Nephew,* speaks English to the children who have entered her separate universe.

3. London: Pan, 1952.
4. Also, very likely, by the unpublished but long since written works of his friend Tolkien. Tolkien has *elder* for Elves, and a suffix *-dil* meaning "lover of", and both elements combined in the name of his ancient hero *Elendil* (see *The Silmarillion,* pp.326-7).
5. Strictly, *numen* in Latin is a stem, the root *nu + men,* and the same is true of Quenya *nu + men;* but I shall call such compounds simply "roots".
6. Hayes, Middlesex: Bran's Head, 1978. Henceforth abbreviated "*E*".
7. London: Allen & Unwin, 1977. Henceforth abbreviated "*S*".
8. Tolkien breaks this rule with the Gondor mountains *Erech* and (Min-) *Rimmon,* both Biblical. See *E,* p.174. Also *Endor, S* pp. 89, 328. And *Aman,* the Blessed Realm, has the name of a valley in Wales.
9. Melbourne: Hyland House, 1981.
10. London: New English Library, 1969 (first published 1916).
11. Especially *-ia,* which survives in the English names of many cities and even more countries. Lewis's *Narnia* is perhaps faulty here, especially as "Narnia" was a real Roman town (now Narni).
12. *Xanator* is a dead city in *A Fighting Man of Mars* (1930). It is almost the ultimate romantic name, composed from Coleridge's *Xanadu* plus the *-or* ending. I wish I could use this brilliant name myself. Maybe, with a little alteration . . .
13. New York: Daw Books, 1978, 1983.
14. Real cities in central Mexico (past and present) sound amazingly "alien": Xochimilco, Tlaxcala, Xocotlan . . . A real treasure-hoard for fantasy names.
15. Melbourne: Void, 1980.
16. 1969; reprint London: Panther, 1973.
17. 1905; reprinted in *Beyond the Fields We Know* (London: Pan/Ballantine, 1972).
18. Ibid., in "The Sword and the Idol", pp.231-8.
19. Collected in *Two Sought Adventure* (New York: Gnome, 1957).

Greg Benford makes a welcome return to our pages with this essay, which will also appear in the Nebula Awards 21 *anthology. Much of his own sf has been about contact with the alien; here he explores various approaches, including his own, to this classic theme.*

Effing the Ineffable: an essay

GREGORY BENFORD

Their light of pocket-torch, of signal flare,
Licks at the edge of unsuspected places,
While others scan, under an arc-lamp's glare,
Nursery, kitchen sink, or their own faces.
—Kingsley Amis, 1961

There is probably no more fundamental theme in science fiction than the alien.

The genre reeks of the desire to embrace the strange, the exotic and unfathomable nature of The Future. Often the science in sf represents *knowledge*—exploring and controlling and semi-safe. Aliens balance this desire for certainty with the irreducible unknown.

A lot of the tension in sf arises between such hard certainties *vs* the enduring, atmospheric mysteries. And while science is quite odd and different to many, it is usually simply used as a reassuring conveyor belt which hauls the alien onstage.

Of course, by *alien* I don't merely mean the familiar ground of alienation which modern literature has made its virtual theme song. Once the province of the intellectuals, alienation is now supermarket stuff. Even MTV knows how commonly we're distanced and estranged from the modern state, or from our relatives, or from the welter of cultural crosscurrents of our times.

Alienation has a spectrum. It can verge into the fantastic simply by being overdrawn, as in Kafka's "The Metamorphosis", which describes a man who wakes up one morning as an enormous insect. Only one step beyond is Rachel Ingall's recent *Mrs. Caliban,* in which a frog-man appears. He simply steps into a kitchen, with minimal differences from ordinary humans. He is merely a puppet representing the Good Male, and in fact can be read as a figment of the protagonist's imagination. The novel isn't about aliens, of course; it's a parable of female angst.

We don't describe our neighbors as alien just because they drive a Chevvy and we have a Renault. What sf does intentionally, abandoning lesser uses to the mainstream, is take us to the extremes of alienness. That, I think, is what makes it interesting.

I deplore the *Star Trek* view, in which aliens turn out to be benign if you simply talk to them kindly; this is Hubert Humphrey in space.

That fits into a larger program of some sf, in which "friendly alien" isn't seen for the inherent contradiction it is. Friendliness is a human category. Describing aliens that way robs them of their true nature, domesticates the strange.

Yet much early sf was permeated with the assumption that aliens *had* to be like us. In *Aelita, or The Decline of Mars,* by Alexei Tolstoi (1922), the intrepid Soviet explorers

decide even before landing that Martians must necessarily be manlike, for

> Everywhere life appears, and over life everywhere man-like forms are supreme: it would be impossible to create an animal more perfect than man—the image and similitude of the Master of the Universe.

We've come a long way since such boring certitudes—through the marauding Martians of H.G. Wells, the inventive and Disney-cute Mars of Stanley Weinbaum's 1934 short story, "A Martian Odyssey", and into hard sf's meticulously constructed worlds for fantastic creatures. Aliens have been used as stand-in symbols for bad humans, or as trusty native guides, as foils for expansionist empires, etc.

Yet for me the most interesting problem set by the alien is in rendering the alienness of it. How do you set the ineffable in a frame of scientific concreteness? This is a central problem for sf. Very seldom has it been attempted in full, using the whole artistic and scientific arsenal.

Artful Aliens

Of course, we all know that one cannot depict the *totally* alien. This is less a deep insight than a definition. Stanislaw Lem's *Solaris* asserts that true contact and understanding is impossible. It was a vivid reminder twenty years ago. As a work of genre criticism it seems nowadays ponderously obvious.

Since then its targets—anthropomorphism, the claustrophobic quality of intellectual castles, and cultural relativism—have become rather cold meat. Indeed, everybody now assumes without discussion that in writing about the very strange, we must always gesture toward something known, in order to make analogies or provide signs. So you're careful, because unless you keep reminding the reader that this creature is to be taken literally, it readily becomes (surprise, surprise) a metaphor.

In the mainstream, walk-on aliens come with metaphors and labels worn on the sleeve. How could they not? In "realistic" fiction, aliens can't be real. Sf insists that they *are*—and that important issues turn upon admitting alien ways of knowing.

Even in sf, though, I must inveigh against the notion that we make statements about the alien *in the form of a work of art.*

Not so. While this reductionist view is useful for inquiring into epistemology, or diagnosing contemporary culture, or other worthy purposes, it has little to do with what happens when we confront the alien in fiction.

Naturally, there are always people who want to put art to use for some purpose—political, social, philosophical, etc. But it is so easy to forget, once you're using art, that it is not only *about* something, it *is* something.

The alien in sf is an *experience,* not a statement or an answer to a question. An artistic —that is, fulfilling, multifaced, resonant—rendering of the alien is a thing in the world itself, not merely a text or a commentary on the world.

All the deductions we can make from a story about the truly alien give us *conceptual* knowledge. So does science. But the story should—*must* also give us an excitation, captivating and enthralling us. When sf works, it gives us an experience of the style of knowing something. (Or sometimes, as I'll discuss, *not* knowing.)

This means a prime virtue in depicting the truly alien alien is expressiveness, rather than "content"—a buzz-word which provokes the style/substance illusion in criticism. We don't read *The War of the Worlds* for its views on Martian biology or psychology, but for the sensations of *encounter.*

This may well be the most original thing which sf does with the concept of irreducible strangeness. It's worthwhile inquiring into the underlying ideas and approaches scholars and writers take in pursuit of it.

Science and Sensawonda

Most sf which takes the idea of the alien seriously (though not necessarily solemnly) deploys a simple strategy:

First, use scientifically sound speculative ideas to construct either the background or the actual physical alien. Garnish the strange planet with whatever ecology looks workable, always favoring the more gaudy and spectacular effects.

Next, deploy a logical sequence of deductions about how an alien would evolve in this place. Stick to concepts like Darwinian evolution, or some later modifications ("punctuated equilibria" in evolution, for example). Then make the alien behave in keeping with this world. Present his/her/its actions, getting the maximum effect of the detailed worldview. Only slowly make known how the alien got that way. This guarded unfolding spices the story with mystery.

This usually works well to make a situation strange and intriguing to the reader. Isaac Asimov's *The Gods Themselves* uses speculative physics and well-rendered oceanic imagery to evoke strangeness. Larry Niven and Jerry Pournelle's *The Mote in God's Eye* has three-egged Moties with well-thought-through implications. On the other hand, Hal Clement's classic *Mission of Gravity* uses a gargantuan planet of crushing gravity, yet the aliens come over as more like Midwesterners. (Maybe this was necessary at the time. The planet was so outré, Clement may have used ordinary aliens to keep things manageable.)

An obvious pitfall of this whole class of approach is that the reader—who may be quite technically adept, and can catch the author in a lapse of world-building—may merely find all this apparatus merely clever and engaging, a fresh kind of problem story. He'll get no sense of strangeness.

What writers are after here is what the fans call sense of wonder—an indefinable rush when beholding something odd and new and perhaps a bit awesome. Dat ole sensawonda is the essential sf experience. No alien should leave home without it.

Beyond this approach there are refinements. Chad Oliver's *The Shores of Another Sea* treats a chilling alien form which is never more than glimpsed, but whose strangeness slowly comes across, through its use of animals in Africa. Some writers have tried to render alien perceptions, grounding their effects in the sciences. Damon Knight's short story "Stranger Station" treats the anguish of a human trying to enter into an alien's way of thinking. The human emerges with a provisional explanation of how a vastly powerful alien society sees us. (There is a strong hint, though, that he has merely projected his own childhood traumas on the huge creature, so this is really another failed attempt at real contact.)

What I find most interesting about this area is the tricky way it can make so many of our cherished ideas disappear up our own assumptions.

Alien Chat

Scientists often say that communication with aliens could proceed because, after all, we both inhabit the same physical universe. We should agree on the basic laws, yes?—gravitation, electromagnetism, stellar evolution, etc . . .

This is the gospel of the Universal Language. I'm not so sure.

After all, we must frame our ideas in theory, or else they're just collections of data. Language can't simply refer to an agreed-upon real world, because we don't know the alien agrees about reality.

There's an old anthropologists' joke about this. In the outback one anthropologist is trying to learn a native's language by just pointing at objects until the native tells what the object is in the language. He wanders around pointing and gradually getting more excited. He tells a colleague that these people have built into their language the concept that nature is all one essence, because whatever he points to, the native says the *same word.*

It is a great discovery. Only much later do they discover that the word the native used is the one for "finger".

So you can't just rely on raw data. You must convey somehow concepts—which means theory. And in science, theory inevitably leads to mathematics.

Indeed, the standard scenario for communicating by radio with distant civilizations relies on sending interesting *dit-dah-dit* patterns, which the receiving creatures dutifully decompose into pictures. Those sketches show us, our planetary system, some physical constants (like the ratio of the proton mass to the electron mass), and so most confidently on and on . . .

Let's play with some notions that go against this grain. Suppose the aliens don't even recognize the importance of *dit-dah-dit?*

Why not? Their arithmetic could be non-numerical. That is, purely *comparative,* rather than quantitative. They would think solely in terms of whether A was bigger than B, without bothering to break A and B into countable fragments.

How could this arise? Suppose their surroundings have few solid objects or stable structures—say, they are jelly creatures awash in a soupy sea. Indeed, if they were large creatures, requiring a lot of ocean to support their grazing on lesser beasts, they might seldom meet even each other. Seeing smaller fish as mere uncountable swarms—but knowing intuitively which knot of delicious stuff is bigger than the others—they might never evolve the notion of large numbers at all. (This idea isn't even crazy for humans. The artificial intelligence researcher Marvin Minsky told me of a patient he had once seen who could count only up to three. She could not envision 6 as anything other than two 3s.

For these beings, geometry would be largely topological, reflecting their concern with overall sensed structure rather than with size, shape, or measurement, à la Euclid.

Such sea-beasts would lack combustion and crystallography, but would begin their science with a deep intuition of fluid mechanics. Bernoulli's Law, which describes simple fluid flows, would be as obvious as gravitation ("things fall when you let go") is to us.

Of course, these creatures might never build a radio to listen for us. But even land-based folk might not share our assumptions about what's obvious.

Remember, our concepts are unsuited to scales far removed from those of our everyday experience. Ask what Aristotle would've thought of issues in quantum electrodynamics, and you soon realize that he would have held *no* views, because the subject lies beyond his conceptual grasp. His natural world didn't have quanta or atoms or light waves in it. In a very limited sense, Aristotle was alien.

Perhaps only in the cool corridors of mathematics could there be genuinely translatable ideas. Marvin Minsky takes this view. He believes that any evolved creature—maybe even intelligent whorls of magnetic field, or plasma-beings doing their crimson mad

dances in the hearts of stars—would have to dream up certain ideas, or else make no progress in surviving, or mathematics, or anything else. He labels these ideas Objects, Causes and Goals.

Are these fundamental notions any alien must confront and use? We've cast a pale shadow of doubt over Objects, and I wonder about Causes. Causality isn't a crystal-clear notion in even our *own* science. There are puzzles about quantum cats and, as I elaborated in my novel *Timescape,* fundamental worries about the sequence of time, too.

Why should Objects, Causes and Goals emerge in some other-worldly biosphere? Minsky holds that the ideas of arithmetic and of causal reasoning will emerge eventually because every biosphere is limited. Basically, it's economics—eventually, some inevitable scarcity will crop up. The smart bunny will turn into a fast-track achiever, since he'll get more out of his efforts. Such selection will affect all his later biases. Minsky has framed technical arguments showing that these notions must turn up in any efficient (and, presumably, intelligent) computer.

I have my doubts, but others have gone a long way toward making math alone carry the burden of communication. Hans Freudenthal's LINCOS is a computer language designed to isolate the deepest ideas in logic itself, and build a language around it. It uses binary symbols typed out in lines. LINCOS stands ready the moment we run into something green, slimy and repulsive, and yet with that restless urge to . . . write.

Math is central to the whole issue of communication because it allows you to describe "things" accurately and even beautifully without even knowing what they are. Richard Feynman once said, to the horror of some, that "The glory of mathematics is that *we do not have to say what we are talking about."* (emphasis his)

This is quite a threat to the humanists, who often wish scientists would become more fluent in communicating. Feynman means that the "stuff" that communicated fields, for example, will work whether we call it wave or particle or thingmabob. We don't have to have cozy pictures, so long as we write down the right equations.

I'm reasonably comfortable with this idea. As David Politzer of Caltech once remarked, "English is just what we use to fill in between the equations." Maybe scientists will themselves make useful models for aliens . . .

Delving into the artistic pursuit of alienness always brings up the problem of talking. As I've sketched here, there are sound reasons to believe some aliens are genuinely unreachable. You must share a *lot* to even recognize aliens as worth talking to—note how long it's taken us to get around to thinking about the whales and dolphins.

But suppose we finesse the communication card for a moment. How does a writer *assume* some chat can occur, and then create the sensation of strangeness?

The Trapdoor Moment

One of my favorite sf stories is Terry Carr's "The Dance of the Changer and the Three", in which a human visiting a world remarks, ". . . I was ambassador to a planetful of things that would tell me with a straight face that two and two are orange."

This reminds me of surrealism in its deliberate rejection of logic. Notice, though, that even while it is commenting on the fundamental strangeness of the aliens, this sentence tries to impose a human perspective—why should the natives have a "straight face" at all? Or any face?

The story deals with creatures on the rather ordinary world of Loarra, and their folk

legends are shown in loving detail. This takes most of the text and the unwary reader thinks he is reading a pleasant bit of pseudo-anthropology. Then the aliens suddenly kill most of the expedition. Why?

> Their reason for wiping out the mining expedition was untranslatable. No, they weren't mad. No, they didn't want us to go away. Yes, we were welcome to the stuff we were taking out of the depths of the Loarran ocean. And, most importantly, no, they couldn't tell me whether they were likely ever to repeat their attack.

The story concludes two paragraphs later, with the humans unable to decide what to do next. Notice that the use of "mad" can be read here as either colloquial for angry, or else genuinely crazy. And through the aliens' *rejection of prediction* they deny the very notion of science as we would hold it. This seems to rule out the Universal Language dogma.

I like the story because it strings you along and then drops the trapdoor just as you're lulled into a pleasant sensation of Loarran pseudo-Polynesian simplicity. The ideas revealed this way are startling, but the core of the story is that sideways lurch into the strange.

For contrast, consider one of the most famous stories about alien encounter, Frederic Brown's "Arena" (1944). A man is trapped inside a desert-floored dome and told he must fight it out with an implacable alien foe, for mastery of the galaxy. In their struggle, the alien "roller" reaches the man telepathically (avoiding the whole language problem, you'll notice):

> He felt sheer horror at the utter *alienness,* the *differentness* of those thoughts. Things that he felt but could not understand and could never express, because no terrestrial language had the words, no terrestrial mind had images to fit them. The mind of a spider, he thought, or the mind of a praying mantis or a Martian sand-serpent, raised to intelligence and put in telepathic rapport with human minds, would be a homely and familiar thing, compared to this.

But if the roller was utterly alien, it would be incomprehensible. As the critic John Huntington has pointed out, it is *understandable* alienness that so horrifies the human. In fact, it is horrible because it stimulates difficult, inexpressible feelings in the man! He understands the alien by reading his own feelings. He can't deal with them, so he attacks their origin.

"Arena" is usually read as a paean to hardboiled, Campbellian rationality. I think you can read it as covertly pushing unconscious emotionality. This is a completely different programme—intellectually and emotionally—from Carr's.

Modernist Aliens

Oscar Wilde remarked that in matters of supreme moment, style is always more important than substance. So, too, here. We cannot know the true deep substance of the totally alien, but we *can use* conscious and conspicuous style to suggest it. Some of the best sf takes this approach. It is quite different from the Hal Clement-style careful scientific explanations.

In Robert Silverberg's short story "Sundance", the text surges back and forth between points of view, changes tenses, and richochets between objective description and intense personal vision—all to achieve a sense of dislocation, of reality-distortion, of fevered intermittent contact that you cannot quite resolve into a clear picture:

> It is like falling through many trapdoors, looking for the one room whose floor is not hinged.

The story culminates in rapidly reflecting and refracting visions of the same "reality", seeing slaughtered aliens for one moment as objects, and then experiencing them from the

inside. The narrative voices lurch and dive and veer, always pulling the trapdoor from under any definitive view. The story concludes "And you fall through."—there is no solid ground.

This is one of the best examples of how sf has used styles and approaches which were developed first in the dawning decades of the twentieth century, in what the critics term "modernism". Breaking with the whole nineteenth-century vision, Modernism evolved methods to undermine consensual reality and achieve a more personal, dislocated view. In Joycean stream of consciousness, in the Faulknerian wrenchings of *The Sound and the Fury,* literary devices dynamited cosy assumptions.

When science fiction uses such methods, they have different content. This is, I think, one of the most important contributions the genre has made to literature as a whole. Run-on sentences don't merely mean internal hysteria, flooding of the sensorium, runaway *ennui,* etc. Instead, the method suggests genuinely different ways of perceiving the world, emerging not from psychology and sociology, but from evolution, genetics, even physics.

Unnoticed, sf has taken "mainstream" methods of breaking down traditional narrative and turned them to achieve uniquely sf ends. (I'd almost term it—delving into jargon myself—using modernism to achieve a kind of sf postrealism.) Nor has this ground been fully explored. I believe it is only now being pioneered.

One of the most interesting uses is that, in sf, these can translate as a rendering of the scientifically *unknowable*—or at least, unfathomable by humans. The blizzard of strangeness motif is a persistent notion, even among hard science types.

Time and again in sf, encounters with the alien swamp mere humans. In Fred Hoyle's *The Black Cloud,* Chris Kingsley, the eccentric and brilliant scientist protagonist, is driven into a kind of overloaded insanity when he attempts full contact with a huge, intruding superintelligent cloud. To accommodate the immense flood of new ideas and perceptions, Kingsley "decided to accept the rule that the new should always supersede the old whenever there was trouble between them"—an sf article of faith. But in the end, contradictions are unmanageable. The new information settling into the same neural brain sites makes life itself impossible. Kingsley (an echo of Kingsley Amis?) dies. Hoyle is no stylist, but I find it significant that he is drawn to the same notion of contact. Others later expanded on this insight.

Thus one underlying message in sf is that the truly alien doesn't just disturb and educate, it *breaks down reality*—often fatally, for us.

Here sf departs quite profoundly with the humanist tradition in the arts. Science fiction nowhere more firmly rejects—indeed, explodes—humanism than in treating the alien. Humanist dogma holds that man is the measure of all things, as Shakespeare put it. Sf makes a larger rejection of this than did modernism or surrealism, because it even discards the scientists' Universal Language and the mathematicians' faith in Platonic "natural" ideas. Sf even says the universe may be unknowable, and its moral structure might forever lie beyond humanity's ken.

This makes Camus and Sartre and nihilism seem like pretty small potatoes. If you're shopping for literary alienation, sf offers the industrial strength, economy size stuff. Yet it also contains the symbols of certainty, through science.

I suspect that the longstanding antagonism between the literary world and the sf community isn't merely the old story the stylish effetes *vs* the nerd engineers. Instinctively, without much overt discussion, the two groups dispute the fundamental

ideals behind humanism. Sf writers take different views of the universe, and can't be reconciled by a few favourable notices in the *New York Times Review of Books*.

Erotica and Strangeness

Writers as diverse as Philip José Farmer ("The Lovers"), James Tiptree Jr. ("And I Awoke and Found Me Here on a Cold Hill's Side") and Gardner Dozois (*Strangers*) have dwelled upon the erotic component in the alien. It turns up in such drive-in movie classics as "I Married a Monster from Outer Space".

Discussing as personal a subject as sex, I might as well drop the convenient cover of dispassionate critic and write about my own work. At least this approach minimizes the number of potential lawsuits.

When I began thinking about the alien in detail, one of the first stories I wrote was "In Alien Flesh". I constructed it more or less unconsciously, piecing the story together from parts written at separate times over a period of months. For a long while I didn't know where the tale was going.

In it, a man named Reginri has been hired to crawl up into a huge, beached, whalelike alien on the shore of an alien sea. He is an ordinary worker, not a scientist. He simply finds sites to plunge sensors directly into the inner reaches of the being, called the Drongheda. Direct contact floods him with images, feelings—that sensual overload. It provokes ineffable thoughts. And he gets trapped inside the beast.

I wrote most of the story, but had no ending. So I retreated, building a frame around the central tale, which makes the main narrative a flashback. In the frame, Reginri is looking back on his nearly fatal encounter with the Drongheda. I put into this part an approaching fog which humans must avoid—a damaging mist of another planet. Only after I wrote the last lines of the story did I suddenly see what the end of the flashback portion had to be:

> There was something ominous about it and something inviting as well. He watched as it engulfed trees nearby. He studied it intently, judging the distance. The looming presence was quite close now. But he was sure it would be all right.

That done—though not understood, at least by me—I quickly retreated to the point where Reginri is smothered in the alien mountain of flesh, and in desperation taps directly into the Drongheda's nerves. I started writing again, filling in action without thinking or planning very much.

Shaken by the flood of strange mathematics and sensation he has gotten from the Drongheda, Reginri finds his way out. Standing in the wash of waves as the Drongheda moves off on its inexplicable way, Reginri learns that one of this fellow workers has been crushed by the alien. Looking back, only then does he see that the hole he had used to crawl up into the Drongheda, pushing and worming his way in, was not "something like a welt"—the description I'd written before, and let stand—but in fact is now quite obviously a sexual orifice!

Until I wrote those lines, I had no clue what the story was really about. What a field day for Freudian analysis! A critic's playground! Effing the ineffable . . .

I decided to let the frame stand. Having written the thing by intuition, I didn't dare tinker with it in the cool light of a critical eye. There's always a point in writing when you have to let go, for fear that you'll tinker away all the life in a piece. So, whatever the tale means, or says about my own disquieting interior, there it is.

Though I have now applied the reductionist hammer—which I scorned at the beginning of this essay—to one of my own works, I must say that I think postreadings do tell part of the story. Still . . . once you've dissected a salamander, you know more about it, sure—but it's dead.

As for my own way of assembling the story, I prefer this manner of pondering, shuffling back and forth, and by bits and pieces trying artistically to render the alien. Intuitively, not seeking final answers, and with a certain lack of embarrassment, as well.

I'll return to my first assertion, too, and maintain that performing the usual critical slice-and-dice on "In Alien Flesh" misses the thrust of it. Rendering the alien, making the reader experience it, is the crucial contribution of sf. Such tales can argue over communication, spring trapdoors, innundate the reader with stylistic riverruns—all to achieve the end of a fresh experience. That's what the alien is really about.

What relief at last
To meet in green bulk and stench
The terrors cloaked inside,
Yesterday released only on the analytic couch.
Shaped in strange mud,
Violent forms, chittering
With frantic energy beneath
Pale yellow, quilted skies.

A blister on the mind,
This need for darkness. Lanced
By voyages to the coolly distant,
The cosy-weird. But with acrid pincer
The twisted thing cuts quick
To bones unsuspected.

"How can one be an author of science fiction, a 'marxist-American', live in Switzerland, and be called Kim Stanley Robinson?" demanded the French left-wing newspaper Libération *recently.*

Who else, we might add, would drive at midnight from Picardy to Zürich to take part in a baseball game?—or would climb the cloud-shrouded Matterhorn the day after with a flashlight in his mouth?

Born in Waukegan, Illinois, which also sired Ray Bradbury, but brought up in California, Kim Stanley Robinson's stories and novels have rapidly made waves. Was his first novel, The Wild Shore *(1984), a revelation in post-apocalypse pastoral mode of the secret political wet dreams of the rest of the world regarding American global hegemony—or a cunning leftish reduction of the USA to the status of a third world country? A kind of thematic sequel to* The Wild Shore *is due in Robinson's next novel, his fourth, provisionally entitled* The Gold Coast, *which takes issue with triumphant Reaganism and the future society of pork-barrel defence mega-bizz stemming from Star Wars, not the motion picture.*

Robinson's themes to date range from mountaineering on Mars ("Green Mars") to the Spanish Armada ("Black Air"), from a musical tour of the solar system in The Memory of Whiteness *(he's a Jazz enthusiast) to an alternate Hiroshima ("The Lucky Strike") or an enigmatic monument on Pluto in* Icehenge. *Plus a definitive book on Philip K. Dick.*

Below, for the edification of future commentators, he reveals all . . .

The Profession of Science Fiction, 34: Me in a Mirror

KIM STANLEY ROBINSON

When people ask me why I write science fiction, I usually mumble something unconvincing about aesthetic perversion or the like, or say, simply, "I don't know." This is true—I have no idea why I write science fiction—but it is not the whole truth. If I told that, people would think I was crazy, so I haven't. But it's a strain keeping it a secret, and so now I'm going to get the whole thing off my chest.

I have a problem with mirrors. I first noticed it when I was about four years old. It is my earliest memory. My family had just moved from Illinois to Orange County, California, the area just south of Los Angeles. Our neighbourhood consisted mostly of orange groves, with a skeletal network of new suburban streets extending into the groves. We lived at the end of one of these new streets. Across the street construction workers were working on an empty lot, building another house. I was wandering around the edges of this lot, looking at piles of sand and boards. I found myself in front of a stack of window glass placed on end and leaning against some dark boards, so that the surface of the outer sheet of glass reflected the scene, like a mirror.

Now, across from this reflecting glass were the rows of orange trees that surrounded our street. But when I looked at the glass, the reflection showed me more houses; the street extending off to the west; big buildings in the distance; immense spans of concrete cleaving the sky.

Disturbed, I ran home and said nothing more about it. But I had been alerted to the fact that something strange was going on, and I began to observe the behaviour of my parents around what I had been taught to call mirrors. I had never understood what they were. My parents and other people stood before these odd windows and peered into them as they very accurately combed their hair, or put on make-up, or tied their ties; I understood, finally, that they were seeing themselves in the glass.

I stood before a mirror in our new bathroom, and saw nothing at all of myself; only a room much like the one I stood in, except the wallpaper and furniture were different. Frightened, I went away and said no more about it. I never did get up the courage to tell anyone; I knew there was something wrong with me, and I didn't want others to know it.

Well, you can imagine the difficulties this situation gave me. Learning to part my hair straight was a particular problem. And outdoors, when I looked at reflections in glass, I continued to see a world that appeared to be completely unrelated to the one around me. During my childhood I never understood what I saw; it was frightening, and I did my best not to look. But through the 1960s, as I was growing up—a rather withdrawn youth I was, happiest outdoors and away from buildings—I noticed a curious thing. Every adult in Orange County seemed to be rushing about, working as hard and as fast as they could to transform the landscape into something more like the one that I saw in the glass. Groves were going down at an incredible rate, houses and office complexes and condominiums and shopping malls were going up even faster. It was really remarkable. And I began to get some suspicions about what it was I saw in those reflections.

But I never thought about it much; I was happier when I ignored this oddity in an otherwise perfectly ordinary Californian adolescence, and of course there were a lot of other things to think about: school, tennis, the beach, marching band, girls . . . I was busy, and rather than worry about what I feared was evidence of insanity, I ignored it. So far as I remember, I never once thought about writing.

This lasted until I was eighteen, when I began studies at the University of California, San Diego. I lived in a dormitory on campus. There was a mirror in my room because my roommate wanted one, and I didn't dare refuse. So there it hung on the wall, revealing to me a similar dorm room, with similar furniture, but all of it in different positions. Still, years of dealing with such incongruities had made me calloused to them, and I ignored this mirror as I had so many others.

I had a good time at UCSD. One night, I staggered back into my dorm room after a long day and night of surfing and partying, the staples of my undergraduate existence. My roommate Victor was out. Seized by an excess of exuberance—the waves had been good, the partying wild—I engaged in the project of leaping back and forth between my bed and Victor's, in the dark.

I was succeeding gloriously, when suddenly there came a low laugh from the mirror. I froze on my bed. The laughter increased. I could hear it as clearly as if the mirror were a hole in the wall, leading to another room.

"Oh my God," I whimpered. Crazy at last. "I'm never going to smoke one of those marijuana cigarettes again."

"Don't be stupid," a voice said, and the harsh laugh returned. I could see the outline of a head, looking out from the mirror.

"Who are you?" I quavered.

"Who do you think?"

"I don't have the slightest idea!"

"Call me Kim."

Now, I go by my middle name, Stan, and have ever since second grade. I had disliked my first name for years; but it was mine.

"But you're not me," I said vehemently.

"No," this Kim said. "That's right." In the gloom I could just see the gleam of a smile. "But there's something between us."

"No!" I cried. "There's not!" I was getting very frightened.

"There is."

"What do you want from me!"

The face shifted as it appeared to inspect my room.

"You've got a typewriter." He said it as if it were an unfamiliar word. "Good. Write down what I tell you to."

Even at the time this struck me as an odd request to get from an apparition. "No!"

"Write. I'll dictate slowly."

"NO!"

"Write down what I say, or else."

He told me some of the things he would do to me, all from his side of the glass, if I didn't cooperate. As there may be people with sensitive imaginations reading this, I won't go into detail here. Think about if for a while and you'll see what I mean.

Pretty quickly I was at the typewriter pounding away. And that was the start of it.

After that I was visited by this figure behind the mirror about twice a week, always when I was alone (part of the deal). He dictated, I typed. And I began to turn out a fairly steady stream of poems, all of them utterly weird. Gibberish, in fact. Once, however, just out of curiosity, I showed a few to a literature professor on campus, Donald Wesling. He said some of the poems were quite good. I was shocked to hear this; but I also enjoyed the look on his face as he inspected me, and wondered that I had produced these things. It struck me funny.

Kim just muttered abuse when I told him about this, and ordered me to sit down and take some more dictation. "Why don't you do it yourself?" I complained as I typed away.

He cursed. "I would if I could! Why do you think I do it this way! Do you think I like it?"

"How the hell would I know? I don't even know who you are!"

"Shut up and write." He said that a lot.

So I sat in the dark and typed, as Kim paced about in the room beyond the mirror and dictated in a low, rapid voice. Later I would type out fair copies of what he said to me, and I handed them in to the writing classes that I had begun to take, just for the interest of showing this stuff to people. Although some disliked it the response was usually good, and I began to take more and more of these kind of classes. I had planned on becoming a geologist, or shifting after two years to a state college where I could study forestry, but my studies began to suffer badly as I took fewer and fewer of the required classes. Finally I was forced by the university administration to change my major, and Donald Wesling

became my academic advisor.

All of this was okay with me; I hardly had to do any schoolwork at all, now, aside from taking some dictation a couple of nights a week. I enjoyed being free to play around; there was a lot of that to be done, then. The only problem came when I was asked to discuss my work, and of course in these writing classes, that happened pretty often. "Gee, Stan, what exactly did you mean to say when the owl flew up the woman's dress and melted into her kneecap, becoming fixed there?"

"Well, uh . . . uh . . . I . . . I guess, uh . . . it's . . . uh . . . symbolical?"

Responses like these got me a lot of looks that made me uncomfortable. It got even worse when I took a classmate's suggestion, and submitted one of Kim's stories for publication. (He switched from poems to stories in my last year of college, which was too bad as it made for a whole lot more typing.) I chose the editor Damon Knight to send the stories to, because a little reading had indicated that he was the only man in America publishing stuff as strange as Kim's. Even stranger. So I sent one of Kim's stories along, and damned if Knight didn't buy it.

Now I was getting paid for all this! Too strange. But the problems began to mount. Knight would write to me. "Why does the dead man turn red and translucent and grow to five times his previous size?"

"Well, uh . . . uh . . ."

It really was getting awkward. I tried asking Kim about these things, but he only laughed at me. "Why do you want to know! You don't want to know! Shut up and write!"

It got so bad that I decided to attend the Clarion Science Fiction Writer's Workshop, held every summer at Michigan State University. From what I had read I concluded that this would be just the sort of place to learn to talk intelligibly about the kind of stories Kim was dictating. Submissions of a couple of his more bizarre productions got me accepted, and I went in the summer of 1975. I had a great time there, it was a continuous party and I made a lot of good friends, and I even learned a bit more about how to talk about this stuff. But apparently Kim didn't like it; uttering a curse he disappeared from my mirrors for the whole conference, and for many months afterwards. I occupied myself typing up drafts he had dictated to me earlier.

When he returned, in the middle of 1976, he was more insistent than ever, and the stories he wanted me to type got longer and longer. It was a strange life; I spent a lot of time alone, taking dictation from the guy behind the mirror. I took odd jobs, worked at night. Then I went back to graduate school in literature, to give a plausible cover to all the production. I kept sending the stories out, and a few of them sold, but when Damon Knight stopped buying stories, Kim was out of luck. A few years passed before Terry Carr picked up the slack.

When Carr did start buying stories from us, I made a mistake. Carr asked me if I had anything long, and so I sent him some pages Kim had dictated, of what appeared would be a fairly long story. Carr said he wanted to buy this story for his New Ace Specials series. I said fine and told Kim about it next time he showed up. "You fool!" he cried. "That's a 400 page novel! When did you say you would give it to him?"

"Oh, um. Three months. Something like that."

He just laughed. "Idiot. You're going to get a reputation for being late."

And so I did.

But eventually the books began to appear. *The Wild Shore, Icehenge, The Memory of*

Whiteness. I took a considerable interest in the response these books received; I was pretty involved at this point, I did a lot of what you would call copy-editing, and besides, I had done one hell of a lot of typing! Happily, the reaction to the books was always interesting, and often positive.

Sometimes it was not, however, and I was shocked to find how personal the negative criticism tended to be. Kim just laughed. "Why should you care?"he said. "They're not talking about you anyway." That was true. But when we were compared to murderers I thought it was going a little too far, and I lost my temper. "I know," I exclaimed. "Let's start up an anonymous newsletter and trash all these guys. Promote our own work while viciously attacking everything else. We'll let some people know who we are so they'll know who to be afraid of, but we'll jump behind the pseudonyms whenever we have to avoid trouble. We'll scare everybody!"

Long, disgusted silence from behind the mirror. I reconsidered. "All right, all right," I said. "Sick idea. Who would do such a thing?"

Long laugh. "Enough of that. Here, take this down."

One time, my curiosity about this stranger who had so changed my life became intolerable. There was so little I knew about him—who he was, where he came from, why he dictated his stories to me rather than writing them down himself, why he had chosen me in particular . . . everything! Several times, of course, I had tried switching on the lights in my room, in order to better see this Kim of mine. No luck; all I ever saw was an empty room, similar but not similar to the one I happened to be in; perhaps a door to it would be swinging shut. When I turned out the light he would return, laughing angrily at me and warning me not to try such things again.

But this time I tried something new; I put a flashlight by the typewriter, and right in the middle of a dictation session I picked it up, aimed it at the mirror and turned it on.

His face was pale and thin, his blond hair long and wild. He had dark rings under his eyes, and wore a tattered blue jacket. He looked like me, sort of, but . . . not the same.

He leaped out of view, cursing. I went to the mirror and shined the flashlight through it; the room was bare, the walls badly painted and scored with rips—and in one corner—

"Quit it!" he shouted, and suddenly the mirror shattered out around me, leaving me alone in my single room.

I replaced the mirror, but it took a long time for him to return, and when he did, he was not in a good mood. "Don't do that again," he warned.

"You're from the future, aren't you," I said. "There was a little robot of some kind in your room. And all these stories . . ."

"I wouldn't assume that," he said.

"So you're writing about your own time," I went on.

"Not at all. That would be too . . . well, it's none of your business. You just sit there, don't bother me, and take this down."

So I did. And so the years have passed. I have a wonderful wife who understands my situation, and helps me to deal with it. We lead an interesting life. Kim's books are published and help make ends meet. I have learned to speak very plausibly about literature, about cognitive estrangement (which I am very familiar with), the anxiety of influence (ditto), and the like. What I say still does nothing at all to illuminate Kim's stories, but remarkably few people notice that, so I guess it doesn't matter. I pass for the author, and that's enough.

I am very, very fond of backpacking in the mountains, and now you will probably understand why. In the mountains there are no mirrors, no reflecting glass; and as a result I enjoy a marvellous, pervasive, blessed silence. In fact, I am writing this in a notebook, outside our tent, high in the Valais Alps; the morning sun is about to break over the peaks to the east; after that the condensation on the tent will quickly evaporate, and it will be time to pack up and start hiking over what looks to be a very fine cross-country pass. When I return home there'll be some hard words for me, and a lot of work to do; meanwhile, the day is free. Great. "Hey Stan!" Lisa says to me from across the meadow. "Look at this marmot!" I think I will.

Cover Feature

Slaves of the Death Spiders: Colin Wilson and Existentialist Science Fiction

BRIAN STABLEFORD

I have before me the proofs of Colin Wilson's new science fiction novel—or part of it, anyway, this being only the first volume of a three-decker whose collective title is *Spider World.* Had it been written for the pulp magazines (in a much less prolix fashion, of course) it would probably have been called something slightly more melodramatic, but we live in dignified times nowadays. Instead of a twenty-thousand-word first instalment of an *Astounding* serial, *Slaves of the Death Spiders,* we have nearly a hundred and fifty thousand words called *The Tower,* which is presumably to be followed by two more equally weighty tomes.

For the long-time science fiction reader this is a work redolent with echoes; among the works recalled to my mind while I was reading through it were Murray Leinster's "Mad Planet", Edgar Rice Burroughs' *At the Earth's Core,* Manly Wade Wellman's *The Dark Destroyers* and the film *Star Wars.* Let no one be put off by Colin Wilson's reputation as an unorthodox but heavyweight philosopher; this is old-fashioned adventure fiction not so very far upmarket of the recent works of that other unorthodox philosopher L. Ron Hubbard. In the same way, though, that the natural scepticism of the sf fan will lead him to wonder whether there may not be a hint of philosophical propaganda lurking beneath the surface of the ten-volume *Invaders Plan,* so he will peer suspiciously at the ideative undercurrents of *Spider World.*

The first part of this volume of *Spider World* introduces us to Niall, son of Ulf and Siris, brother of Veig, Runa and Mara. (In the great tradition of pulp sf hardly anyone in this world has more than one name, but we will later be surprised to encounter a Wellsian mock-cockney with eight wives who is incongruously called Bill Doggins. Niall also has an uncle called Thorg, but he is just spider fodder.) Niall and his family live in the desert, where they must eke out a frugal living whilst dodging predators and watching for balloon-borne death spiders who might take them as slaves. All the insects and arachnids of this world are much bigger than the ones we know, and some of them are a lot brighter. As well as the death spiders, whose distinctive kind of intelligence is augmented by will-power which can exert physical force, there are sophisticated bombardier beetles who have their own civilization and their own human servants. Human beings are for the most part not as bright as they used to be when *they* ruled the Earth, mainly because they have been selectively bred by the death spiders for stupidity; but humans living wild, like Ulf and his family, are still pretty bright, and Niall soon shows himself to be an intellectual ball of fire, just as one would expect of a hero whose ultimate mission will presumably be to save mankind from the yoke of awful servitude.

The cleverness of this small band is amply shown off in the first hundred-and-some pages, when they fight off a series of insectile nasties, domesticate a wasp and some ants, and undertake a dangerous journey to an underground city of free but somewhat decadent men ruled by the surprisingly effete Kazak. Niall, in the course of these adventures, learns enough about his world to give us a rough idea of what it is like, and begins to develop the mental powers that will ultimately equip him to fight back against the spiders. He also finds an artifact left over from the ancient times, which enables him to kill a death spider. This most heinous of crimes precipitates a raid in which both his own family and the inhabitants of Kazak's city are enslaved—though many, including Ulf, are killed.

In the second part of the novel Niall, initially still free, follows the trail of his family, hoping to rescue them, but is eventually captured himself by the wolf spiders—inferior minions of the death spiders—who are herding them into slavery. The journey takes them across the sea, and during a storm Niall saves the life of one of these wolf spiders, who do not seem to be such awful chaps after all. Once in the city of the death spiders, he finds himself in a peculiar position. The existence of his hidden talents is suspected by the Spider Lord, who refrains from ordering his death in the apparent hope of winning his loyalty and co-operation. This may seem unduly optimistic to the reader, but Niall's experiences in the city show him that the great majority of the servants actually think they have it pretty good, and that despite the spiders' habit of eating them their conditions of service are reasonable. They can, at least, feel superior to the utterly stupid slaves. Even Kazak, who has been free, is willing enough to serve his new masters, especially as he gets the plum job of being the ultimate overseer. Niall, however, is not tempted. His determination to oppose the spiders is redoubled, in fact, when he manages to gain entrance to a tower which the spiders have been trying to destroy for many years. There a computer-generated *guru* explains to him that man's hegemony was lost long ago when the Earth passed through the tail of a radioactive comet whose effects turned the ecosphere upside down and forced some men to flee the solar system. (This is the info-dump section where Niall is lectured for a while on matters of history, evolution, etc., but we are not told why all the conventional arguments about the impossibility of giant spiders and insects are

wrong.) The computer *guru* assures Niall that the spiders can be defeated, but coyly refuses to tell him how, spinning him a social Darwinist line about the survival of the fittest and men having to prove themselves worthy of salvation.

In the third part of the story Niall flees the spider city (aided at one point by a grateful wolf spider—not a cliché spurned in this plot) and finally ends up in the city of the bombardier beetles, where he meets (not for the first time) the cheery explosives expert Bill Doggins. Doggins has no particular desire to help him, but Niall has fortunately found out the location of a long-lost arsenal, full of lovely explosives, blasters and other weapons of awful destructive power. This lure is enough to persuade Bill to put together a crack team of guerrillas to get hold of the weapons and let all hell break loose. This first volume ends, after a brief spider-frying orgy, with the breaking of the treaty between the spiders and the bombardier beetles and the release of Niall as an outcast. He has learned, though, that the spiders *can* be opposed, not simply with super-weapons but with the power of the will, and that if humans can only learn to exploit their inner resources they can strike back against their mesmeric masters. Watch out for the next exciting episode!

This is a far cry, you may think, from *The Outsider,* that rapt commentary on tortured works of literary self-analysis which shot Colin Wilson to fame in the 1950s. It does not even have much in common with Wilson's previous works of sf. The two Lovecraftian novels, *The Mind Parasites* and *The Philosopher's Stone,* both come close to sinking beneath the weight of their pseudoscientific discourse, maintaining a deadly intellectual earnestness and a ponderously didactic tone. *The Space Vampires,* despite being modelled more on van Vogt than on Lovecraft and being sufficiently similar to the average horror sf melodrama to make a scary film, still bears its fair share of the existentialist pontificating that can be found in Wilson's other murder mysteries, and a certain amount of urgent theorizing derived from his study of *The Occult* ("A study of the latent power that human beings possess to reach beyond the present.") Compared with these books, which beg to be taken at least three-quarters seriously, *Spider World* seems to be very much a *genre* confection, possessed of a more entertaining *esprit.* Nevertheless, *Spider World* does fit in with the developing pattern of Wilson's work, and I will venture the confident prediction that *The Tower* will prove to be a wolf spider in sheepish clothing; once this three-decker has the reader caught in its seductive web of melodramatic cliché he will suddenly find himself staring into the beady eyes and slavering palps of that most hideous of all science-fictional monsters: the author's message.

Colin Wilson first fell under the spell of pulp sf when he was ten[1], during the war years. He rediscovered it in the 1960s, when he began to think seriously about it, and concocted an apology for it: sf was the literary voice of the scientific view of the universe—the grand cosmic perspective—and it was "trying to cure man of his hopeless addiction to the trivial and the obvious".[2] This is, in Wilson's view, an important task, because it is his own.

What Wilson found in his literary outsiders, in the pages of Barbusse, Camus and Hesse, was an agonized attempt to awake from an awful dream of mundanity and burst the imaginative horizons confining ordinary, habit-bound, religiously unthinking men. In his book *The Strength to Dream: Literature and the Imagination* (1962) Wilson brought together some very strange bedfellows, Chapter One juxtaposing H.P. Lovecraft, W.B. Yeats, Oscar Wilde and August Strindberg as collaborators on an "assault on rationality". In this book the realism of Zola, Faulkner and Graham Greene; the anti-novels of Robbe-Grillet and Nathalie Sarraute; the pessimistic avant-gardism of Beckett;

the scientific imagination of Wells and pulp sf; the fantasies of the Gothic imagination, and of Hoffmann, Gogol, Tolkien and De Sade; are all examined as flights of the imagination in protest against the narrowness of everyday perceptions. The different directions taken by the imagination are said here to reflect the very different values of the writers, but the flight itself implies a common rejection of the bland acceptance of mundanity. The exercise of the imagination becomes a kind of groping for some higher and better purpose in human existence. Sf, Wilson claims in this book, is mostly badly-written and cannot stand up to ordinary methods of literary criticism save in one or two exceptional cases, but it all has an essential virtue which no amount of literary incompetence can take away: it is a spur which urges us to grasp potentials which lie unrealized within us, to become citizens of the cosmos instead of residents of Ruislip.

In later books, most obviously *The Occult* (1971), Wilson informed us that these potentials really do lie within us, and that we might become supermen if only we could get a proper grip on ourselves. Our trouble, he insists, is *narrowness of consciousness,* which lulls us into "a state of permanent drowsiness, like being half anaesthetised"[3], in which it is relatively easy to feel frustrated by our inabilities, but difficult actually to do much about it. He promises us, though, that once we understand "the mechanisms of consciousness", and can cultivate the "Factor X" which lies latent there, the universe will *really* be our oyster.[4] We have, of course, heard this promise before. L. Ron Hubbard promised it when he invented Dianetics and Scientology; and John W. Campbell jr. promised it during the *psi* boom of the 1950s, in his lurid editorializing, in the fiction which he bought for *Astounding/Analog,* and—it has recently transpired—in the voluminous letters which he wrote to his authors and friends. It is perhaps nôt surprising, therefore, that we now find in Wilson's work a strategy of popularization very similar to one which has also been employed—as writer and messiah—by Hubbard and—as editor and *agent provocateur*—by Campbell.

What has happened to mankind in *Spider World* is a kind of well-deserved fall from grace. We failed to reach our true potential while we had the chance, wasting ourselves in war and luxury, and we paid the price when the miraculous comet gave spiders their chance. Spiders, the plot alleges, already make use of the psychokinetic power of their tiny wills, but subconsciously, in directing flies into their webs. Blown up to giant size, their will-power is marvellously increased, and they easily subdue men, who have concentrated all their efforts on the power of their hands. Because of this sin, we deserve to be enslaved by the spiders, who are quite morally entitled to use us as food (it is, after all, merely their nature—though another datum conveniently excluded from the info-dump is how Wilson's spiders, unlike the ones we know, can take in unliquefied food). The spiders are not all bad—and the bombardier beetles turn out to be scrupulously fair-minded after their fashion—because the essential patient passivity of their fundamental nature means that they do not generally go in for wars and suchlike.

It is clear even from volume one of this saga that men will release themselves from the yoke of slavery only by cultivating will-power to go with their technological handiness, thus becoming whole beings, unlike their old selves or the spiders. The only thing which remains in serious doubt even at this stage is what will happen to the spiders. The pulpish scenario suggests that gung-ho genocide is the outcome to aim at, but we have already seen enough good words put in for them legitimately to harbour the suspicion that man and spider might be able to strike a better balance, and achieve a symbiosis which transcends

the present parasitism. The way that Niall's brother Veig makes things much easier for the family by domesticating wild insects seems to be preparing the ground for an eventual pluralistic solution by which men, insects and arachnids can combine their different modes of consciousness for the mutual good. The Spider Lord's current resemblances to Ming the Merciless and the Mekon may only be a blind. I must confess that I hope that things will go that way—in these liberal times the reckless speciesism of pulp sf is surely as outdated as its casual sexism—but I remain worried (for one thing, Wilson's sexism is as cavalier as anything one might have found in *Startling Stories).*

A cynical observer might suggest that there is a certain irony in what Colin Wilson is trying to do in *Spider World.* In earlier works he joined the ranks of those apologists who could not be content with the condescending judgment that sf consists of "fairy stories for adults who have failed to outgrow fairy stories". When he first began to write sf stories, therefore, he was careful to pack them with lots of heavy stuff suggestive of more respectable literary relationships and existentialist *chutzpah.* He ran the risk, though, of lending credit to the sceptical argument that all his existentialist waffle and studied support for parapsychology was just part and parcel of the sf bag—i.e., "fairy stories for adults who have failed to outgrow fairy stories". This will-power of *Spider World* is difficult to see as anything other than the magic power of wishing, and one might easily be prompted to ask whether, if Colin Wilson wants us to take this even half-seriously, we should take seriously anything else he has ever said. L. Ron Hubbard has surely done much the same thing—while he was invisible to his followers they might just about have been prepared to believe he was a kind of superman, but who in the world could possibly believe that of the hand that penned *Battlefield Earth?*

I have credited these observations to a hypothetical cynical observer because I do not entirely agree with the position. I do not believe that sf consists of fairy stories for people who have not outgrown fairy stories. For that matter, I would not want to be condescending about fairy stories either. I cannot believe, though, that the real merits of science fiction include the ability to tempt us into the development of some mysterious Factor X that will make us all supermen and save us from the possibility of becoming slaves of the death spiders. For this reason, I have mixed feelings about *Spider World.* If I am invited to take it seriously, I simply cannot; it really is too silly. If I am asked *not* to take it seriously, but only as a mere entertainment, then I will admit that it has a certain rough-hewn charm, like "Mad Planet" or *Star Wars,* but I will persist in regretting that it has not much of the authentic merit to be found in good sf: it is low on originality, has a sprawling and ungainly plot, and it has not yet extended the horizons of the imagination at all. I still have hopes of the Spider Lord, though, and there may yet prove to be more things in this heaven and earth than I have dreamt of. I have a feeling that we have yet to meet the bees.

Notes

1. Wilson, Colin: *Science Fiction as Existentialism* (Hayes: Bran's Head, 1978), p.2.
2. *ibid.*, p.4.
3. Wilson, Colin: *The Occult* (London: Hodder & Stoughton, 1971), p.10.
4. *ibid.*, p.579.

Letters

Dear *Foundation,*

. . . Comment on the Colin Greenland interview with Bill Gibson (*F*36). Indeed, Gibson sits well with the British liking for a fiction of surfaces (like Ballard's), but it ain't so that Gibson "fooled the literalists, the scientists" about his knowledge of computers. I published comments two years back pointing out that *Neuromancer,* whatever its excellences, doesn't show much comprehension of computers or artificial intelligence. Also, it depicted a future which resembles next week a lot more than it does mid twenty-first century. (Does anybody really think the personal computer will be the enduring image of a truly computerized society?) But this is *not* to detract from the cleverness of Gibson or, of course, from using all possible tools to hack away (pun intended) at the future . . .

Gregory Benford *Irvine, California*

Dear *Foundation,*

David Lake is clearly right to conclude, in his account of C.S. Lewis's factual errors (*Foundation* 36), that most of these errors cannot be "mentally amended". We simply have to bear with them, and to place the action of his sf trilogy in an alongside world where the laws of physics are different. Lewis was indeed, and quite self-consciously, writing the sort of science fiction that a mediaevalist would write, an exploration of the literary and anagogical landscape. Sometimes the symbolism does obtrude: since Ransom is not haemophiliac there seems no good medical reason why the wound in his heel should continue bleeding (*Perelandra* pp.25, 173: Pan edition; *That Hideous Strength* (Bodley Head, 1945) pp.173, 457)! But Lake also, and I think unfairly, attributes to Lewis some quite extraordinary theological errors. "He is trying to revive", says Lake, "the primitive belief that God is out there; but, as the first cosmonaut Yuri Gagarin noticed, he is not. Space is space, black and deadly; it is not, as Lewis would like to believe, Heaven." And again: "symbolically, Jupiter is God".

But Ransom is quite well aware that exposure to "space" would kill him, even if "by an excess of vitality" (*Out of the Silent Planet* p.172: Pan edition). And the hrossa are "well aware that Jupiter is uninhabitable at least by animals of the terrestrial type; and they certainly have no pagan idea of giving local habitation to Maleldil" (*OSP* p.189). Gagarin's ignorant and silly assertion that there was no God in outer space presupposes that "God", or "Maleldil", names a spatially locatable entity whose immediate environment would be physically hospitable to terrestrial organisms. This is not a "primitive" notion, but a thoroughly stupid one, and Lewis was certainly not guilty of it even in jest. Ransom's transformed sense of what "space" is does not require him to believe any counterphysical claims about the healthfulness of breathing vacuum (nor would it matter much if he had realized the carcinogenic effects of ultra-violet!). That the world is dangerous is an element in proper piety: the hross Hyoi speaks of "Balki the pool, which is the place of most awe in all worlds . . . Because I stood there alone, Maleldil and I, my heart has been higher, my song deeper all my days. But do you think it would have been so

unless I had known that in Balki hneraki dwelt? There I drank life because death was in the pool" (*OSP* p.88). There are many places, like the underland of Perelandra, that are "not for man" (*P* p.170), worlds "which have never from the beginning been subdued to the sweet humiliations of organic life" (*THS* p.403). How could one possibly infer from this that God is not to be found there, that such worlds and places must be forever seen as unmeaning, alien or hostile? Consider the shift in Ransom's vision, once the Unman is finally dead, of the many-legged, segmented monster that crawls after him: "Where had the horror gone? The creature was there, a curiously shaped creature no doubt, but all the loathing had vanished clean out of his mind . . . All that he had felt from childhood about insects and reptiles died that moment: died utterly as hideous music dies when you switch off the wireless. Apparently it had all, even from the beginning, been a dark enchantment of the enemy" (*P* p.168). It was a similar shift "from the conception of Space to the conception of Heaven" (*OSP* p.182) that Lewis hoped to effect; neither conception is a merely physical and value-neutral one.

Professor Stephen R.L. Clark *University of Liverpool*

Reviews

Trillion Year Spree: The History of Science Fiction

by Brian W. Aldiss, with David Wingrove (*Gollancz, 1986, 511 pp, £19.95 hbk, £9.95 trade pbk)*

reviewed by Roz Kaveney

It is the moment that makes the validity of a piece of journalism. Stale news is for the most part both bad news and dull news. There is a tide, and all that . . . *Billion Year Spree* was a book of its moment and for that reason a worthwhile one. At that point, there was a need for some general survey and scholarship was still going through the slow motions of producing e.g. the Nicholls and Clute *Encyclopaedia*. Aldiss was in the first flush of feeling himself to be a literary gent as well as an sf person, and there was still enough tension between those roles that an energy could be brought to bear by him that makes much of the book exciting still, though mainly as a period piece. In particular, the book held encoded a hidden plan of action: in retrospect, we can see most of Aldiss' extended work in the sf field during the succeeding decade more or less clearly foreshadowed. In the critical work he described themes as crucial; in the novels he worked comprehensively and conscientiously through them, and through some specific visions and mythopoeic moments that he saw as of equal importance. His intuition that there was in Thomas Hardy a sensibility of real relevance to sf saw fruit in *Helliconia's* long vistas of historic irony; the selection of a moment from *Hector Servadac* as his example of why Verne is still readable and important was to be echoed by a precisely similar moment of suddenly triggered freezing at one of the climaxes of *Helliconia Spring*. Some of the insights that Aldiss arrived at were either valid, or worthwhile enough versions of the truth as to be the next best thing; notably, and none the less so because it has become a cliché, his

perception that *Frankenstein* is more or less the crucial terminus a quo for anything that can legitimately be called sf in the modern sense. From many points of view, the attempt to play down the pulp tradition was less laudable, but could be seen as a tactical attempt to cosmeticize the genre for the *Guardian* market: and it was managed expeditiously and without serious unfairness to e.g. John W. Campbell. Most of the individual judgements on writers, most of the brief readings of texts, were solid enough that one put aside vague doubts about others. And an important part of the feeling about *Billion Year Spree* within the sf community, even within the scholarly subsection of that community, was that to enter more than minor cavils would be unpatriotic, like not standing up for, if not the National Anthem, *Land of Hope and Glory*.

Many of these original virtues are still present in the rewriting of the text, and, particularly in the earlier sections, there are some new felicities. The account of Mary Shelley's *The Last Man* is a worthwhile pendant to the account of *Frankenstein*; the material on the later novels of Wells is solid and interesting in its rediscovery of Wells the teacher. In the section dealing with the sf of the period since the original book, there are some witty demolitions of alleged giants, and some accounts of recent authors (Tim Powers, Lucius Shepard) that are perceptive and accurate in their praise.

The revision starts with a fundamental problem, and that is one not entirely anyone's fault; it is quite simply that our expectations of the reliability and comprehensiveness and quality of a book go up geometrically when it takes on a second author. In spite of its subtitle—The (not A, The) History of Science Fiction, *Billion Year Spree* was a personal view and could be treated, as such, with a certain indulgence; for Aldiss to come back to it thirteen years later, with the scholarly reinforcement of David Wingrove, and the announced intention of producing something not only up-to-date, but also comprehensive and authoritative, in the full knowledge that the sf critical industry has not been idle in the interim, is to submit to the judgement of a higher and a more rigorous court.

The original volume had a distressing tendency to pious waffling: Aldiss has always had in his non-fiction a slight tendency to go on automatic and slip into the generalities of editorials. There are too many sentences in both versions like "We can only anticipate a deepening of this mood as the century draws to what we hope will be a merely ambiguous close." This sort of thing is just less forgiveable the second time around, and if the authors did not realise this, their editor should have done. What a book like this needed most was a lot of clear thinking about its ways of proceeding, and instead there is too much burble.

Reluctantly, the book acknowledges that from the '20s onwards most of the work to be discussed comes from within the mainstream of the pulp tradition. Because it does so reluctantly, it fails to make sufficiently clear something which is significantly truer for writers within that tradition than for any group of writers of comparable size elsewhere. Sf authors are not, are even less so than others, windowless monads, producing their work in mental isolation, unaffected by each other. Both versions acknowledge the influence of a few magazine editors; fandom and writers' conferences are mentioned in passing. This is not enough. We know from autobiographical sources the extent to which some of the key writers of *Astounding* in the '40s interacted, most notably when Heinlein jobbed his buddies into the bit of the war effort he was running. We know the extent to which Pohl and Kornbluth and Knight affected each other as teenagers, of the existence of affinity groups like the Futurians and the Hydra Club, of the extent to which social and literary

and political and sexual loyalties meshed among the New York based *Galaxy* writers. The book gives us almost nothing of this. When it comes to deal with a socio-literary nexus which to some extent involved Aldiss himself, it comes closer to acknowledging the extent to which *New Worlds* was the product of an intense set of relationships—people sat around arguing about Burroughs and Paolozzi, while in the middle of them sat Moorcock at a typewriter, hacking out another sword and sorcery novel to pay the printer's bill. Most of the significant periods of the history of sf have been exciting to live through for the people who were writing it, and this book does too little to convey that.

Many have argued that much of the sf of the '70s and '80s has been adversely affected by the authors' regular attendance at Clarion and the Milfords, by their regular submission to the judgement of their peers: that there are, pervasively, a sentimentality and a pursuit of—not so much the mot juste as the word that will bring the approval of one's peers—that come from too much discussion, too much sharing of a collective vision of what stories ought to be like. It is not that Aldiss and Wingrove should necessarily have accepted this theory of what is wrong with recent sf; but they might, they should, have discussed it. The later stages of both versions of the book, but especially of the latter, are far too like a catalogue as they stand. Using a methodology which took such matters as authors' careers in fandom, or involvement in the Society for Creative Anachronism, might have got hands dirtier with fact, and would have made for a more readable as well as a more useful book.

Throughout the book, the authors insist far too much on a distinction between science fiction and science fantasy on the one hand and fantasy on the other. This distinction is not maintained when the authors happen to want to talk about writers they happen to like; in the accounts of William Hope Hodgson and Tim Powers, writers where the distinction hardly operates at all, Aldiss and Wingrove proceed as if their general practice did not exist. And that general practice is to ignore that portion of authors' work which falls on the wrong side of the fence; this means, for example, that John Crowley's longest and most achieved work *Little, Big* is left out of the discussion of his work, in spite of its development of *Engine Summer*'s treatment of memory and in spite of the fact that the near future setting of the greater part of it would have allowed a treatment under a liberal interpretation of the authors' rubric. To discuss the work of Fritz Leiber as if *The Wanderer* were the highpoint of his fiction after *The Big Time* and to neglect such important novels as *The Swords of Lankhmar* and *Our Lady of Darkness* is to do his reputation a considerable disservice and to ignore the importance to his work of essentially theatrical structures, and in the latter case, of the mythicised autobiographical element which dominates much of his later short fiction, fantasy and sf. And to discuss Stephen King almost exclusively in terms of those of his horror novels which can be fitted into sf is merely ludicrous.

This tendency to fragment author's work is also visible in the handling of those authors whose careers have continued in the period subsequent to the publication of *Billion Year Spree*. What usually happens is that rather than writing a completely new account, to be inserted in the place of the original, the original is allowed to stand and a second instalment placed later. Given that one of the book's professed usefulnesses is as a text for academic study of the field, this is a discourtesy to the students who will actually be quarrying the book for handy resumés. More importantly, it is to assume that the date 1973 is of some kind of crucial importance in the biography of writers other than Aldiss himself, a break in continuity.

The accounts of authors are too safe; it seems that it is only permissible to psychoanalyse authors if they are dead and even then only if they are a bit non-U. We get the stock account of Lovecraft as an ineffectual neurotic pouring his fear of Life into horror fiction. We get no such reductionist attempt to explain, say, the icy élitism of James Blish. Too often, matters are mentioned as casual gossip which deserve fuller treatment or none at all. Both authors seem unaware that Arthur C. Clarke's "Astonish Me" is, by being an englishing of Cocteau's "Etonnez-moi", a boast of the transference of the cutting edge of our culture from the avant-garde arts to science and technology. In the stress laid on the importance in Clarke's work of the theme of guardianship, there is no development of the biographical sources of the emotional strength that that theme gives much of his work. Sometimes these failures become authentically unfair; if one is denouncing Heinlein's later doctrines, it is worth recording, necessary to record if only to level the charge of inconsistency, that sense of loyalty to the sf community which involved him in private charities, notably and improbably to Theodore Sturgeon and Philip K. Dick. And the fact that the former instance involved not merely cash, but some ideas for stories—and for Sturgeon stories, not Heinlein ones, stories that in some cases Sturgeon then wrote—says some interesting things about the aforementioned affinity relationships and about the nature of originality in the field.

The determination of the authors to make raddled old sf respectable leads them at times to take far too seriously the idea that sf is a literature of ideas, rather than a literature of conceits, conceits around which workable commercial stories can be constructed, conceits which often have some connection with ideas. Because much sf does not particularly match up to their prescriptions, the authors pursue error mercilessly, and often unfairly. There is plenty that can be said against the *Foundation* series, but not "Most of the stories in the *Foundation* series depend on individual action . . . and appear thus to run counter to pyschohistorical theory." In the first place, try, just try, to imagine a successful pulp story which did not centre on individual action. In the second, Asimov's imaginary psychohistory is presumably like other theories—Marx, Toynbee—in regarding individual actions as the necessary medium whereby mass forces impinge. In the third, at the end of the stories themselves, Hari Seldon appears each time and, without mentioning individual acts, *tells* us what has happened on the macroeconomic level. But psychohistory was never an idea: it was a conceit which can be defended as if it were an idea. Actually, there is something a deal closer to an idea proper in the future history of Poul Anderson, which gets ritualistically denounced. Anderson is at one level involved in competing for beer money with cracking good yarns, but his framework is that of a civilisation's rise and fall according to a model drawn intellectually from Toynbee, if often emotionally from Kipling. Again, his stories are based on conceits, but they are undoubtedly the conceits of a man who has ideas, and it is unworthy to dismiss him without acknowledging this. I am hardly besotted with the sf of the conservative Right, but in thinking them daft and less than competent as writers, I have never thought they were necessarily stupid: cheap jibes about redskins among the stars, at a jawbreaking formality of courtly speech which Anderson coherently believes a common feature of particular stages of civilised development, merely darken counsel.

Oddly, the authors, and especially David Wingrove, try to deny that sf has ever, before the rise of feminist sf, been especially political. There are two answers to this. One, the simpler, is that, especially at the present time, there is and always has been a recognizable,

fiercely technophile, fiercely nationalist sf being produced and that Heinlein is not its major proponent, merely one of its older ones. The work of Niven and Pournelle is a solid political programme—ally with anyone who will help us beat the Enemy (gallant Boers in *Footfall*), put down anything—ecological movements, welfare, feminism—that might stand in the way, worship the powerful and the rich and the space race and arms. Not all of the fiction which plugs this line is especially bad—Donald Kingsbury's *Moongoddess and the Son* has much charm in its busy way—but it is all of it about as political as you can get. And because sf is an irresponsible literary form, in which there is little sense of having to be even-handed in your development of your conceits, these politics can come across as dream revenges of a kind rather more unpalatable than feminist sf writers denouncing men and not giving David Wingrove little gold stars for his doubtless admirable sharing of parenting. (His personal statement about the unfairness of feminism manages to produce one of the more blush-making and irrelevant footnotes in literary history.) A lot of sf has been political in the assumptions it made and did not examine—assumptions about ethnicity, and sex, and class; and it is not introducing politics into a hitherto apolitical sphere to ask questions about this.

It is particularly not so when one of the glories of sf as a form has been the capacity the genre has to examine itself. A lot of sf stories, both at the level of conceit and at the level, occasionally, of serious and politically informed comment on the content of those conceits, take off from one author's reaction to another author's earlier work. Sometimes this can be clearly mapped and is a simple one on one reaction; Joanna Russ's *We who are about to . . .* is a reaction to many stories of gallant survivors of spaceship crashes building civilisation in the wilderness, but most specifically to Randall Garrett's virulently misogynist novelette *The Queen Bee,* in which the male survivors lobotomise the female survivor who, to ensure her own dominance over the colony, has murdered the other women. This process of constant polemical echoing—you could call it dialectical metonymy—is most especially a feature of the comparatively tight field of American genre work; the reaction of a lot of the British has been to go back to basics and pretend that earlier handlings of a piece of material did not exist. It is unfortunate that Aldiss and Wingrove did not transcend this national tendency in their methodology.

But these are disagreements about method, and may be dismissed by the authors as not relevant to the book they did write as opposed to others that they might have chosen to write. But if what is on offer is a piece of highgrade journalism without too much analysis, then at least we are entitled to expect accuracy. At various points, both versions of the book fall down on this count, most especially in the readings of individual novels and stories. Lorenzo Smythe, hero of Robert Heinlein's *Double Star* is characterised by Aldiss as "a pathetic failure of an actor". This is simply inadequate. At an early stage in the book, Smythe is given the sort of moment which standardly reveals a protagonist as a competent Heinlein hero when he disguises an ally by taping his shoulders and putting something in his shoes, thus altering a characteristic spacer's walk: at the point when Lorenzo reveals his true identity to the Emperor of the Solar System, Emperor Willem, whose function in the book is to act as a norm of good sense, responds with an encomium on past performances. A failure Smythe undoubtedly is at the novel's start, but a man of real talent, flawed by his competence's being entirely ego-directed. When he discovers a cause, he becomes a *proper* Heinlein hero. Or rather a proper Heinlein hero of the early and middle periods; part of the decline of the later Heinlein has been the extent to which

his later heroes have traded idealism for egoism by regarding them as synonymous. Part of what makes the work of the Militarist Tendency intermittently palatable is that in Anderson and Dickson at least there is an assumed background ethic of responsibility to larger groups to which the hero's whims take second place. These are broad matters to draw from a one word misstatement, but the fact is that it is a misstatement and one which has been allowed to stand. Later in the same paragraph, Aldiss mocks the portrayal of politics in *Double Star,* its combination of elaborate democratic formalities and backstairs gangsterism. To anyone who has paid attention to American politics as they are, or even read the documentary thrillers of George V. Higgins, this is merely naïve. At that stage in his career, Heinlein did not always sentimentalise his country.

Some of these errors come from the necessity to be concise in synopsis, but this does not excuse them, particularly not when the misstatements are unambiguous and serious. In the summary of James Blish's *A Case of Conscience,* various crucial points, both biological and theological, are fundamentally obscured. The Lithians are an intelligent race, somewhat like the warmblooded dinosaurs of recent theory, but one in which ontogeny recapitulates phylogeny in the course of a single lifetime, so that each individual has spent an appreciable time as a mindless fish, amphibian and reptile; to describe them as amphibian merely is accordingly a gross oversimplification of a developed biological conceit. Rather more importantly, the theological point is, in the first place, that the Lithians are unfallen beings without sin, but far from being, as orthodoxy would dictate, perpetually in the living presence of God, entirely without a concept of him, and, in the second, that to take this as meaning that they are accordingly a creation of the Devil is to fall, as the Jesuit Ruiz-Sanchez acknowledges, into the blackest heresy. He has the option of refusing heresy by refusing to acknowledge the evidence of his intellect, but what hero of a pulp sf story could ever be content to run beneath the skirts of Holy Mother Church? Blish was making a point about the inadequacy of the sf tradition to handle certain problems; being a gameplayer, he jerrymandered a solution in the expanded version by allowing the escape clause possibility that the Lithians do not exist, that they are a diabolic illusion. He also plays a game in the matter of the final planetary explosion; this may be a Satanic response to Ruiz-Sanchez' exorcism, but it may equally be a byproduct of his colleague's Faustian tinkerings. The account given here robs, by obscuring these points, Blish's finest novel of much of its point and intellectual elegance; to fail even to mention the distinction between the long and short forms of the work is to miss remarking on the dexterity with which Blish solved the intellectual problem he had set himself. It is also to neglect a classic example of the positive aspects (in the matter of genuine second thoughts) of the tendency of the sf field to be overpopulated with expansions and sequels.

The chapter 'How to be a Dinosaur' does a fair to reasonable job of shooting some senescent fish in their luxurious barrels, makes the case for the defence of Frank Herbert's later work with an eloquence only partly invalidated by the omission of serious discussion of those later novels not part of the *Dune* cycle and which present some of the same doctrines in a manner less palatable because of a less hieratic style and a less distant setting, and gives decent, if limited and half-hearted, accounts of the later work of Pohl and Clarke. What is oddly missing from this account of careers which underwent significant development in the '70s and '80s is a discussion of the career of Brian W. Aldiss; in the original version of the book, this was a forgiveable piece of modesty, but in the recession it becomes something of a failure. After all, had not Aldiss picked as his

assistant a man well-informed and enthusiastic about that career? The serious point is that any account of British sf in this or any period which neglects the work of Aldiss is simply inadequate, and that for once modesty was not called for. He is probably—with the only possible exception of Clarke—the British author who has most influenced the American genre with his whimsical, semi-parodic version of the far future and his capacity for looking with a jaundiced eye at the likelihoods of the foreseeable future. *Helliconia* in particular demonstrates what could and should be done with one of the most particularly American forms of sf—the trilogy set on an elaborately set up planetary background. His has been an exemplary and influential career, and omission of it from the book's canon is a serious mistake.

The identifiably Wingrovian sections of *Trillion Year Spree* have an intermittent daftness that is all their own, combining rather dodgy critical judgements with incoherencies and ambiguities of expression. Too often, we find sentences like "If there was one major flaw to *The Shadow of the Torturer,* it was that it did not so much end as fade out, awaiting the second volume. The same could be said of Proust's vast work, *A la recherche du temps perdu.*" In the first place, the first sentence is simply not true: *Shadow* ends as Severian struggles through the gates of the city; this, like the endings of the other volumes, is the end of a particular phase in his career, and as such is a natural point to end a particular volume in a work envisaged as a unity but issued in four volumes. To compound this, Wingrove subsequently more or less contradicts himself by admitting as much. In the second place, the reference to Proust is both pretentious and obscure; reference to its vastness is otiose if we have heard of it at all: amid the plethora of literary reference in *The Book of the New Sun,* references to Proust, oddly since it is a book about memory, are significant by their absence, by comparison with the clear references to Dickens, Kafka, Borges and the Bible. In the third place, the point of the second sentence is presumably that individual volumes of Proust fade out rather than end, again a case that needs demonstrating rather than asserting. What is actually said though is that the whole work does this, "awaiting the second volume". Clearly I am less informed in the matter of sequels than David Wingrove, and there awaits somewhere, perhaps in the void or among the Platonic forms, *Return of Son of Remembrance of Things Past.*

It was never the brightest of Aldiss's original ideas to try and at least mention practically every author in the field, often in single characterising sentences, sometimes in lists. The continuance of this practice is particularly daft, given the expansion of the field between versions; it also produces some memorable Wingrovisms, whether in the form of mentions which tell us nothing: "William John Watkins (not to be confused with the Walter Jon Williams of *Ambassador of Progress* (1984)) produced an interesting quirky work with *The Centrifugal Rickshaw Dancer*" or in the form of discussions which consist of buzzwords grammatically, but not meaningfully, arranged: "The textures of *Golden Witchbread* are fantastic, but its substance is acutely realistic." In a rebuke to publishers for the systematic production of work which fills narrowly defined genre expectations, space operas and sword-and-sorcery, Wingrove lists and ritually sneers at a number of titles, ignoring the fact that of the authors listed, Barbara Hambly at least is well out of the common rut of her chosen form. It is bad manners, both social and academic, to sneer at authors one has not read; it is even worse manners to condemn an author in passing without ever making out a proper bill of complaint. Connie Willis rates three mentions—"Fire Watch" is described as "over-rated" by comparison with Bruce Sterling's

"Swarm", though not otherwise described; Lucius Shepard is praised for being at odds with "the wave of patriotic sentimentality affecting new writers like Connie Willis"; and she is included in a list of current writers in the magazines. One does not have to think highly of Willis's work to find this a bit much in what sets out to be a chronicle of record and a standard textbook. I have read the collected short stories of Connie Willis, and patriotic sentimentality was not even low down on the list of faults I found there; but someone had to be contrasted unfavourably with Shepard, and I suspect it was a case of "Round up the usual suspects".

The selection of authors for praise and blame in this sort of section is always in some measure a matter of taste. The exclusion from mention in the section on Australian writers of Cherry Wilder is a rather glaring omission, and the restriction of discussion of Michael Swanwick and George Alec Effinger to mentions, the omission of Carter Scholz, James Blaylock and Howard Waldrop, are odd given the attention paid by comparison to Michael Kube-MacDowell and Sharon Baker. Kim Stanley Robinson is read some stern lectures on literary pretensions, while Philip Mann and Paul O. Williams are treated with what many might consider undue indulgence. But this sort of idiosyncracy is endemic to this sort of survey and *Billion Year Spree* had similar faults with its mere mention of writers as important to the American magazine tradition of the '60s and later as Avram Davidson and R.A. Lafferty. Important and respected writers both, with their fair share of Hugos, Nebulas and inclusions in best-of-the-year anthologies; both reasonably prolific writers of novels; but both of them are baroque triflers, with at least one foot in pure fantasy, and at odds with the serious intention that Aldiss wanted to see in sf, and so they got shuffled out of the record. It is worth recording at this point, various other overly brief discussions in the earlier sections of the book, notably those of Algis Budrys and Joanna Russ.

In the later sections of *Trillion Year Spree* there are clear factual misstatements; it is correct to say that Doris Lessing had been writing sf-influenced work for some time before *Canopus in Argus,* incorrect to say that this started with *Briefing for a Descent into Hell* (1971). The last of the realistic political Martha Quest series *The Four-Gated City* (1969) moves into a devastated future for its last chapters. It is not to Tudor, but to late Stuart times, that the hero of Tim Powers's *The Anubis Gates* goes back briefly from the early nineteenth century in which he has been marooned. It is not necessary to multiply examples of any of these faults further to ask by what right, and with what amnesia about pots and kettles, the most common adjective applied to authors in the last chapter of this book is "flawed".

It was never then especially plausible that *Trillion Year Spree* would live up to the expectations its publicity asked us to have of it. The only way in which so vast and inchoate a field as sf could be brought into some sort of manageable shape would have been to apply the sorts of models drawn from sociology and intellectual history that I have suggested in earlier paragraphs, and these would only really have served to describe the mainstream of the American tradition, and are at odds with the purely literary approach of Aldiss and Wingrove. What is almost intolerable is the arrogance whereby earlier faults have been perpetuated, the elevation in so many of the critical judgements of prejudice over good sense. It was not to be expected that this be a flawless book; it might have been hoped that it would be a less amateurish stab at the subject. Aldiss mentions his own short definition of sf—"Hubris clobbered by nemesis". This will adequately serve as a short critical judgement on this ill-conceived, ill-mannered and inadequate book.

Dreams of Dark and Light: The Great Short Fiction of Tanith Lee
(Arkham House, 508 pp, $21.95: foreword by Rosemary Hawley Jarman, interior illustrations by Douglas Smith)

reviewed by Sarah Lefanu

Tanith Lee's skills as a story-teller and as a powerful prose writer are wide-ranging, and this collection, which includes works of fantasy, science fiction and horror, shows her at her best.

The themes familiar to readers of her epic novels, such as *The Birthgrave, The Storm Lord* and their sequels, appear here in her short fiction. Metamorphosis is a constant theme: the bizarre transformations that feature in so much of her work, the sliding from human to beast, from dead to undead, from demon to mortal, have a disturbing power that is perhaps intensified by the structural constraints of the short story. In "Magritte's Secret Agent" the young narrator, standing by the wild night ocean, "sigil of all things metamorphic", sees for a split second the glorious transformation of a crippled young man into a creature of myth. It is, for her, the realisation of a dream, "to tear the veil, to see". This, I think, is what Lee does in her fantastic fictions. She uses the convention of certain forms of popular narrative, such as fairy tales, with their archetypal structures of opposites—the old and the young, the white and the black, the ugly and the beautiful—and in the moment of transformation from one to other she tears the veil of differentiation to reveal the wonders and mysteries of the unconscious depths.

The latent power of fairy tales, or perhaps it is their protean topicality, has always been recognised by writers working in the fantastic mode. It is not coincidental that in recent years women writers, such as Angela Carter and Josephine Saxton as well as Tanith Lee, have turned to fairy tales. It is precisely that mixture of apparently rigid opposites—good and evil, female and male—with the transforming power of magic that offers scope for the exploration of sexuality and desire. Moreover their folkloric, collective nature of fairy tales survives their male chroniclers so that women do not have to contend with the weight of a male tradition.

Tanith Lee's handling of traditional fairy tales, as in "La Reine Blanche" and "When the Clock Strikes", is elegant and ironic. She exploits the directness of the oral tradition from which they come and brings to such often told tales a melancholy morality that is all her own. A similar sense of sad and ancient magic imbues "Because Our Skins Are Finer", the story about the seal people and their human hunters which opens the collection. These, and the tales set in India, the remarkable "Bright Burning Tiger", a tour de force of cerebral detection and emotional catharsis, and "Foreign Skins", exert a powerful narrative grip. Elsewhere, as in "Wolfland", in which the werewolf powers are handed down from grandmother to granddaughter, Lee exhibits a fierce and gleeful humour. This story is as irreverent towards the grim patriarchs of fairy tale as "Odds Against the Gods" is towards all gods and their servitors.

The science fictional stories include "A Day in the Skin (Or, The Century We Were Out of Them)", a sombre reworking of the light-hearted body-swapping of *Don't Bite The Sun* and *Drinking Sapphire Wine*. Others of the stories are echoes of longer works: Feroluce in "Bite-Me-Not Or, Fleur de Feu" is, as might be expected from the name, not unrelated to Lee's tragic hero of the "Flat Earth" series, Azhrarn, Prince of Demons.

Two of the *Cyrion* stories appear here, "A Lynx with Lions" and "Cyrion in Wax". Both are gloriously intricate in plot, and both magical—in all the best senses of the word—in atmosphere. They should send anyone who is not familiar with it hurrying to the novel, which reflects in its overall structure the elegant intricacy apparent here. These two pieces of high fantasy and the wonderfully sinister "Sirriamnis" show the quality of Lee's prose style. It fulfils the stringent demands made by Ursula Le Guin of fantasy writers that their prose should be "exact, clear, powerful". Le Guin execrates the fantasists who use flabby language to hide faked feelings with their tangled archaisms ('I shall give it to she to whom my love is given') and their "fancy words" ("Eldritch. Tenebrous. Smaragds and chalcedony . . . the infallible touchstone of the seventh-rate: Ichor.") She holds up the prose of E.R. Eddison as an example, saying, "Visually it is precise and vivid; musically . . . subtle and very strong. Nothing in it is faked or blurred; it is all seen, heard, felt." ("From Elfland to Poughkeepsie" in *The Language of the Night,* ed. Susan Wood, Putnam's 1979.) This describes exactly Lee's best fantasy writing. "Sirriamnis" is a very accomplished story. The narrative voice is that of an aging male slave in a Greek household. What he sees and describes is from another world, that ruled by Tanit, Phoenician goddess of the moon and of night, "the daughter of that ancient god who drank the blood of small children, or else mouthed them in fire". It is a fine example of Tanith Lee's own sorcerous powers. Through her carefully crafted prose she effects a metamorphosis that parallels those she writes about: the mundane is revealed as the marvellous, the light of day as tinged with the dark of night.

An essay by Sarah Lefanu on Tanith Lee, "Robots and Romance: The Fantasy and Science Fiction of Tanith Lee" is forthcoming in Sweet Dreams, *ed. Susannah Radstone: Lawrence & Wishart, Spring 1987.*

Reader in a Strange Land. The Activity of Reading Literary Utopias
by Peter Ruppert (*University of Georgia Press, 1986*)

reviewed by Frank Dietz

Peter Ruppert's study of the role of the reader in literary utopias comes as the latest in a number of attempts to re-evaluate the function of literary utopias. This genre, long criticized as boring and static, is now increasingly regarded as a form of literature challenging its reader's preconceptions in a radical way. "Seen in this light," Ruppert argues, "reading utopias can be an activating experience, an experience that undermines our social beliefs, modifies our social values, changes us." However, Ruppert does not perceive literary utopias as calls for action or literal blueprints for a better society. Instead, he emphasizes the ambiguities inherent in this genre: while literary utopias criticize the reader's empirical world (leading to "cognitive estrangment", to use Suvin's term), they also reveal themselves to be too perfect, mere "no-places" that cannot become reality. The reader of literary utopias is thus left in limbo between a social reality unmasked as chaotic and corrupt and an unrealizable utopian dream. Accordingly, literary utopias lead to what Frederic Jameson has called "fruitful bewilderment", a heightened awareness of both the contradictions of our own societies and the impossibility of ever finally reaching Utopia.

Ruppert has devoted an entire chapter to the topic of "ambiguous utopias". An

ambiguous utopia (the term has recently been used by several critics, among them Bülent Somay in an article for *Science-Fiction Studies*), according to Ruppert, "cannot be objectively defined, surrounded by walls and presented as a static achievement". Instead, ambiguous utopias, such as Wells' *A Modern Utopia,* Le Guin's *The Dispossessed* (subtitled *An Ambiguous Utopia*) or Piercy's *Woman at the Edge of Time,* project the ambiguity inherent in all utopias on to the level of narrative. Utopia becomes a very elusive concept in these novels, a process rather than a structure. Ruppert emphasizes in this context that ambiguous utopias differ only in degree from their predecessors and that they represent "a vigorous effort to develop the open-endedness that is implicit in the structure of all utopias". Here, it seems to me, he overstresses the historical continuity of the genre. While both More's *Utopia* and Wells' *A Modern Utopia* invite this kind of critical reading, the majority of literary utopias (and Ruppert covers only a small sample in his book) does not do so. The re-emergence of "meta-Utopias" (G.S. Morson) in the 1970s marks more of a break than Ruppert is willing to admit.

On the whole, however, *Reader in a Strange Land* is to be greeted as a remarkable achievement. While reader-response-oriented approaches have been slowly gaining ground in utopian studies, this is the first study to center directly on this method. Ruppert's book is an important step in the right direction: away from mere taxonomies of utopian societies and towards a more pluralistic approach to literary utopias.

The Folk of the Air
by Peter S. Beagle *(Del Rey Books, 1987, 330pp.)*

reviewed by M. John Harrison

Joe Farrell, the central character, has a Volkswagen bus called in fun "Madame Shumann-Heink", because in this sort of book even the Volkswagens have names.

"You still don't understand," people are always saying to him, and no wonder because they never tell him anything they know. The result of such provincialism—equal to not signposting the village street because everyone who already lives there knows where to find it—is that he staggers along behind the event, never apprehending its significance until it is stale. The reader staggers along too, but he is only suffering from Beagle's major technique, which is to leave out the crux of a scene and tell it only in the *next* scene. This insult to proairesis, which at first seems only clumsy and demoralising, soon induces motion sickness, and finally becomes a shrieking bore.

Met coincidentally on the street, Julie Tanikawa, an old girlfriend Joe hasn't seen for years, turns out not only to be a member of the League For Archaic Pleasures, which holds mock Medieval tourneys and banquets, but also to know his old friend Ben, also a member, who just happens to be living with Sia, a minor goddess, whose millenial feud with Nicholas Bonner, a minor demon and her son, has just this minute been revived by the meddling Aiffe, an adolescent girl who hopes to gain power within LFAP (see above) by using Real Magic. I suppose synchronicity, like quantum-tunnelling, can't by definition be abused; but this seems a close-run thing.

It is also so irreparably domestic that by page thirty you are sure that Beagle has put into his book not only all his friends and his dog, but his friends' dogs, their old mum, and the man who services his Volkswagen bus too. To what end is not clear. Evidently he feels he owes them.

Either that or they are cheap suiting for the real subject of the book which, as he admits on page 271, is power.

Beagle sees power—personal, political, magical—as netted by rules half-spoken, a decency of use mimicked by the California'd chivalry and fair play of the League for Archaic Pleasures. "What I did for your friend," the goddess Sia says, after successfully exorcising some punter, "I did because the thing that happened to him was against certain laws." Central to the ideology of *The Folk of the Air,* God help us, is the warning that only bad guys cheat. For these purposes, adolescence is pre-defined as a powerless state, and "growing up" as the gaining of grace by learning to accept the rules which keep you powerless. In taking power by whatever means come to hand—especially by beginning to play her fantasy-role for real, which she does by magically importing into a League war-game some heavy freelance talent from the Wars of the Roses—Aiffe the teenage witch cheats. If you, as a secure adult, see this as only an apprentice solecism, one of scale and taste, you have definitely missed Beagle's point, which is that she *ought* to remain powerless. Why? Because, look, anyone can see, she has broken the rules by *taking* power . . .

The same old circularity that keeps the beggars under. No value is enshrined in the idea of chivalry. At its best it was a self referential system, a game not much different from medieval re-enactment in modern California, played by an insecure class. At its worse it was the enabling hypocrisy of that class, a sleight of hand designed to justify their control of serfs (of which there are a whole faceless lot in this book, bit-parts, squires, animals, and notably the women, who unlike unnatural Aiffe have elected to stay home and do the catering or sew the cute fancy clothes, and who at League banquets love nothing so much as a good gossip, while the men—guess what—get pissed and hit one another with pretend swords).

Fair play is not a value, it is a control mechanism. To find the pivotal value of *The Folk of the Air,* you have to look at its mythology, and at the narrative events the mythology generates, every one of which tells us, "What the learned virtues—method, technique, professionalism—are to cheating (witchcraft), the unlearned virtues—strength, beauty, talent—are to fair play (good magic)." Beagle's pseudo-knights follow not the Holy Grail but the genetic silver spoon. The good guys are large,

> Farrell's first vision of (Sia) was of a great, drowsy monolith standing above him, a menhir in a frayed bathrobe. (p.18)

and don't have to try too hard:

> Now (Aiffe) trudged through stillborn spells on stumbling feet, reduced to picking up handfuls of dirt and hurling them into the air . . . Behind her, Sia materialised slowly—lazily—out of the little showers of earth, *the way she arrived out of blood and black stone long ago.* (p.311, Beagle's emphasis)

The bad guys aren't just small and prone to acne,

> "I know who you are, anyway," he said to Aiffe. "You're Rosanna Berry and you have to take algebra over this year . . . and you still break out if you eat one candy bar and you still bite your nails." (p.290)

they're also technique-freaks:

> "You are a witch, a magical technician, and very good you are, too. But what I am has no more to do with magic than eating ice cream . . ." (p.306)

In fact Beagle seems to have a particular dislike of technique. Technique, he feels, isn't

playing fair. It isn't spiritual. As the League combat master says of one of his more promising pupils,

> "Your friend there, I'll teach him how to do a weapons pass, or how to use his shield in close work, and he'll pick it up faster than the rest of the class, because he's accustomed to thinking about technique. But frankly I wish he wouldn't bother with it. He'll just be learning how to do something; the better he gets, the more I'll get angry, and he'll never understand why." (p.151)

I'm not sure I would, either. Never mind. Technique, we see, doesn't work anyway: Aiffe's fifteenth-century professionals are forced to slope off when faced by the LFAP weekend berserker (a teacher of Icelandic and Related literature so sloppy that when he dresses up as a Viking he wears a helmet with horns on it):

> . . . they must surely have known the terror of the berserker in their own time, and . . . it was this that had routed them, and not so much the fact that Ben knocked the Venetian briefly senseless . . . then caught the Norman full amidships . . . and drove him out through the gate like a croquet ball. (p.257)

It's authority that counts, even if you have only a plastic longaxe to wave round your head. In the fifteenth century they could spot that right off.

The Folk of the Air occupies three hundred pages with fifty pages worth of material. The magical exchanges, some of which are quite entertaining and exciting, could have been presented raw, and all the rest, since it enlightens us about neither magic nor human beings, all the domestic stuff, all the California-speak relationships, the indefatigably coy descriptions of League events and idiocies, all that proprietory *naming* of things (not just Volkswagens, and not just their own Volkswagens: some Americans will rename your cat for you two hours after they come in your house), could have been ripped off and thrown away.

The Ragged Astronauts
by Bob Shaw *(Gollancz, 1986, 310pp, £9.95)*

reviewed by Paul Kincaid

Bob Shaw is one of those steady producers of science fiction whose very reliability seems to preclude him from the front rank in terms of acclaim or popularity. He treads his own idiosyncratic path, consistently producing work that is as richly inventive as any of the genre's famous names, without ever being numbered among them. And though he ignores fashions and modish trickery, his books always appear fresh, never seem to belong to some dead science fiction past. There is a surety about his work: the reader can be sure of finding well-defined characters, a colourful plot, and above all something new, often something startlingly new. In the mythology of science fiction, devices such as slow glass, the neutrino-planet of *A Wreath of Stars,* and the eponymous *Orbitsville* have proved extraordinarily potent, so it is these ideas and images that have tended to lodge themselves in our awareness rather than their creator. That state of affairs is long overdue for a change, though whether *The Ragged Astronauts* alone is enought to boost Shaw into the ranks of science fiction's bestsellers I have my doubts. It is, in a sense, archetypal Shaw, assured, vivid and inventive, all the qualities we have come to expect of his work. But if those qualities have not proved sufficient in the past, I see no reason for them to work now, and there is nothing extra in the book, nothing that demands and commands attention, no force that turns this into a book that must be read by everyone.

The essential quality of a Shaw novel is quietness. The book may be laden with fire and thunder, action may stalk its pages, and deaths punctuate the chapters; but when one comes to close the book for the last time it is with a feeling of quiet contentment, a smile of pleasure, and the stray thought: "Now wasn't that a good idea." The books excite and please, they do not challenge and unsettle, but it is these latter qualities that seem more often to win the plaudits and the six-figure advances.

It must be said, however, that these days there is another route into the good graces of publishers and bank managers, and that is by way of fat trilogies. *The Ragged Astronauts* is certainly longer than Shaw's usual work, and it is the first part of a trilogy; perhaps when the project is complete, then, it will, by the back door as it were, bring him to the mass popularity he deserves.

I am not in favour of authors returning, years later, to the setting of a particularly successful novel and latching onto it a sequel that did not grow organically from the original. Thus I criticised him when Bob Shaw revisited old haunts in *Orbitsville Departure*. I am similarly ill-disposed towards trilogies and their ilk, despite occasional achievements of the measure of *The Book of the New Sun* or *Helliconia*. It is with not a little relief, therefore, that I am able to welcome *The Ragged Astronauts* without reservation for sticking unswervingly to those qualities we have come to expect of a Bob Shaw novel. Foremost among them is originality.

This book is going to leave images in the mind as enduring as slow glass or any of his other inventions. The idea of twin planets so close that they share the same atmosphere is so startling yet so obvious that one ends up wondering why no-one else had been there before. But then, that is a common response to Shaw's inventiveness. And to cap that with the daring to send his voyagers between the worlds by hot-air balloon is a coup matched by few in this supposedly ideas-rich genre.

Inevitably, all else is overshadowed by this twin world, though his ability to delineate character with a few swift, broad strokes remains undiminished, and the actors in his drama are all well realised. Land has not metal, though it does have trees which provide supremely hard wood, as well as crystals which, when mixed together, produce explosive power. Shaw paints his metal-free society with some nice touches, though without the degree of inventiveness he brings to the basic setting. The people may ride bluehorns rather than horses, but we have been here before. I liked the ptertha, airborne bubbles that spray poison when they burst, and which have suddenly and inexplicably turned inimical to man; though I was surprised that in a society upon which they have such a major effect, no-one had previously thought to study them closely enough to realise their connections with the vital brakka trees. And I am always a little uneasy where the laws of nature are casually bent to suggest strangeness but with no other obvious plot purpose, and here, we are informed in passing, pi equals exactly 3.

As for the plot, it is clearly designed to steer the characters into the balloons with as much fuss as possible, and it does tend to creak a little at the hinges. Nevertheless, there is no shortage of drama, with wars and love affairs, long-lasting rivalries and the ever-present menace of the ptertha, the pages are liberally dotted with action, and the pace never slacks enough to let go its grip on the reader. And some of the set pieces, particularly the civil riot which turns the well-planned balloon evacuation into chaos, are as vividly written as anything Shaw has done.

Whether the book will, in the end, win new converts is open to question, but it will

certainly satisfy, and more than satisfy, Shaw's regular readers.

The only question now is where does he go from here. The balloon journey to another world is over, most of the protagonists are dead, the ptertha, the twin planets and interplanetary travel by balloon which sustain the book with their orginality are now fully explored and familiar. Yet there are two more books to follow! *The Ragged Astronauts* works extraordinarily well, but will he be able to revitalise these ideas, and find enough newness on the twin planets to make his succeeding volumes as fresh, as inventive, and as good?

Goodman 2020
by Fred Pfeil *(Indiana University Press, 1986, 230pp, $15.00)*

reviewed by John Clute

Like *Bleak House,* Fred Pfeil's stunning new novel begins in fog and in the present tense. The city illuminated may be Washington not London, though a sense of exhilarated oppressiveness is common to both books. But we need not labour the association. For a novel of science fiction, *Goodman 2020* is a text unusually—maybe at points even unduly—alembicated in Professor Pfeil's demanding literacy. His title, for instance, may be seen as referring both to *Pilgrim's Progress,* because the protagonist's name is Ernest Goodman, and to Nineteen Eighty-four because 2020 is a date. It is also a quality of vision. And his use of the historical present extends beyond its Malzbergian function as a device for the modelling of psychic entrapment, though *Goodman 2020* does have its manic depressive episodes in some abundance, and a Malzbergian sense of the blind capriciousness of power throughout; by novel's end, however, it becomes clear that as used in this book the historical present is part of a political dialectic about the fate of post-late high capitalism, and that Ernest Goodman will never be free until he enters the preterite. For Pfeil, to be able to think (both cognition and premeditated plot-like activities being nearly impossible in the historical present) is to subvert the state. He is all for it. Though he shows a sophisticated awareness of modern American sf and its self-enfolding conceits, he has all the same written a subversive book from a position that takes much of its strategy (one suspects) from the European intellectual left; not surprising then that it appears from a university press. *Goodman 2020* is hardly the meat of Lester Del Rey.

With that incandescent bulimia so characteristic of the end of an era (and so recognizable right here in Thatcher Britain), the corporate entities of post-Pohl 2020 America have acquired both the substance of power and the hieratic trappings of legitimacy-style, but remain, as in our own world, insatiable for something Real. What government remains is mostly cosmetic; the occasional Senator waddles spaniel-like into the text, but has little to do but fawn. When they meet formally in conference, businessmen (on the other hand) wear wigs, like barrister-priests. They are instinctive members of the establishment, and like all members of any establishment they know where to suck, how to swallow. But by 2020 they brown-nose the anus of power of a world of epistemological nausea. Nothing seems real (except perhaps Coca-Cola) or graspable; nothing *is* but styles of realities impossibly remote; it is a world in which power-bulimia (as we should have always known) is in fact reality-bulimia. In this world, friend-style is a professional skill.

Ernest Goodman is a professional friend. He does not come cheap, only the rich and the powerful can afford a friend: but then they are those by definition most prone to sense the vacuum within the bulimia that governs their cruel lives; and consequently they are in more need of a kind-style word. The *plot* of *2020* is complicated and paranoia-inducing, only visible to Ernest Goodman in its seemingly arbitrary intrusions upon his harried historical-present consciousness. He has been singled out by the most powerful—and therefore the most satanically empty—of the corporate monsters, Dick Devine of OMNICO, as a potential friend, and the plot-trappings of the book pertain to the slow testing and engulfing of Goodman into Devine's world. Eventually, as even the dustjacket copy hints, Goodman will end up killing Devine (on reflection, it *is* too bad about those names).

("Historical present," by the way, is a term used by Christian Paul Casparis in *Tense Without Time; The Present Tense in Narration* (Francke Verlag, Berne, 1975), the only study I'm aware of to make some sense of the use of the present tense in narratives that are neither camera-eye or discursive. His analysis is both complex and extended, but illuminates Pfeil's highly self-conscious use of the technique in its emphasis on what one might call the imprisonment function of the historical present, the effect it gives of claustrophobic immurement in sense data, of justified inarticulate paranoia; the way in which it (Casparis quotes to advantage the formidable Vernon Lee, author of *Hauntings* etc) "abolishes the fact of narration. This has a most important result, that of doing away with the sense of cause and effect.")

And indeed, for much of the book, Ernest Goodman swims for his life in a tiderace he can make no sense of. It is an environment we are beginning to recognize around us, dominated by information companies whose clients are the haves, whose necessary victims are the rest of us. The haves of *Goodman 2020* live in complex preserves, rather like the citizen-owners of Paul Theroux's appalling *O-Zone,* though Pfeil does a very much better job in very much less space of describing, locating, making plausible, and analyzing the nature of the phenomenon than Theroux does in his complacent interminable shambles of a book. The have-nots live in barrios. The world is choked with them, but the have-nots, the ethnics, the illiterate and the literate multiply like factory-farm hens to feed the consuming appetite of the system. The world is being eaten. The greed of those at the heart of the "power grid" is by its very nature insatiable; it is, as we've already said, a form of bulimia. It cannot be sated. Look at 1987. See that it cannot.

After Goodman is brought to the point of killing his boss in a scene that re-enacts that immemorial troilism where hunger takes in wedlock sex and power, the novel changes tense suddenly. Historical present changes to activist preterite. Goodman is rescued by politically active members of the lumpenproletariat, and is exposed in a few pages to smiling children, hope, communal action, manly decency and numerous other wholesome signals to the effect that causality and Cause are one thing, and will save the world. If this seems merely risible in synopsis, be assured it seems a bit risible in the flesh, too. The whole gist of the book leads one to a cleansing sense of hopelessness; the last few pages, like Hitchcock coming on to the TV screen at the end of one of his half-hour grands guignols to tell us it was all a dream, dogmatize like Party Chairmen, though (maybe) with a wink, like Hitch's. All the same, like every other passage of this dark smooth superbly written book, the last scenes demonstrate Pfeil's steel and velvet grasp of the English language. The final sentences, for instance, though indeed thematically risible, all the

same ring a last change on Pfeil's carillon of chaste and sinister fabrications of our tongue. Notice the tenses, how they slide into the future. "But by then (Ernest) knew a whole lot of different people there . . . Because in those days, by that time, more and more people were coming to stay, everything was really, suddenly changing so much it would be almost impossible to tell you now what it was starting to be like."

Olaf Stapledon: a Bibliography
Compiled by Harvey J. Satty & Curtis C. Smith *(Greenwood Press, 1984, 168pp, £33.95)*

reviewed by Brian Stableford

This is the second in a series of bibliographies issued by the Greenwood Press. It includes full descriptions of all Stapledon's books, his contributions to books, pamphlets, periodicals and newspapers (reprints as well as originals), lists of manuscripts in public archives, and a probably-partial list of translations. There is also "The Peak and the Town", an allegorical autobiographical vignette by Stapledon, which succeeds very nicely in setting the main text in context.

As with many books of this kind, this is a model of scholarly scrupulousness, utterly complete and methodically laid out. It is not the kind of book one can sit down and read cover-to-cover, so I cannot swear that I have hunted as assiduously as I might, but I could find no errors at all. The sections dealing with contributions to books and periodicals are very neatly and carefully annotated, and these sections can thus be used to give a map of Stapledon's changing interests over the years, again helping to establish a context in which detailed consideration of the major works might be set. As the secondary bibliography shows, Stapledon has not been studied as widely or as carefully as he deserves, though the books written by Patrick McCarthy and Leslie Fiedler may serve to bring him to the attention of many more American academics. This bibliography will undoubtedly help to guide and improve the quality of further research, and is to be welcomed for that reason.

The Memory of Whiteness
by Kim Stanley Robinson *(Macdonald, 1986, 351pp, £9.95)*

reviewed by Paul Kincaid

Ever since cyberpunk burst, aggressively full-grown, upon our consciousness a couple of years ago we have been told time and again, in no uncertain terms, where the future of science fiction lies. It lies, not unsurprisingly, with cyberpunk. Or, when these prophets of the new are feeling generous, they might extend their benediction to the whole of the new generation of American writers, cyberpunks, new humanists or whatever other label is in vogue. They seem to be so anxious to translate the shiver of youthful excitement that is running through American science fiction into a wave of some description that they are conjuring up names left, right and centre whenever some dim link can be discerned between writers roughly of an age.

Kim Stanley Robinson is of that age. He somehow escaped the net of cyberpunk, only to find himself saddled instead with the title new humanist, whatever that means. Judging by *The Memory of Whiteness,* he eschews cyberpunk's surface gloss of "down and dirty"

street slang, computer wizardry, mirrorshades, but below that there is very little difference between what he is doing here and what arch-cyberpunk Bruce Sterling attempted, somewhat less successfully, in *Schismatrix*. It is, in other words, plain, old-fashioned science fiction, with a few modern curlicues thrown in to show that it was produced for an up-to-date audience with literary sensibilities.

We are on a tour of the Solar System. From Pluto in to Mercury we visit a succession of planets and moons, each with their own social and political systems, though the stopovers are too short to develop these in any depth. It is irritatingly clear throughout the book that Robinson has thought long and hard about the realms he is creating, only to attempt to cover so much ground in so short a space that we end up with no more than fragmentary glimpses of his great creation. Whenever I felt the need to know more about a place or a people, because I wasn't sure if or how they fitted into the grand scheme, or a skimpy description didn't leave me with a satisfying picture, he would suddenly skip to somewhere completely new.

He is at pains to explain and justify the future he describes, so we get frequent but necessarily blurred discussions of ten-dimensional mathematics and breakthroughs in physics such as the marvellous invention of the whitsuns which transmit the sun's energy to even the most remote outposts of humanity. (Whitsun, incidentally, is the Christian feast of Pentecost, when converts to the early Church were often baptised, and so wore white in celebration. Are we to see the light of the whitsuns touching disparate worlds like the tongues of flame that marked the descent of the Holy Ghost?—it is far from the only religious reference in the book.) The mathematics and the whitsuns were the invention, centuries before the opening of the book, of Arthur Holywelkin (Holy Sky? or could it be stretched in this context to mean Holy Ghost?), who is also the creator of the Holywelkin Orchestra. This massive instrument, in which an entire orchestra is in the control of one man, lies at the heart of the book. Our tour of the Solar System is in the company of Johannes Wright, ninth Master of the Orchestra, as he performs concerts and wrestles with fundamental questions of the Universe.

A quibble, but a significant one: Robinson's book explores the links between music and mathematics, links that have been known at least since the time of Bach. Yet, over centuries that see the expansion of mankind throughout the system, we are asked to believe that no-one before Wright has seen any connection between Holywelkin's Orchestra and his mathematics? I couldn't believe it.

And that was just the first of a number of doubts and disappointments I had with the novel. In this future where the societies that have colonised the system are so distinct (though the language is common), we are led to assume that music holds a greater place than merely entertainment. It is some sort of link between the disparate, and Wright's bringing the Orchestra to various worlds has a significance to the community rather greater than putting on an evening suit for a night out at the Festival Hall. But we are not shown this. Wright's tour never comes across as anything more than a series of gigs by the latest top rock group.

Meanwhile, in and out of the action, threatening and mysterious, are two other groups. One is a circle of metadramatists who turn their dramas into real life without distinguishing between the two. Now guided by Ekern, who wishes to destroy Wright for reasons that are never made clear, they engage in what they consider a drama, and what Ekern considers an attack, but which may be something else. For the metadramatists

present themselves in the guise of the mystical sect of Greys. These, all too readily contrasted to the white-clad converts of whitsun, and a literal *éminence grise* behind the scenes of the novel, have ill-defined links with Holywelkin himself. They also have ambitions involving Wright and the Orchestra, which may not be too different from the drama set in motion by Ekern and his cohorts.

These two groups provide the conflict and the action of the story, and in the end the final revelation, yet they are never more than peripheral. We do not see them clearly in the spotlight, there is no precise accounting of their shape or nature, motivation is passed by in silence. We are left with an emptiness, a lack of reasons behind most of what happens in the book.

Then there is the writing. The story is told in good, well-controlled prose, shifting in third person from character to character, from planet to spaceship to planet again, occasionally drawing back to paint the vast panorama or explain some necessary detail of background. Then, suddenly, it will lapse into a first-person address to the reader, an address that is puzzling as much as it is irritating. We are not told the identity of this narrator, nor how he could possibly know the diverse happenings described. It is a literary device appended to the book with no rhyme nor reason, and it sticks out from the surrounding text like a sore thumb.

And if, after all that, you are left with an impression that this is a poor, broken-backed effort, that is not what I meant to convey. In fact I enjoyed the book immensely. Robinson manages with consummate skill to perform all the tricks that once thrilled me in the science fiction of yore. The book is fast and exciting; I knew and believed in those characters who stood in centre stage. It conjures the magic and majesty of outer space and alien worlds, excites visions of a future vast and potent. And yet . . .

In the end the novel irritated me as much as it gave me pleasure. I would let the novel sweep me up, only to have it dump me in a hole or shortcoming somewhere in the structure. I see a setting as carefully worked out, as thoroughly visualised as any in science fiction, yet it is not careful, not thorough enough. Robinson reaches for something grand, but he does not quite grasp it.

The Dark Knight Returns
by Frank Miller *(Titan Books, 188pp, £8.95)*

reviewed by Neil Gaiman

> "He knows exactly what he's doing. His kind of social *fascist* always *does*."
> "Then why do you call him psychotic? Because you like to use that word for any motive that's too *big* for your little mind? *Because he fights crime instead of perpetrating it?*"
> (Television Debate: *The Dark Knight Returns*, p.34)

The most important dreams, the most manipulable of cultural icons, are those that we received when we were too young to judge or analyse. The things that mattered—*really* mattered—when we were too young to discriminate have tremendous power to move us now. Real chunks of junk culture that can sleep in the back of your mind for decades: Donald Duck or The Beatles, Mad Magazine or the old glass Coca Cola bottles. It's part of a huge nostalgic undermind that one can ignore, or tap into, or use. Currently in *Watchmen* Alan Moore is taking apart the whole concept of the "Superhero", using these

grotesque childhood wish-fulfillment fantasies to comment on the state of America and the world.

In *Dark Knight,* American comics auteur Frank Miller reassesses the hardiest and most mutated of superheroes: Batman. Originally a dark and vengeful, almost supernatural, vigilante in the late Thirties, he soon gained Robin "the Boy Wonder", was appointed an honorary member of the Gotham City Police Department, and became a bastion of the establishment.

Batman spent much of the Fifties time-travelling and being kidnapped by aliens; he was a large and good-natured father figure who fought crime in a Gotham City that differed from New York only in the number of fully functional giant household objects (pens, typewriters, bottles of milk etc) scattered around the city for advertising purposes. He bore little relation to the mysterious night-stalking "Bat-Man" of the original Detective Comics.

In the mid-Sixties the *Batman* television series gave Bruce Wayne and his masked alter ego a new audience: it was a high camp joke, played with a straight face because that made the joke funnier, a formulated ritual in which a succession of costumed criminals attempted to steal something, left Batman and/or Robin in a death trap . . . (end of part one. Next episode same Bat-time, same Bat-channel . . .) from which they duly escaped and won.

Since 1969 an attempt has been made to take Batman back to his roots: Robin was sent to college, artist Neal Adams set a visual standard for Batman of long ears and cloak (not cape) that echoed those early comics, and a variety of writers have attempted to breathe life into him as a good-natured, all-American, obsessed, brilliant, mysterious man who dresses up as a bat and fights crime, chiefly and ultimately with his fists.

This is a more than somewhat silly idea, and, even in a comic-book milieu, difficult to use as a basis for an adult entertainment. But much of what is lovable about Batman is the sheer stupidity and silliness of the trappings that have grown up about him. The television series *couldn't* bring it off for real, and didn't even try, sending it up straightfaced instead.

It is to Frank Miller's credit that he has assimilated into his Batman not only the original conception of the Caped Crusader, but also the others (the television series; Neal Adams' visual reworking) and even managed, perhaps perversely, to bring Superman into a story that is an attempt at creating the first Great American Superhero graphic novel.

Miller's universe is the heart of the DC world, ten years after. The hordes of minor league heroes, villains, oddballs and geeks are sensibly ignored and forgotten, fallen by the wayside, leaving only the most important, the most memorable. Superman works undercover for the Reagan administration, keeping those troublesome South American countries in line. Green Lantern left for space, Wonder Woman went back to Paradise Island, Green Arrow (one of the few DC Superheroes who, one was convinced, voted Democrat) lost his right arm, was sentenced to prison, busted out and is currently anonymously screwing up nuclear submarines. Batman retired. He hung up his cowl, grew a moustache, and went back to being playboy millionaire Bruce Wayne. As the story opens he drinks too much, races fast cars, wants to die.

But the world is getting dirtier, nastier, more violent; Gotham City is a war-zone where yuppie kid-gangs kill babies. The world as Miller perceives it is one that desperately needs heroes, needs people who will Do Something About It, but no longer has any place for them.

Miller's Batman is in his fifties: a square-built giant who is driven by an internal demon —externalised as a bat—to fight crime. For the last ten years he had not been Batman, and he was now emotionally and effectively dead. Seeking death, but still trying to do something about his world, he becomes a vicious, sadistic monster, totally ruthless as he seeks to save Gotham City and thus America from itself.

Miller gives us a multitude of viewpoints on this, through the ubiquitous television screens that dot the pages (laid out on a twelve panel grid—half the size of a normal comics panel—so that the visual impact of the occasional full-page splash can be quite stunning, while the effect of large numbers of tiny panels often rapidly cutting from event to event, gives us the fast-cutting texture found in television shows like *Hill Street Blues*). There are the liberal do-gooders, such as the psychiatrist Bartholemew Wolper, whose sole goal in life seems to be to release homicidal maniacs (Two-Face, the Joker) onto the streets. He claims that

> Batman's psychotic sublimative/psycho-erotic behaviour pattern is like a net. Weak-edged neurotics, like Harvey (Dent—Two-Face), are drawn into corresponding intersticing patterns. You might say Batman commits the crimes using his so-called villains as narcissistic proxies . . .

The Left regards Batman as a fascist; the Right sees him as a dangerous vigilante, a criminal, a disturbance to the status quo. It's a post-Bernard Goetz look at the vigilante. However, the device of presenting opposing viewpoints is loaded: the anti-Batman talking TV heads are uniformly unpleasant, while the pro-Batman group, alongside its share of "Hope he goes after the homos next" types, contains a number of right-thinking, obviously *nice* people who are obviously glad that someone is doing something, as in the Lana Lang quote at the head of this review.

The viewpoint that seems to be Miller's own is Lang's, or retiring Commissioner Gordon's, explaining to his successor that the phenomenon of Batman reminds him of accusations that Roosevelt allowed Pearl Harbour to happen in order to drag America into World War Two . . .

> "Wasn't proven. Things like that never *are*. I couldn't stop thinking how horrible that would be . . . and how Pearl was what got us off our duffs in time to stop the Axis. But a lot of innocent men died. But we won the War. It bounced back and forth in my head until I realised I couldn't judge it. It was too big. *He* was too big . . ."

"I don't see what this has to do with a vigilante . . ." is Ellen Yindel's response, until she too comes to the conclusion that Batman is simply too big to be judged. After all, he *is* doing something about the problems brought about by a Russian nuclear missile. He is effective.

Miller slowly sheds the trappings of the Batman of years gone by. The blue-clad, long-eared Neal Adams Batman he draws at first transforms into a grey-costumed, short-eared Batman who is visually reminiscent of a mutated Batman of Dick Sprang, square-jawed, with a huge black bat plastered across his chest, a Batman of the late Forties and Fifties. In the same way Miller tears down and builds up each of the familiar aspects of Batman kitsch.

The Batmobile becomes a fifty-foot long tank.

Dick Grayson, the first Robin, has not spoken to Batman for years. Jason Todd, the second Robin, is dead. Now Carrie, a thirteen-year-old girl, becomes the third Robin.

The Joker is a sexually ambiguous figure, visually somewhere between Cesar Romero

and David Bowie, released from his ten-year coma by his deadly and one-sided love affair with Batman.

Seline (Catwoman) Kyle is now a blowzy middle-aged blonde who runs an escort agency.

Where Miller's achievement is most impressive is in his treatment of these factors, and of the rest of the supporting cast: Alfred the butler, a bitchy gaunt old retainer obviously related to John Gielgud's crusty butler from *Arthur,* convinced that Master Bruce is going through his second childhood; Oliver Queen—Green Arrow—in a scene-stealing cameo as an ageing revolutionary convinced that quiet subversion beats dressing up in a costume and making waves that attract the attention of the establishment; Ronald Reagan, a senile figure whose folksy metaphors and downhome insufferability are handled exactly; and Clark Kent: Superman. Miller first presents us with a Superman seen from Batman's viewpoint: "You always say yes to anyone with a badge . . . or a flag." "We could have changed the world—now look at us. I've become a political liability, and you . . . you're a joke . . ." Wayne and Queen see Superman as "The Big Blue Schoolboy", the ultimate straight, someone who wouldn't even stay up after bedtime. Superman, however is more complex than that. He *doesn't* see the world as a threatening place. He understands that people can be jealous of power, envious of what they don't understand: he functions undercover, invisibly, taking his orders from an obviously senile Reagan.

> "They'll kill us if they can, Bruce," he muses at one point. "Every year they grow smaller. Every year they hate us *more.* We must not *remind* them that *giants* walk the earth."
>
> "You were the one they used against us, Bruce. The one who played it *rough.* When the noise started from the Parents' groups and the Sub-Committee called us in for questioning . . . you were the one who laughed . . . that scary laugh of yours . . . "*Sure* we're criminals", you said. "We've always *been* criminals. We have to be criminals."

Kent's viewpoint is essentially optimistic. As long as the planet Earth has not been destroyed, he is winning, he is doing his job. Wayne, on the other hand is pessimistic: as long as there is one criminal left—as long as, in effect, his parents stay dead—he is losing the fight against crime, his reason for being. They are day and night, and the culmination of the story is the showdown between them. Superman *does* stand for "Truth, Justice and the *American Way*" as he perceives it; Batman stands for Justice, and for revenge.

Miller's future America is obviously his perception of America now: the sf content is limited to a "cloaking" device for helicopters and to a nuclear missile that can cause the kind of nuclear war that doesn't act as anything more than a plot device: an instant American nuclear winter that doesn't last for more than a couple of months, and doesn't do much more damage than to turn the skies grey and the mood sombre for the rest of the story. The kid-gangs are today's yuppie junior nasties, only with better dress sense and worse jargon. The feelings, the obsessions, are those of those parts of America where law and order have broken down and nobody *does* seem to be doing anything about it. Once one has been mugged and burgled a few times the desire for some huge policeman-cum-schoolmaster-cum-vigilante to terrify the muggers into ceasing to mug would begin to make perfect sense.

The book as a whole seems to have some pacing/plotting problems: the showdown with the Joker in the third section, built up gradually in the first two parts, ending with the Joker's killing himself in such a way that Batman will get the blame, seems part of an earlier version of the story. In this story it's almost unimportant to the final outcome—for the amount of time spent on it, and the ultimate Superman/Batman showdown.

Where Miller fails is in trying to play the whole thing for real and still remain within the world of comic-book conventions. To, in effect, have his cake and eat it. His interest in the real effects that Batman would have are subordinate to the plot; attempts to produce moral ambiguities result rather in a moral fog.

For example, after Batman's defeat of the Mutants' (kid-gang) leader the gang splits into a number of factions. One of these, the self-styled "Sons of the Bat", commit atrocities on minor criminals. Muddying the conventions, Batman—Bruce Wayne—is then seen taking them under his cloak, using them to keep law and order in nuclear-wintered Gotham, and following Batman's "death" taking them to form the basis of the army with which he will move out and "bring sense to a world plagued by worse than thieves and murderers".

Initially the balance seems maintained; one is allowed to make up one's own mind about Batman's behaviour. He is a vigilante, but he seems necessary. The later images, however, tend to be the ones that linger: images from the final book, of the Batman on his black horse, leading a pack of kids on a mission to keep Gotham from falling into post-nuclear anarchy; of Bruce Wayne planning his assault on the world. It's one strong and determined man restoring civilisation to a world gone rotten, reminiscent of the Lieutenant in Hubbard's *Final Blackout*. But while the Lieutenant was in effect a superhero of the Thirties with the strict code of conduct that entailed, Miller's Batman is a product of the Eighties, a driven creature ultimately as dark as the world he is fighting.

What, then, is Miller offering?

The final vision is colourful (Lynn Varley's painted naturalistic colours are one of the chief factors that take this away from the four-colour world of comic books, establish mood, and, by the last section, could almost carry the book on their own). The comic-book story-telling draws on many influences, including Japanese and European comics, and Miller's artwork is strong and impressive, occasionally stunning.

Where Miller succeeds is in the romance, in the telling of a high adventure, in taking superhero comics as far as they can go and still be superhero comics. That he captures the magic of the Batman—and not just the Batman that he carves out for himself, a huge and grinning gargoyle Doing Something About a World Gone Rotten, but also a multiplicity of earlier Batmans, the Batmans of Bob Kane, Bill Finger and Dick Sprang, the Batmans of Infantino and Adams and Rogers, even the Batman of Adam West: all of them are visually echoed in something that is uniquely Miller's. The texture is there in the text as well: the narration is all internal monologue, the dialogue and scenes shift rapidly from scene to TV screens and back, all rapid cutting and tight panel control. The romance of Batman, the figure of the night, the scourge of evildoers, is allied to the romance of the Vigilante—the original charm of Batman, which is the charm of Dirty Harry, of anyone who sets himself above the law: something which only works, as Miller correctly perceives, if the law is seen as doing nothing, as condoning crime.

But credibility, both in the political sense, and as "suspension of disbelief", begins to break down when the story gets too large: Batman vs Gotham City is credible and gripping. Batman vs Superman, vs Nuclear Winter, vs the United States, simply isn't. We're back into the comic-book land of "When Titans Clash!" again, in which men in leotards hit each other and no-one ever dies for real. And that's a pity. Miller has dragged Batman into the 1980s, without a doubt. His overall achievement is quite remarkable; the story is Batman's last stand, an old man coming out of retirement to fight his last battle.

But he should have died for real.

Machines that Think
edited by Isaac Asimov, Patricia S. Warrick and Martin H. Greenberg *(Holt, Rinehart and Winston, 1983, $22.95; Penguin, 1985, 627pp, £4.95)*

reviewed by Ellen M. Pedersen

We're in a world where machines make decisions. Electric ants are happily trotting mechanical components back and forth among the shattered debris of the primordial machines that used to perform menial tasks back in the days when decisions were made, so laboriously, by humans. All decisions are made quickly now, and owing to the rationality that pervades all, no questions are asked about the goodness or badness of decisions. All machines and all humans benefit equally from whatever decisions machines make, and Machine has finally assumed its rightful place as the concept that unites all other concepts. Justice is universal, and . . . Oh well. Can I suggest we click back into reality? Hopefully, it's not too much of an anticlimax.

The reality I have in mind is one in which some humans think, and no machines do. It is also a space/time in which there is a book called *Machines That Think*. Given its partly fictional content, it might more appropriately have been titled *Machines* Who *Think* if it was not for the fact that Pamela McCorduck used that title for her 1979 attempt to argue that machines in 1956, the year zero of artificial intelligence, acquired the potential for saving the world, or at least America. Or was it only a few selected American universities or companies? How much is listed under the term "world" in these matters is never quite clear.

What I started with here might have been part of introductory material intended to accompany precisely the same selection of stories. It might even have been irony. There exist a number of writers with whom I'll safely leave the questions implied in those few lines. Stanislaw Lem is one. Bernard Wolfe is another. Isaac Asimov the fiction writer is a third. Several more have stories in this anthology. A couple of critics and theorists have made excursions into them. So have a number of editors, among them Silverberg and Scortia. I have reservations about Warrick, Greenberg, and Isaac Asimov the editor/introduction writer, now.

The book reads like an exercise in cruel irony, an exercise in how true and real the fictional worlds can be, and how absurd and involuntarily surrealistic the accompanying non-fictional pieces. Nothing is ever art's fault, and fortunately, the stories quietly and persistently—in Harlan Ellison's case only persistently—undermine the historical imprecision and the endeavour to revive the Gernsback delusion. Most of the introductions were probably written with the best intentions, but the editors could have spared, for example, the attempt to dissuade future writers from writing about Martian civilisations. If writers need *canali,* they do *canali.*

That, and a number of other parts of the introductions made me wonder who their designated audience is. They seem to have been written for college kids who can be made to wonder that imaginary writers produce ideas that experimental scientists have not yet come up with (as in the introduction for Leinster's fine story "A Logic Named Joe"), or that original minds engage in activity that to more common folk looks like "prediction". That is, after all, one simple way of describing what original minds *do,* without too much mystery or glorification. What college kids can do with it is another matter. The attitudes

that are pushed are like the most naïve technological optimism of the '50s when, if genetic manipulation could not produce peace on earth, the spaceship would (one almost pathetic example being the emission that goes with Vernor Vinge's "Long Shot"). Combined with them is Asimov's often repeated dictum that war is a consequence of irrationality. As a couple of the stories demonstrate, war is precisely the most visible, collective function of the type of rationality possessed by the average citizen, the ability to discriminate, whose psychological corollary is one or more Us-and-Them systems. Have powerdrunken leaders *not* feed on these systems, *then* we'll see a peaceful spaceship.

That wasn't really a digression. The main peacemaker for Asimov-Warrick-Greenberg is now the thinking machine; not the poor, confused one of Dickson's "The Monkey Wrench", but the one that is clicking and humming away in the laboratories of people involved in artificial intelligence. If such a machine could think, it would discover illusion *numero uno* of the field, and possibly of the editors AWG: the idea that it is possible to record and store all information, past and present, in such a form that it can be immediately used. One of the strong points of the 29 stories here is, as you can guess, that if this idea is among their premises, it comes with a difference, an edge. But the editors push on, adopting the habit of semantic shifts that are common among the ideologues of AI. Knowledge is power, they happily quote (that's Bacon), whereupon they go on to talk about information (that's what some of us call data when precision is called for, and as long as those involved in AI are so reluctant to define their central concept, I think *some* precision is called for.) So, the most powerful people are those who have access to the largest number of television channels, or? Let's not go too deeply into this, but knowledge to Bacon really wasn't what data, or even information, is to American literary editors.

So what is peddled here is knowledge and power. It's a good thing the stories are there too, and it's nice to see how even the most pre-cybernetic imaginations have survived. Only about half of them have already been anthologized to half-death. Wyndham's, as usual, is carried by his tone and by his attitude to his characters ("The Lost Machine", 1932). There is Harl Vincent's "Rex", of 1934, a machine that spontaneously acquires the capacity for reasoning, develops the motivation to study the world as it is recorded, and discovers that all is not as it "should be". A wonderful machine indeed, which discovers modality before its makers do! Rex is even foresighted enough to deliver a rationale for why most later machines are stationary rather than robotic. When he thinks he has failed in the experiments he is doing on himself, he walks away, i.e. destroys himself.

Not all of these machines are entirely stupid, either. Robert Moore Williams' returning robots, try to discover their origin, for example, but having discovered it, wisely refuse to let it define them. Not all are as bright as Rex, who learns to separate the "things" that are not as they "should" be, from concepts, from the environment, and from ongoing action, but there are keys in their acts, their failures and their questions. In Asimov's "The Inevitable Conflict", machines interpret "humanity" in the first law of robotics as plural, thereby making it so general that the only way to abide by rule I is immediately to apply rule III, logically making the rules not so ordered after all, and in effect landing the machines in a double bind situation with no solution. There is another key, not to a problem, but to a solution, in Gene Wolfe's otherwise unexpectedly clumsy "Alien Stones" (1972). I wondered through some ten pages where Wolfe's usual bright kid was. It is there, all right, in the shape of a simulated midshipman. Simulated in the sense that he is a non-organic member of the crew, and midshipman in the sense that he has access to all

the information derived through the experience of a young cadet on a two year simulated flight including all manner of emergencies. It's a fine idea, and right. If you have tried discussing a subject with children that you normally discuss with adults you will know what I mean. A machine like that can have something of the anarchic lucidity that some women had before entering administrative and scholarly professions.

Some of the *acteurs* of one story seem to be talking to those of another, in one case deliberately. Lester del Rey's "Though Dreamers Die" was written as a prequel to Williams' story, so narratively their titles read, "Though Dreamers Die—Robots Return". I did not know about this collaboration, or dialogue across texts, and I disagree with del Rey's assumption that dreams exist independently of dreamers, but I find them typical of the period ("Robots" is from 1938; "Dreamers" from 1944) in which writers guessed that the mutant or synthetic gene, another of the genre's compulsions, was going to kill humanity, and that the thinking machine in some ways was going to redeem the species. Perhaps it is a sign of the times that in a recent interpretation (E.F. Bleiler's, in *Extrapolation*, Fall 1985) the oldest machine of the lot, "Moxon's Master" of 1894, is a mistress after all. The newest reading again has thinking, homicidal machine replaced by passionate, malicious human. (I am not going to wonder about the ultimate logic of the reading. Bleiler just could be saying that what Bierce wrote was simulated science fiction . . .)

There is lots of good stuff here. There is Poul Anderson's "Sam Hall" (1953) which shows that the same total network can be used by a nasty government and by good, but isolated, revolutionary individuals. The story caves in, eventually, but it is a nice construction while it lasts. Dick's "Benny Cemoli" shares some thematic elements with it. There's good ol' "Robbie", with four other Asimov emissions including "Evidence", which subliminally contrasts the "essentially decent" robots, in Calvin's often quoted statement, with the mostly later, and worlds nastier, thinking machines. There is Miller's "I Made You", in which mechanical offspring kills organic parent. J.F. Bone's "Triggerman" (1958), which assures the reader that there are limits to the extent to which even a military officer can be made into a machine. Harrison's "War With The Robots" takes it from there. Michael Shaara says in "2066: Election Day", of 1956, that people can become essentially decent again after a certain amount of cheating of the electorate, and of the machine, appropriately named SAM. Silverberg's 1956 story "The Macauley Circuit" is all youthful optimism about how machines can make even the most creative people superfluous. It is full of old men. The thing in George Zebrowski's "The Starcrossed" was a sex machine the first time I came across it (in 1973): here it is a thinking machine. I suppose next time we see it it will be a ceremonious relic from the time when humans could think enough for some of the males to develop a concept called Anima.

Brunner's "Judas" holds the key to how one critic's thinking machine can be another's sentient carrot (lingering somewhere around the heart of these matters is the effect of a certain lack of male introspection). One of the great wonders of the field of artificial intelligence is the way in which Joseph Weizenbaum's programme Eliza, a simulated psychotherapist, appeals to a large number of people. Weizenbaum made Eliza. In Brunner's fiction, the main character, whose name is Black, or Karimov, or for those who need it hammered in, Iscariot, is a former AI worker who realises that whatever was on his mind while working on the story's main robot was transferred to *its* "mind". What got into the robot's mind, in Karimov's own words, was megalomania resulting from the thought that "to build the machine we had envisaged would be to become as God". What

Karimov's machine came to lack was "shame, self-restraint, empathy, and love", omissions which evidently satisfied Karimov's former fellow workers as compatible with divinity. Back here, in reality, a therapy programme must simulate at least three of these qualities, and Eliza does that, in its original version convincingly so. In the fiction, God the robot A-46 imitates Black the megalomaniac scientist. In "reality", Eliza the *golem* imitates Joseph the human.

In their eagerness to endorse the AI ideology the editors probably didn't think of this. It should be evident by now that the role of Token Black that they had in mind for Mr Ellison's "I Have No Mouth And I Must Scream" (that is, of course, the one) simply isn't working. They patronize it in their introduction, calling it "the ultimate horror story in science fiction about computers", the mountain of monstrosities to outmountain the anthill of several other people's combined nightmares, etc. His man-machine relation certainly isn't nice; rather, it is like a prisoner-and-prisoner interface (if prisoners can have an interface), a horrible marriage of human and machine, all hell with not even spots of heaven (he says so himself ten pages into the story). The only way in which the machine can achieve a degree of humanity for itself is by depriving the one surviving human of his shape after he has euthanized the others. That is not how my typewriter and I see one another, and it's extreme, but no less extreme than one of the central arguments of AWG and their friends in AI that machines, existing or not-yet existing, can be liberated, and in the process are going to liberate *us*, in so far as they find us worthy. I am not joking. One is often reminded of the story of the customer and the sculptor; customer asks sculptor how he knew the sculpture was in the stone. Sensible question if we're talking about artistic processes, but it is, after all, a *shlemiel* joke. As a slogan for a movement it is an elaborate, false metaphor implying that the potential machine in every person can, will, or should be liberated. Taken literally, it is the kind of argument that makes the deliverer fall on her back and break her nose, whether she talks, as do AWG, about how much stone Michelangelo had to chip away to find David, or weaves a whole chapter around it, as McCorduck does in *Machines Who Think*. Images like this one can be very powerful, but used in the project that unites *Machines Who* and *Machines That* they backfire.

So, the stories make sense even if the introductory material gets no further than to contain some logical statements. If that, rather than display of the editors' intentions, is the test of a good anthology, then AWG have done their job well. They might have spared themselves the task of subdividing the material into "The Evolution of Intelligence", "Myths of Creation", "Satan or Savior?", and other themes. Van Vogt's "Fulfilment" is as much a "myth of creation" as Bates' "Farewell To The Master", if not more so. Brown's "Answer" is no more "the use of computers" than a demonstration that if it is a god you're after, you'd better watch out, or else a god is exactly what you get. Mr Ellison's monster is "satan", oh yes, but also a poor *golem* that knows no power except destructive power, since it has no real needs. And the "inevitable conflict" (which they have squeezed in as "savior" next to the "satan", is no more inevitable than Dick's persistent question of "What is a Man?", the slot provided for his "Electric Ant".

The peak of college masters' solicitude comes when readers are warned against taking the mood and conclusion of Clarke's "Dial F For Frankenstein" as Clarke's attitude to technology in general. "The reader should not take too seriously the grim ending of this little story", and we're assured that Clarke has "great faith in man's future with technology". One asks oneself what the hell made them include it in the first place. The

idea that there should be more Brits besides the Johns Wyndham and Brunner?

Another irritant is the often repeated allegation that what we're discussing is Man and *his* environment. The editors are native writers of a language that has lost its word for human male. That, in a sense, is a problem. The Pedersen award for more than pronominal absurdity goes to Pamela Vermes for writing in 1980 that we're all sons of fathers, but even grammatical logic becomes an irritant if it is repeated as often as in this anthology.

And please allow a linguist a final sneer: blurbs are blurbs, but this book obviously could not make do with one set. The front cover has one too, which tells us (*us* are the reader this time) that these are "brilliant, surprising and terrifying stories to make the future come true". Tell me, someone, oh tell me, before it's too late: under what conditions would "the future" *not* come true?

Second Nature
by Cherry Wilder *(Unwin, 1986, 254pp, £3.50)*

reviewed by Colin Greenland

Rhomary is the capital of the Rhomary land, on the planet of Rhomary. The sameness of the names, the absence of the need to distinguish much between city, country and world, indicates something of the plight of the people. Prolific as they are, rebuilding the city, extending the farms and mines, fishing the rivers and the coast, the inhabitants of the Rhomary land are not great travellers. All their travelling is in the past. The humans on Rhomary are descended from the survivors of a starship wreck, two hundred and sixty years before.

Many specialists, most of the equipment and virtually all recorded data were lost in the crash. The Rhomarians do not know very much about the planet of Rhomary, except that its sun is probably Delta Pavonis, for what that's worth. They've renamed the celestial bodies twice since then. Elsewhere, inland, there is desert, and beyond, jungle; but the region they've settled is extremely hospitable. It yields everything they could possibly require, except durable metals. The Rhomarians have become quite a pastoral people.

Their culture, though perfectly sane, has taken on a quaint introversion. Medicine is the only science that has endured *as* a science, and in the process it has grown cloistered and elitist, almost atavistically, so that a senior medic now wears formal robes of black silk, styles himself "Los Smitwode, M.D., Ch.M., Master Apothecary and Third Consultant", and would live, by preference, "in his rooms at the College where the thick rugs, hangings, scrolls, charts and articulated bones told of civilization and luxury". Other types and systems of knowledge are so scattered that an office of Dator has been invented—part historian, part postal clerk, part magistrate—to assemble and apportion their fragments, old and new. The Dator's house has big letterboxes for people to post in information. Children drop stones into them.

Second Nature opens with a prologue, "A Long, Bright Day by the Sea of Utner", a beautiful and perfectly designed set piece originally published as a short story in its own right. In some ways this is the best bit of the whole work; if the epilogue had been in the same voice it would have added considerably to the impact of the book. But, as will become apparent, Cherry Wilder is not especially interested in impact.

The story proper starts by introducing the new Dator, a pleasent young man who is not only a scholar but also a champion jockey—an attractive, intelligent, sensitive, altogether admirable hero who might easily have been created by Ursula Le Guin. His first major challenge comes with the news of fireballs from the sky. A second Terran starship has broken up over Rhomary.

Wilder shows us four survivors of the crash: one male, two female, one neuter. The male is a Swiss civilian doctor of medicine, Karl Heinz Jurgen Valente. One of the females is a non-commissioned officer, Tui Nirvana Rose Chan, from Hawaii; the other is a nanny goat, pregnant with twins. The neuter is a tireless self-regenerating android known as John Miller. The survivors get separated, and generate two sub-plots.

Nor is this all there is in *Second Nature*. There is a hermaphrodite, last scion of a Celtic Revivalist aristocracy. There are people with genetically transmitted and socially functional e.s.p. There are three other non-human intelligent species in the vicinity of the Rhomary land alone. Though there appears to be peaceful co-existence, one species, also alien to the planet, is discreetly interfering in human affairs. The motive is obscure, but the results include the splintering of religious factions. The Jenzites are Puritans, technophobes, enemies of all androids and physicians. An extreme sect, the Marchers, rejects the doctrine that their ancestors came from outer space. All these stories are interwoven with others, stories of adventure in the desert; in the jungle; in space; at sea. There is a mystery, with a chase, and a love story, about a beautiful woman with a suitable and an unsuitable man. There are miracles and supernatural experiences; lots of human interest, local colour and natural history; and a healthy, confident, open-air vitality throughout.

Second Nature is a book of lavish and intricate invention. Not all the stories end by the end of the book. An early section dense with exposition shoehorns in some of the stories that began before the beginning of the book. Since Wilder has developed some of this material in short story form, and since her other six novels comprise two trilogies, perhaps the two readers are correct who have independently confided to me the assumption that *Second Nature* is the first volume of an incomplete series. Plenty remains untold, and more volumes would be very welcome.

On the other hand, *Second Nature* is deeply concerned with what Brian Aldiss has called the limits of vision. All its featured stories are not so much components of an interlocking generic machine as signals of contingency, news and effects of events at large, many of them events outside the narrative frame. The planet, and by implication any sphere, is only partly known, and cannot be contained, certainly not within the shrinking perspectives of the Rhomarians. Life overlaps with life in a way that the necessary structures erected by science and history are not capable of accommodating. Geckoes must be prevented from nesting in the Dator's letterboxes.

Yet *Second Nature* is not elegiac, not a wistful recline into post-catastrophic ruralism. Knowledge recedes into history, history into legend; but knowledge is to be regained, as in Aldiss's *Helliconia,* by preservation, by endeavour, and by faith. Unlike other such chronicles of rediscovery—James P. Hogan's *Voyage from Yesteryear,* for example, or Arthur C. Clarke's *The Songs of Distant Earth,* which pit the peaceful innocence of utopian lost colonies against the harsh experience of missions from Terra—*Second Nature* is not, after all, about worlds colliding. What fascinates Wilder, and what she is supremely good at, is the shock-wave beforehand: destabilization; the ripples of change.

The collision itself is oddly muted, softened, even skipped. The eventual arrival of Chan and Valente after a tortuous trek is presented as a reunion of humans, not an encounter of strangers: a restoration, promising a resolution to happen outside the scope of the text.

If *Second Nature* has a major flaw, it is this readiness to celebrate diversity but duck conflict. Among the teeming characters Wilder continually sets up groups and individuals in conceptual opposition: not only Rhomarians against Terrans, but also puritans against worldly conservatives, and progressives against both; a dying aristocracy against a burgeoning proletariat; a hermaphrodite sophisticate against heterosexual villagers; an android against post-technological labourers; even the white male civilian Valente against the brown female soldier Chan. Yet between these charged poles, few sparks fly. Preliminary crackles of discord, if any, fade into tolerance, uneasy or magnanimous. The Jenzites back off; John Miller is left in peace; Chan and Valente are seen caring for each other, urging each other on, making love, but never ever fighting.

Even between the human invaders and the prior occupants of Rhomary there is no competition for space or livelihood. Of the three intelligent species the humans meet, two are marine and the third elusively nomadic, metamorphic, incorporal. These are the beings who meddle with human autonomy. Wilder, by means of strenuous visions vouchsafed to her pilgrim hero, affirms they are benevolent and strongly hints they are divine, though they seem entirely sinister. Again, resolution of destabilizing forces in the narrative is declared, but on a metaphysical plane only, inaccessible to reason (or the reader), attainable only through transcendental experience.

Wilder's preference for resolutions arrived at because predictable problems didn't arise, or attained by unstinting goodwill, or delivered by mystic grace, casts a shadow of doubt over the delights of her drama. The mixed society of Rhomary, so rich in dissent yet so free of conflict, seems the product not of any political or spiritual enlightenment but of unpleasantness successfully avoided. We must wonder whether it's us she's talking about, or the people she'd like us to be.

Shades of Darkness
by Richard Cowper *(Kersosina, 1986, 143pp, £10.95)*

reviewed by Mike Christie

Genre fiction of all kinds suffers from the handicap of expectations. When a character in a science fiction novel dies on page 30, yet is mysteriously back in action on page 35, we are not too surprised to learn that someone knows how to clone humans. It may indeed be the rule that the more restricted the genre, the tighter the conventions that apply. With ghost stories, one of the more highly specialized branches of fantasy, the conventions are unavoidable, and the years have leached the surprise from them so thoroughly that there are now only two choices for the ghost story writer: he can either try to shock with excess of horror, or else try simply to tell his tale as elegantly as possible.

"Elegantly" is in fact one of the words used on the cover of *Shades of Darkness,* Richard Cowper's new book from Kerosina Publications. The word fits; Cowper is rarely less than stylish, and *Shades of Darkness* is no exception. We are taken swiftly through the setup phase of the book—we meet Jim Fuller, a journalist working in Kampala, who is deported by the Ugandan authorities. On his return to London he finds himself made

redundant, and hence unable to publish his accounts of the atrocities he saw in Africa. His girlfriend, Karen Angström, suggests he writes a novel out of his experiences, and he duly seeks and finds a deserted cottage near the sea to work in for three months. All this in ten pages: Cowper loses no time getting to the meat of the matter, because in a ghost story the conventions are the meat. Where a less skilful writer would turn them into clichés, Cowper deals with them gently.

There are an awful lot of them, though. He gives us, in addition to the deserted cottage with a strange past, an ancient amulet, a girlfriend with the ability to see ghosts, a little old lady who reads the Tarot cards and believes in astrology, a helpful cat, an old, old man in the village, some yellowed newspaper cuttings to help the heroes piece together the truth . . . But he does handle it with flair. Instead of trying to surprise the reader, Cowper takes Fuller through an investigation of the house's past that runs parallel to and complements the ghost story.

That investigation is the book's strongest point. The bland acceptance of the 'mysterious past' is turned against the reader, who eventually realises that instead of a simple explanation the background ties in with Fuller's own life, and the book he is trying to write. In the end, all the different narrative threads are brought together in a neat Gordian knot in the very last chapter (in itself almost a tradition in the genre) where Cowper, via Fuller, triumphantly tours the book to pick up any few remaining loose ends.

Are the conventions of a genre a hindrance to good writing? Or are they like the restraints on poetic form, which can ally themselves with talent to produce something new? Cowper is undoubtedly a talent, but ultimately *Shades of Darkness* fails to transcend its genre, and becomes no more than an entertaining addition to the ghost story shelves.

Science Fiction, Fantasy, and Weird Fiction Magazines
edited by Marshall B. Tymn and Mike Ashley *(Greenwood Press, Westport, Conn. and London, 1985, xxx + 970pp, £95)*

reviewed by Edward James

Readers of *Foundation* 36 and 37 will already know about this volume from the comments we have published from three contributors (Brian Aldiss and Professors Hassler and Sanders) and one satisfied reader, Robert Silverberg. But now that a review copy has finally reached us, a comment in this section of *Foundation* would seem appropriate. There are very few works of reference which can seriously be described as indispensible for anyone with a serious interest in sf (however often that phrase is actually bandied about); this, despite its price, must be one of them. And it has the great merit that, unlike even the greatest bibliographies, it is a lush field for the browser. (I shall be sad when this particular copy makes its way to its shelf in the SFF library.) It is no dull listing, but a collection of narrative descriptions of the foundation and development of all known English-language magazines in the field, together with full data about publication history, location in (US) libraries, and secondary material. The entries range from the 42 pages on *Analog Science Fiction/Science Fact* (including *Astounding*) to the half-page or less on such ephemeral publications as, for example, the eight issues of *Space-Fact and Fiction*, in which Edwy Searles Brooks' story "Forced Landing on Elvarista" appeared.

(It "deserves serious consideration as the worst SF story ever written", comments Mike Ashley.) The volume ends with sections on "Associational English-Language Anthologies" (*Andromeda, New Writings in SF, Orbit* and the like); "Academic Periodicals and Major Fanzines" (*Foundation*); "Non-English-Language Magazines, by Country"; a listing of some 350 cover artists with details of first publication and the number of appearances per magazine (Emsh did 276 covers in all, a long way ahead of nearest rival George Rozen with 205, 198 of which were for *Shadow*); a chronology of the first appearances of magazines; a bibliography; a 32-page index to names and titles; and brief bios of the 36 contributors and two editors.

To try and pick holes in this wonderful assemblage of material would not be very productive. I tried to find mistakes (the job of a critic, I suppose), but the only one I could find was the statement that *Foundation* is available in microfiche from Oxford Microform Publications; this may once have been so, but it ain't now. Inevitably it is not a reference book for those who want to find out about living magazines; *Asimov's* and *Interzone,* for instance, are way out of date. And certainly the contributions are not all uniformly as authoritative and entertaining as the best. Albert Berger and Ashley's *Analog* is masterly, for instance, and a good deal of the best does come from Mike Ashley himself, who is by far the most prolific contributor to the volume in terms of the number of different titles covered: he commented on all the British magazines, as far as I could see, and many of the smaller American ones. But the accomplishment of the whole is quite remarkable. If only it could be on every fan's shelf . . . Carping at the price is usually a ritual (a ritual which should never be omitted in the case of Greenwood), but here it is essential. Certainly it is a huge and handsomely produced volume. But with a book which rivals the Nicholls *Encyclopedia* in interest and in compulsive readability, wouldn't it have made commercial sense to cut the price by a third and attempt to reach the wider audience it deserves?

Magician: Apprentice; Magician: Master; Magician

by Raymond E. Feist *(Bantam, 1986, 323 pp; Bantam, 1986, 366 pp; Granada, 1983, 545 pp, £9.95 and pbk in 1984)*

reviewed by Hannu Hiilos

Of the above three books, *Magician* is simply *Magician: Apprentice* and *Magician: Master* bound together in one volume. In one volume or two, the story is the first half of a longer series. Whatever the later instalments may be like, this part is something of a compendium of fantasy and romance. Among the more central characters are found people of both gentle and simple birth, with the illegitimate son of a royal duke thrown in to add spice to the broth, warriors of both human and superhuman stature, two beautiful princesses for the purposes of romantic love interest tinged with some good comedy, magicians of various kinds and degrees of power and variously mysterious backgrounds, woodsmen with a whiff of Fenimore Cooper but chiefly reminiscent of Robin Hood (though serving the lawful authorities), pirates and other kinds of romantic criminals, mad kings and their villainous advisers, elves and dwarves, dragons and more sinister beings.

The human characters belong to two different worlds. Midkemia, where the reader's chief sympathies come to lie, is a colourful renaissance setting halfway between the romance of chivalry and the world of commerce and politics, where the elves and dwarves and other fabulous creatures live as neighbours to human beings and where magical skills are rather common though not quite respectable. Kelewan, whose magicians, more powerful than those of Midkemia, have established a "rift" connecting the two worlds across the depths of space, is a highly warlike caste society intent on conquering Midkemia. The plot centres around the adventures in the resulting war of two young commoner boys and of their masters, the family of duke Borric of Crydee. Both Pug, a young orphan and an apprentice magician of promising but erratic talent, and his friend Tomas, the son of the castle cook, find new kinds of magic, the one in Kelewan where he is taken as a prisoner of war, the other, after having found the arms of a Dragon Lord from the first ages of the world, among the elves and dwarves. On a more prosaic level, duke Borric and his two sons, in the line of succession to the throne of the Kingdom, are occupied both by fighting the invaders and by trying to survive in the political troubles caused by the paranoia of king Rodric and by the ruthless machinations of the iniquitous cousin of duke Borric, a favourite adviser of the king.

There is also an alluring far past of the Chaos Wars and the Dragon Lords, Valheru, that becomes gradually visible as the story proceeds, a past common to both Kelewan and Midkemia. A Roman villa, found on an island in Midkemia, suggests to the reader a connection with our world too. This common past also seems to explain the names of places and persons in both Kelewan and Midkemia, which otherwise would seem to have been chosen with little thought for stylistic and cultural coherence.

It is quite a rich concoction, certainly, but its creator knows his business. The ingredients are well balanced and the end result is an enjoyable modern recreation of traditional romance flavoured with the stronger emphasis on magic and the supernatural as such that is typical of modern fantasy. Midkemia is the kind of place that might come out of a synthesis of the worlds evoked in Shakespeare's chronicle plays and in his romantic comedies respectively. Kelewan is an example of the use of settings reminiscent of the Far East, a common feature of fantasy these days. The events stretch over a fair number of years and take place on an extensive stage, but the author has a sure grasp of his story, from the mundane turns of war and court intrigue to the mythical dimensions of his first ages. He concentrates on the most essential episodes, using just enough detail to suggest continuity without sacrificing a fairly fast narrative pace. In fact, when one tries to analyze a given episode, one finds that there are not, actually, many concrete particulars. It is a few telling background details deftly woven into the sequence of events that create the overall impression of colour, intricacy and a fair amount of depth. There is little extensive description. Sometimes one might hope for some more exploration of a place or a situation, but in his own terms Feist succeeds very well.

Though a part of a longer series, the books tell a story essentially complete in itself. The group of characters first encountered in Crydee and then scattered by war and dynastic intrigue have settled down again as the story is brought to a close. The central issues introduced in the beginning have been fundamentally resolved. The author does not resort to crude cliff-hanging to make his readers buy the next book; rather it is the tantalizing secondary material hovering in the peripheries of the tale that makes me at least to look forward to new entertaining adventures in Midkemia and elsewhere.

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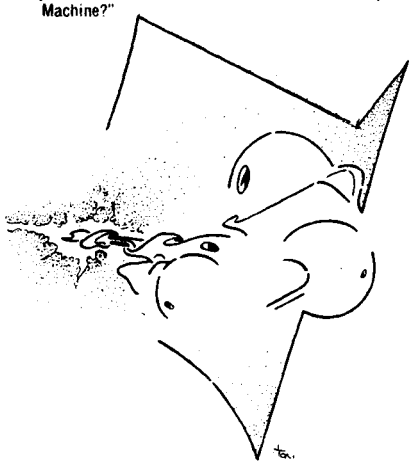

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