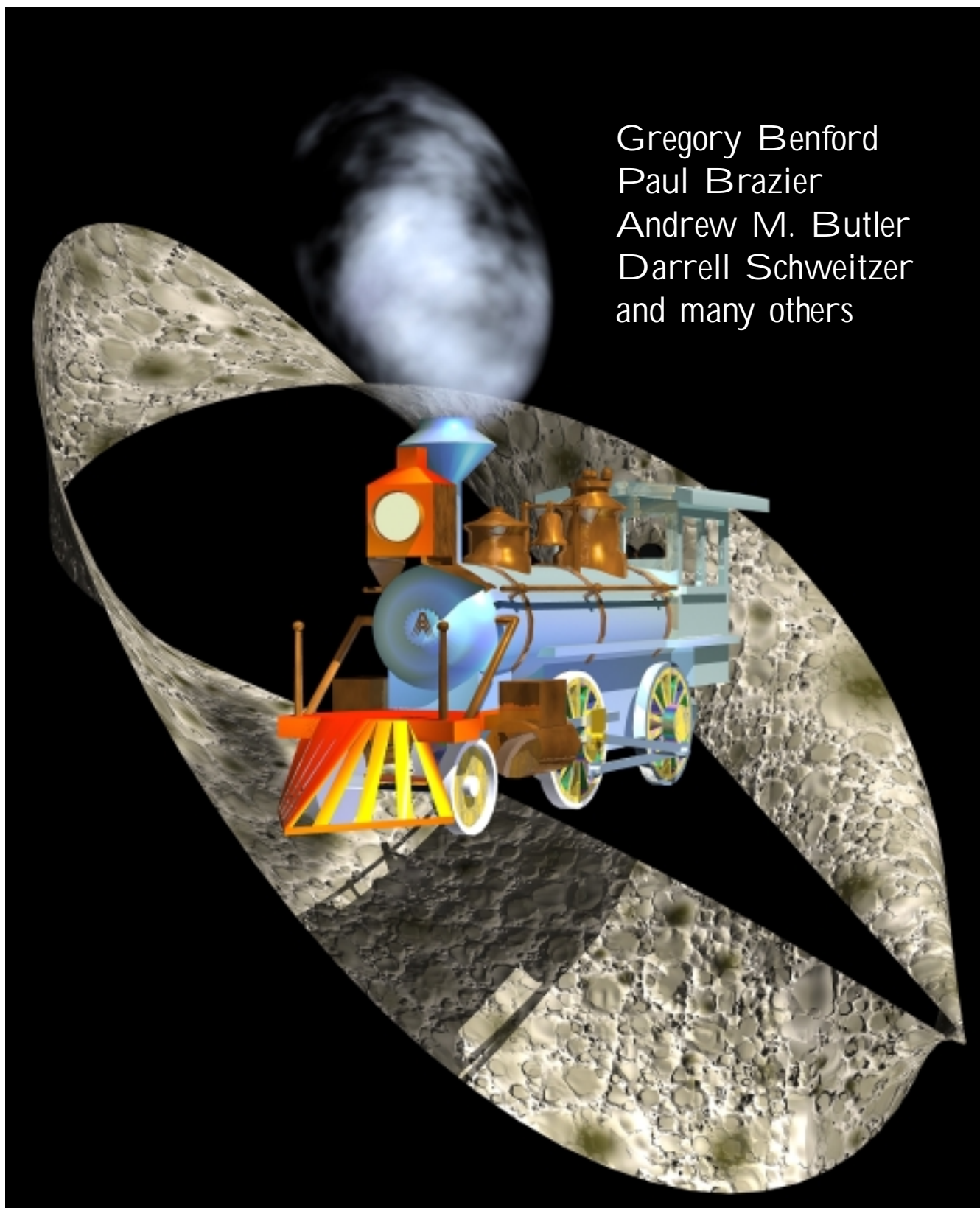


# Steam Engine Time

Gregory Benford  
Paul Brazier  
Andrew M. Butler  
Darrell Schweitzer  
and many others



Issue 4

January 2005

# Steam Engine Time 4

STEAM ENGINE TIME No. 4, January 2005

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## Graphics

Ditmar (Dick Jenssen) (front and back covers).

## Photographs

Covers of various books and magazines discussed in this issue; plus photos of (p. 7) Darrell Schweitzer (unknown) and John Baxter (Dick Jenssen); (p. 8) Lee Harding, John Baxter and Mervyn Binns (Helena Binns); (p. 15) Andrew M. Butler (Paul Billinger).

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Welcome to our new co-editor: Janine Stinson.  
See her self-introduction on page 3.

# Editorial 1:

## Unlikely resurrections

I (**Bruce Gillespie**) thought *Steam Engine Time* had died when British co-editors **Maureen Kincaid Speller** and **Paul Kincaid** lost interest a year or so ago. Paul, as production editor, was a hard act to follow, and I was too busy with my other projects to try emulating his meticulous publishing style.

Early in 2004, **Janine Stinson** sent me an email offering to help revive *Steam Engine Time*. I knew little about her except that she was the affable editor of the small, regular fanzine *Peregrine Nations*. I wasn't even sure I was cut out to be a co-editor. Let Janine tell the story:

'I've been reading SF since seventh grade, when I found André Norton's *Moon of Three Rings* in my school library. That was back in the Jurassic, mind. I graduated from Western Michigan University in 1979 with a Bachelor of Arts degree in English. I've been a newspaper reporter and editor (arts and copy), a soldier (signals intelligence analyst), a thrift-shop item cleaner, a moving and storage company clerk, and a Baskin & Robbins ice-cream shop server.

'I've lived in a variety of places, most recently in the Florida Keys for over a decade, and had to leave the hard way — I was widowed in January 2003. My son and I now live in my heart's country in northern Michigan, where I write for publications such as the *New York Review*

*of Science Fiction*, the *Internet Review of Science Fiction*, and *Strange Horizons*. I approached Bruce Gillespie with the idea of reviving *Steam Engine Time* because, very simply, I missed getting and reading it and felt there weren't enough avenues available for the sercon variety of material I prefer to read.'

This new incarnation of *Steam Engine Time* doesn't look the same as the three issues assembled by Paul and Maureen. Paul gained some wonderful layout effects in Microsoft Publisher; so far I haven't worked how to emulate them in Ventura. Jan and I will find our own style.

**Subscribers and others who receive the print edition:** I had a financial crisis at the beginning of 2004. I announced my fanzines would go 'all-electronic': that is, be published in .PDF format on Bill Burns' wonderful efanazines.com website.

Readers objected. They wanted the print versions of *SF Commentary* and my other fanzines. They sent money. That also led to our commitment to publishing a print edition of *Steam Engine Time*. The very first edition, however, will appear on efanazines.com as a .PDF.

I've asked Paul Kincaid five times if he has any list of Americans, Britons or Europeans who subscribed to *Steam Engine Time*, and haven't received an answer. I have a list of the people who

subscribed through me, and will do my best to honour those subscriptions. I have no idea what to do about the subscribers whose names I don't have. All I can do is appeal through the email lists for them to get in touch. Otherwise, I will have to guess (from the *SET* correspondence lists) the people who took most interest in the first three issues of *SET*. Apologies in advance to interested readers who miss out.

**Reprints:** Jan asked me to comment about the number of reprint articles we've used in this issue of *Steam Engine Time*. When I accepted Greg Benford's article, he didn't tell me that it was also scheduled to appear in Guy Lillian's *Challenger* (No. 16) as well as in *Reason*. Darrell Schweitzer's article was offered first to *SET*, then appeared first in *New York Review of SF* only because of *SET*'s seeming disappearance. Andy's article appeared first in an academic journal (*Science Fiction Studies*) and Paul's in a semiprofessional magazine (*Interzone*), so you may not have read them before.

Jan also wondered why I was using a long review as my editorial. Read it and see; I think it's as much about me as about the book under discussion.

— **Bruce Gillespie (on behalf of Janine Stinson), December 2004**

# Editorial 2:

## The journeys they took

*The Best Australian Science Fiction Writing: A Fifty Year Collection*, edited by Rob Gerrand (Black Inc ISBN 1- 86395-301-9; 2004; 615 pp.; \$A39.95/\$US32.00)

Time is like an ever-expanding bowl. I stand forever at one edge of the bowl — the Present. Over the outside edge is The Dark. Perhaps it is the Future, and the bowl expands forever, or perhaps all

time ends one moment from now. I look backwards down the inside slope of the bowl — at History, a vast, colourful territory filled with everything that has happened. I cannot jump from where I am and land in any spot in the bowl, but from the edge I can see clearly sections of it, especially that small section through which I lived.

Rob Gerrand's vantage point on the bowl of time is very close to my own. No doubt he also remembers vividly a time in the 1950s when obtaining enjoyable

science fiction books in Australia was so difficult a task that it seemed almost unimaginable that any of those books should be written by Australians. Only a few of them were written by Britons; the rest, it seemed, by Americans.

Yet in 1959, when I was twelve and discovered the British magazines *New Worlds*, *Science Fiction Adventures* and *Science Fantasy*, I was amazed to find that Australian authors were published regularly there. The editor of the three magazines, E. J. (Ted) Carnell, had a feature

page in each *New Worlds* showing a picture of one of his regular authors, plus a short biography. Two I remember were those for Wynne N. Whiteford and David Rome (David Boutland), although I suspect he also did features on Lee Harding, John Baxter and Frank Bryning.

Frank Bryning and Wynne Whiteford had each begun a writing career in the American magazines before World War II. After the war, these and the other Australian authors usually sold their stories in Britain, although each no doubt hoped he might score a spot in one of the better-paying American magazines. David Rome (TV writer David Boutland) was unusual, in that his short story 'Parky' was picked up from *Science Fantasy* and included by Judith Merrill in one of her *Year's Best* anthologies. There it was read by Frederik Pohl, who some years later remembered the quality of the story, and asked David for more stories for *Galaxy* and *If*.

No doubt, Rob Gerrand also remembers this long period when we could find

stories by Australian writers only in overseas magazines. He chooses to begin his own journey through Australian SF in 1955 (with Frank Bryning's 'Infant Prodigy'), but, as his advisers Graham Stone, Sean McMullen and Van Ikin would have reminded him, he might have begun much earlier. The long reach back into the late nineteenth and early twentieth centuries was one of the strengths of Van Ikin's 1981 anthology *Portable Australian Science Fiction*, which should be revised and reissued.

The lack of local markets had an inhibiting effect on the range and quality of local writing of SF, as can be seen from the first few stories in Rob Gerrand's new collection. Frank Bryning's 'Infant Prodigy', Norma Hemming's 'Debt of Lessor' (1958) and Wynne N. Whiteford's 'The Doorway' (1960) are stories that now seem a little creaky and outdated, although quite readable. They fitted well among stories by people such as Donald Malcolm, John Rackham, E. C. Tubb and Francis G. Rayer.

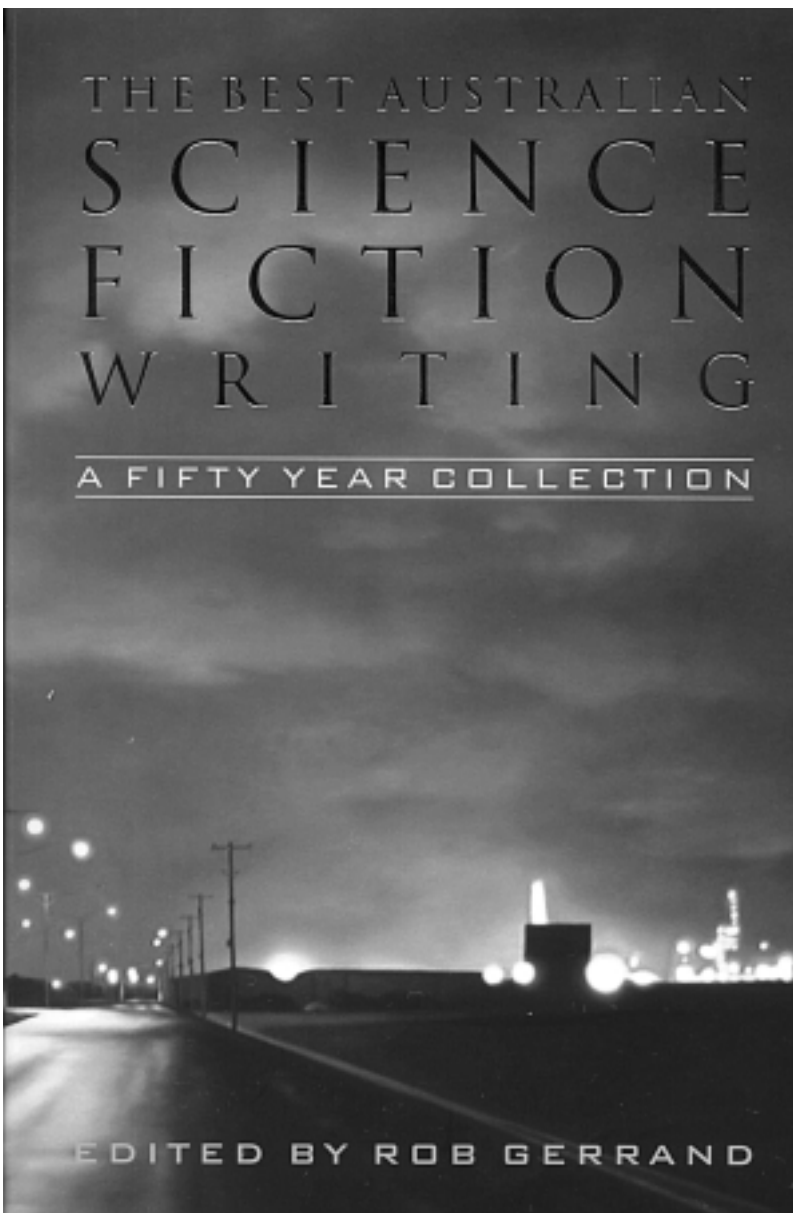
Much sharper, and with a memorable twist ending, is A. Bertram Chandler's 'The Cage' (1957), which had sold to one of the top markets, America's *Fantasy & Science Fiction*. Chandler, a British sea captain, had chosen to make his home in Australia after already scoring some major successes in the American magazines. Until 1982, when he died, he was regarded here as Australia's senior SF writer, but the SF world in general saw him as one of the major writers of America's 'Golden Age' of SF magazine publishing.

Chandler, as 'George Whitley', also contributes the much-anthologised 'All Laced Up' (1961, from *New Worlds*). Today's reader might find the theme of alien visitation all too familiar, but it is difficult to emphasise how daring Chandler was to set his story in the Sydney he knew so well – the inner suburbs with their lace ironwork decorations, which were just becoming fashionable – and to have his main characters resemble closely himself and his wife. Until then, most Australian short stories had to be set in a never-never land, or somewhere in Britain or America.

As I've mentioned already, David Rome's 'Parky' had an international success. Years later, David was still debating with himself whether he should give up TV writing for what he regarded as more ambitious work in science fiction. Fortunately for him, he stayed with TV, becoming one of Australia's most successful script writers. 'Parky' has that extra spark in its dramatic style that is missing in most of the early stories in this collection; perhaps David did have in him a major SF novel that never was published.

At the launch for this book, Rob Gerrand said that he read several thousand stories before choosing its contents; and that he could have produced several more 600-page volumes while still telling the same story about the progress of Australian SF. One result of this selection dilemma is that the book itself has some odd gaps in chronology. Were there really no notable stories between 1961 and 1967? None leaps to my mind, I must admit.

In February 1967, Jack Wodhams published 'There Was a Crooked Man', the first of a number of stories he sold to John Campbell at *Analog*, then the top US SF magazine, a status it retained until Campbell's death in 1971. Campbell had never published anything like this story before, and I can't think of any later author whose works resemble those of Wodhams. On the page, 'Crooked Man' looked like the dreaded stories emerging from the new *New Worlds* in Britain (Michael Moorcock had taken over in the mid 1960s). It had no plot; it was told in



snappy little vignettes of dialogue; and its feeling was impressionistic rather than preachy. The manic world depicted by Wodhams had some resemblance to those shown by, say, Eric Frank Russell in the early 1950s, but that's the only influence I could ever detect. Wodhams appeared to be saying that any 'progress' in technology will have results that are so disastrous and unexpected that they will make the idea of 'progress' unthinkable. I would have thought this is not a message much liked by Campbell. But Campbell did like writers who poked fun at what he regarded as conventional wisdom; he was the only editor apart from Paul Collins (in the 1970s) to publish Wodhams regularly.

'The Case of the Perjured Planet', by 'Martin Loran' (John Baxter and Ron Smith) (*Analog*, December 1967), is more conventional in structure than Wodhams' story, but its oddly jagged imagery of a planet that seems insane to terrestrial observers also owes much to the British New Wave. If Campbell had lived, perhaps Australian writers might have undermined Campbell's many prejudices and led *Analog* into a 1970s renaissance. 'Perjured Planet' leaves out almost all the comforting paraphernalia of the detective story, yet it does retain a feeling of mystery. It also has a manic sense of fun that reminds me of the work of Eric Frank Russell, one of the few British authors who is still counted a part of the American Golden Age of the late 1940s and early 1950s.

The assumption during the fifties and sixties was that Australian writers still needed to kowtow to overseas editors from either side of the Atlantic. Sydney publisher Horwitz Books, guided by American expatriate Ron Smith, published a couple of SF novels in the late sixties, but nobody could see that as the beginnings of a local industry.

Ron Graham, also from Sydney, caused great excitement when in 1968 he announced the forthcoming publication of a magazine, *Vision of Tomorrow*, that would feature half British stories and half Australian stories. It would be edited in Britain by Phil Harbottle (unknown to most SF people in Australia and Britain), but it would have an Australian advisory editor, John Bangsund. Stories were bought, and Lee Harding even went so far as to quit his job as a photographer to become a full-time author on the strength of all the positive feedback he was getting from Graham and Harbottle.

*Vision of Tomorrow* was published for one year. During the early seventies there were many harsh words said about its demise, but today we can see that the problems posed by its combination of ambition and poor distribution reflect

the problems faced by every Australian and British magazine since then. Although *Vision* looked glossy and substantial, the cover art on its first issues was just a bit oldfashioned. It became clear that Graham had chosen Harbottle as editor because of their mutual interest in a now almost forgotten British pulp era writer named John Russell Fearn. One of the ambitions of the editors was to publish a magazine that restored the style of the pulps. Meanwhile, the Australian writers who were trying to sell to *Vision of Tomorrow* were influenced most by Mike Moorcock's *New Worlds*, and wanted to leave the pulp style way behind them. *Vision* attracted mainly scorn in Britain, and was dropped by its distributor there. It was never distributed properly in Australia. But it did have its triumphs, including Lee Harding's 'Dancing Gerontius' (much anthologised, and now republished by Rob Gerrand) and 'The Custodian', which Lee illustrated with photos.

'Dancing Gerontius' is a one-idea story that is saved from predictability by Harding's ambition and a genuine lyricism in its last pages. What shall we do with the old in society? Most SF writers have plumped for life extension, but Harding is hardly the first or last writer to suggest that we will all be killed off at a certain age. To judge from statements from Australian government sources during the last year or so, this idea has achieved renewed popularity in Canberra. Their idea is to work us to death by denying us retirement; Harding's 'solution' is rather different, and quite moving. Harding has done better work since, especially in his novels, but 'Dancing Gerontius' stays in the memory as a genre breakthrough story.

Rather more original, however, is the next story in the collection, Michael Wilding's 'The Man of Slow Feeling' (1970). Wilding is one of two non-genre writers in this collection. (The other is Peter Carey.) Literary writers in Australia have tended to stay far away from SF and fantasy, but Wilding (who became one half of Wild & Woolley, the pioneering small press from Sydney that offered much help to Norstrilia Press) shows a poised awareness of the balance between the exposition of the SF idea and exploration of the interpersonal implications of the idea. The idea of a person who is slightly out of time with the rest of the world is not entirely new, but only Brian Aldiss's 'Man in His Time' can match this story for subtle horror. The fine quality of Wilding's story-telling proved not to be unique: he pointed the way forward to the Australian SF of the seventies and beyond.

I don't know what to say about Damien Broderick's 'The Final Weapon'

(1969), which I don't like much. To publish a 'Best' collection without reprinting one of Broderick's best stories (especially 'The Magi') does a disservice to the most consistent and productive author and anthologist of the whole fifty-year period.

A most important date in Australian SF was 1969, when John Baxter edited for Angus & Robertson *The Pacific Book of Australian Science Fiction*. The *Second Pacific Book* appeared soon after. Until those collections appeared, nobody had realised that Australia had a heritage of SF story-telling. Once we realised it, our authors, who had seen themselves as isolated lighthouse keepers sending out occasional flares to the rest of the world, began to think in terms of local stories to be told to local audiences. Damien Broderick edited two more collections of Australian short SF, each as interesting as Baxter's collections. Yet Gerrand skips eight years between 1970 and 1978, eight years in which everything, in a sense, had already happened!

As Rob Gerrand was a partner in Norstrilia Press, which began in 1975, it is not clear why he ignores several of Norstrilia's collections, especially *The Altered I*, when compiling *The Best Australian Science Fiction Writing*. In 1976, Paul Collins and Rowena Cory began *Void* magazine, which became *Void Publications*, and later Cory & Collins. Both Norstrilia Press and Cory & Collins were small presses that had little chance of making a profit, but both kept going for ten years, and laid the foundation for everything that has happened since in local small press publishing. Enterprising independent publishers, such as Hyland House/Quartet Australia and Wren, were publishing occasional Australian SF novels and anthologies during the same period. Even Penguin Australia offered a short-lived SF line.

Gerrand takes as his starting point for the 1970s renaissance *Rooms of Paradise*, edited by Lee Harding (Quartet Australia, 1978) and *Transmutations* (1979), the anthology Gerrand edited for Morry Schwartz (now the publisher at Black Inc), when Schwartz was publisher at Outback Press. Each of these landmark anthologies took advantage of the enormous boost to the quality and quantity of Australian SF writing that resulted from the visit of Ursula Le Guin to Australia in 1975 (the Writers' Workshop associated with Australia's first world SF convention, Aussiecon I), and Christopher Priest and Vonda McIntyre in 1977 (the second major SF workshop). David Lake's 'Redeem the Time', George Turner's 'In a Petri Dish Upstairs', Randal Flynn's 'The Paradigm' and Philippa Maddern's 'Inhabiting the Interspaces' have a swagger of approach and command of the

English language that one finds rarely in Australian SF stories before the mid 1970s.

David Lake's 'Re-deem the Time' is conventional in structure, with an H. G. Wellsian time traveller finding much more than he could have expected as he travels into the future. Its theme, our responsibility for a livable future, has become more rather than less pertinent during the last 25 years.

George Turner's 'In a Petri Dish Upstairs' is rather conventional, too, and even a bit creaky. Turner made no secret of his dislike of the short story/novella form, and wrote short works only on commission. He collapses the skeleton of an entire novel into the 38 pages of 'Petri Dish'. Turner did write better short pieces than this, but it has its memorable moments.

Randal Flynn's 'The Paradigm' is a story by a young writer about young writers in a future that has little time for creativity of any kind. It's a faithful portrait of the despair that many Australians felt as Fraserism took over from Whitlamism in Australia during the late seventies. It still has some fine sentences and accurate portraits, but perhaps has not aged as well as some of the other stories.

Philippa Maddern's first published story, 'The Ins and Outs of the Hadhya City-State' (1976, in *The Altered I*), was listed as Best Australian SF Short Story in a poll conducted by *Science Fiction* magazine fifteen years later. Maddern should have become the anointed monarch of Australian SF from the seventies onward, but she abdicated. 'Inhabiting the Interspaces', which reads as grippingly as it did in 1979, shows her great gifts. The main character, unemployed in a society that does not forgive the unemployed, can survive only by inhabiting the nooks and crannies of a large office building at night when its workers depart. This becomes a perilous enterprise. I had always remembered this story is a long, epic tale, but it proves to be only 14 pages.

Maddern published few stories after this, and in the last decade has been Associate Professor of History at the University of Western Australia. If only writing SF could have offered her a real career path.

By 1979 the maturation of Australian SF had already taken place. Again, Gerrand has an odd elision in his narrative, offering only two more stories before 1989.

Where is a story by our most successful writer of the period, Leanne Frahm, who sold stories to several American anthologies? Where, indeed, is the best Australian SF story ever, Frahm's 'On the Turn'?

Where is any recognition for *Omega* magazine? *Omega*, an *Omni*-style science

fact/science fiction magazine, began the careers of many of the best writers of the 1990s. Perhaps it's hard to find archival files of *Omega*.

Where is any recognition of the vital importance of Peter McNamara's *Aphelion* (magazine and publishing company) during the 1980s? McNamara's work is the link between the books by Norstrilia and Cory & Collins (both having disbanded by the mid eighties) and that of *Eidolon* and *Aurealis* magazines in the nineties.

The coverage of the 1980s is the weakest aspect of this book. I cannot believe that Gerrand did not have available for reference a copy of David King's *Dreamworks* (Norstrilia Press), which he helped to publish, or King and Blackford's *Urban Fantasies* (Ebony Books), which included David Grigg's best story. However, Gerrand does include Paul Collins' 'The Government in Exile', a dark, amusing fable about future social breakdown, and Rosaleen Love's 'The Total Devotion Machine', hardly her best story, but an effective demonstration of her insouciant verbal facility and fine wit.

Rob Gerrand does his best to cover adequately the 'boom period' of Australian SF publishing (1990 onward). With the sudden development of writers such as Greg Egan, Sean Williams, Terry Dowling, Lucy Sussex, Simon Brown and many others, Australia entered the world stage. Australian stories began to be picked up for international 'Best Of' collections and feature on the annual *Locus* Awards lists. The major Australian publishers began to take an interest in their own writers. In the end, this led to the proliferation of endless fantasy blockbuster trilogies, but it also generated income for writers such as Sean Williams, who otherwise could never have quit his day job. The great Australian small press tradition continued in the form of *Eidolon* and *Aurealis* magazines, and publishers such as Ticonderoga and MirrorDanse. Recently, Agog! Press, the Vision Writers' Group, the Canberra Writers' Group, Mitch, and several other small presses have published a large number of original fiction anthologies.

I won't look at the later stories in detail, mainly because they are known signposts in the current landscape. I think that Gerrand could have chosen a better story of Sean Williams' than 'The Soap Bubble' and a better Stephen Dedman story than 'A Walk-on Part in the War', but at least the roles of these authors is recognised.

As Race Mathews pointed out when launching the book, Gerrand really scored the jackpot with his reprint of Petrina Smith's 'Angel Thing' (from Sussex and Buckrich's *She's Fantastical!* an-

thology, Sybylla Press, 1995). Smith was a graduate of the first major Writers' Workshop (the Le Guin Workshop of 1975); she has published little since; and she works very slowly. The fine writing and sharp dialogue of this quiet story of exploitation and the horrors of true belief makes it one of Australia's best short stories of any kind during the last fifty years.

Oddities remain in Gerrand's book. I can't pretend to like Terry Dowling's Tom Rynosseros stories, but how could one represent Dowling's strange career (adulation from Australian readers; very little success overseas) without featuring a Rynosseros story? 'He Tried to Catch the Light' represents some of Dowling's strengths, but it's hardly his best.

Neither 'Niagara Falling' nor 'The Diamond Pit' seem to represent Jack Dann's work at its best (and Janeen Webb has published stories that are much better than 'Niagara Falling'), but again, recognition must be paid to the role played by Dann and Webb in promoting Australian SF during the nineties, and these stories did win awards and impress people other than me.

The nineties was a good period in which to be an SF reader in Australia. It was satisfying to rediscover the subtlety and power of Lucy Sussex's 'Red Ochre' (it is fourteen years since I had read it). Re-reading Sussex's story and Margo Lanagan's 'The Boy Who Didn't Yearn' made me feel all gooey and patriotic and proud that the current best stylists in Australian fiction are part of the SF/fantasy genre. The division between literary fiction and science fiction disappears, much as it did in stories by Michael Wilding and Peter Carey all those years ago.

The last section of Gerrand's anthology includes plenty of my other favourites, some of which I've reviewed at length elsewhere: Greg Egan's 'The Caress' I've just re-read for the fifth time, with as much pleasure as ever; Russell Blackford's 'The Sword of God' seems retains its freshness every time I return to it; and I enjoyed the only story new to me, Sean McMullen's 'Tower of Wings'.

My fifty-year journey through Australian SF is slightly different from Rob Gerrand's, but I'm satisfied that we have been looking back at the same timescape. For some of these writers, I would have chosen other stories. I might have chosen stories from the time gaps I've mentioned. But whatever its limitations, this fifty-year collection is an essential record of the long, rocky journey of Australian SF writing. Better, for me, it's the record of some achievements by people I grew up knowing and admiring.

— Bruce Gillespie, 28 November 2004

# Tales of members of the Book Tribe

Darrell Schweitzer

Darrell Schweitzer has been writing for fanzines since about 1970. He has been selling stories since (depending on how you want to count) 1971 or 1973, and has sold about 275 stories to SF/fantasy publications in the US, UK, Australia and elsewhere. His books include three novels, *The White Isle*, *The Shattered Goddess* and *The Mask of the Sorcerer*. His numerous collections include *Transients*, *Refugees from an Imaginary Country*, *Nightscares*, *Tom O'Bedlam's Night Out*. His verse ranges from serious poetry (*Groping toward the Light*) to a limerick rhyming 'Cthulhu' (in *Non Compost Mentis*). He has also published essays, interviews, and nonfiction books (on H. P. Lovecraft and Lord Dunsany). He has worked editorially on *Isaac Asimov's SF Magazine* and *Amazing*. He has been co-editor of *Weird Tales* since 1988. A three-time nominee for World Fantasy Award, he has won it once (with George Scithers, for *Weird Tales*.) Most recently, he has edited a 'facsimile' of the April 1933 *Weird Trails: The Magazine of SF Supernatural Cowboy Stories*.



Darrell Schweitzer

## **A Pound of Paper by John Baxter**

**Bantam Books (UK), 2004;  
trade paperback; 336 pp.; £7.95.**

JOHN BAXTER IS A MEMBER OF MY tribe. That's what I conclude from reading this delightful memoir. Superficially, the book is the autobiography of a man I don't know, whose works I have more heard of than read, and whose interests do not necessarily coincide with my own. It's not really a fan memoir either, though the narrative weaves in and out of science fiction and fandom at times. Certainly a fan will recognise the Moment of Contact, when the proto-fan first meets another science-fictionist or attends a fan meeting for the first time. (How appropriate that the first SF story Baxter read was Murray Leinster's 'First Contact'.)

Mine happened a little earlier than Baxter's. I attended a Philadelphia Science Fiction Society meeting for the first time when I was fifteen. The PSFS is a most venerable organisation, founded in 1936, one of the two surviving chapters of Hugo Gernsback's Science Fiction League, still engaged in a genial dispute with the Los Angeles chapter over which is the oldest continuous fan group in the country or even the world, the question being whether PSFS can genuinely claim continuity through World War II. I wasn't sure, before I went to that first meeting, whether I was going to a convention such as I had read about in Lin Carter's 'Our Man in Fandom' columns in *Worlds of If* magazine, or something smaller. ('Don't buy the place out,' my father said to me.) The first fan I ever met, in the stairway on the way to the meeting room, was the PSFS president, J. B. Post, later famous for *The Atlas of Fantasy* and still a good friend after 37 years.

Baxter was seventeen at this point, considerably more mature (out of school and living on his own), but I could readily relate to his description of his first fan meeting in Sydney.

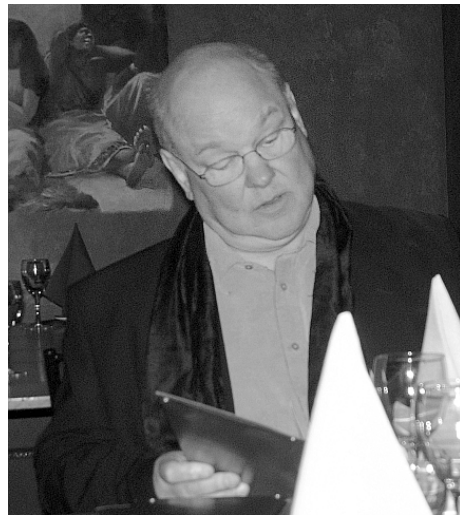
There's another early moment that's happened to all of us, described in chapter 4. Somewhere in the early teens, the proto-fan has a friend whose father reads science fiction and who will lend

out science fiction magazines. Thus I gained access to the *Galaxys* and *F&SFs* of the 1950s. Baxter's first SF magazine seems to have been the February 1940 *Super Science Stories*, which he borrowed and read sometime in the late '50s. I read that issue about ten years later, but by then I was in fandom and bought that issue from a mail-order dealer.

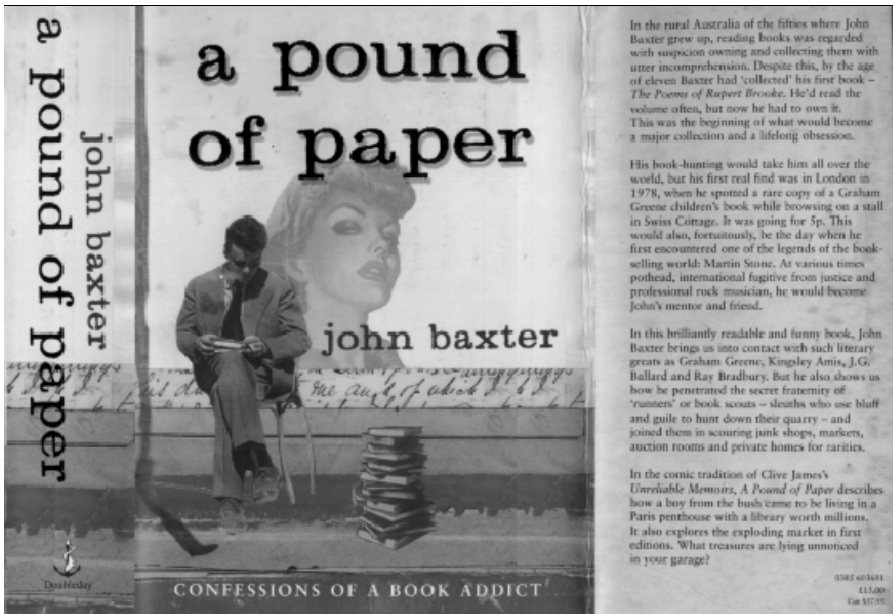
I am sure that if John Baxter and I ever got together, we could have a long and pleasant conversation that wouldn't mention science fiction all that much. If I visited him, he could show me his rarities. If he visited me, I could show him mine. What we truly have in common is that we are both members of the Tribe of Book People. H. P. Lovecraft, who was not, complained to one of his younger correspondents (I think it was Donald Wandrei), 'I love literature. You love books.'

There is something to be said for the book as *object*. Hopefully the collector does not lose touch with an appreciation for the contents, but the *book* is considerably more. Non-collectors, with whom Baxter has had many colorful encounters, will never grasp this. Baxter tells one ghastly incident in which someone casually ripped the flyleaf out of a Nigel Kneale book to make a note on it, and couldn't understand why he and the bookseller were virtually in a state of shock.

That brought to my mind a scene from *Buffy the Vampire Slayer*, in which a high school bimbo is very obviously chewing



John Baxter (Melbourne, July 2003) (Photo: Dick Jensen.)



gum. 'Get rid of the gum,' says Giles the librarian. The bimbo tears the flyleaf out of one of those *Necronomicon*-like tomes with which Sunnydale High's library is so mysteriously well equipped. Giles looks like he's been slugged in the gut. 'But . . . that's a six-hundred-year-old book!' he manages to gasp. 'Well at least it wasn't a new one!' the bimbo says cheerfully. Giles is appalled.

Even TV fantasy sometimes touches on real life.

Books are part of real life. An obsession with them is not mere escapism. To quote the late L. Sprague de Camp, a book is as real as a board or a baby.

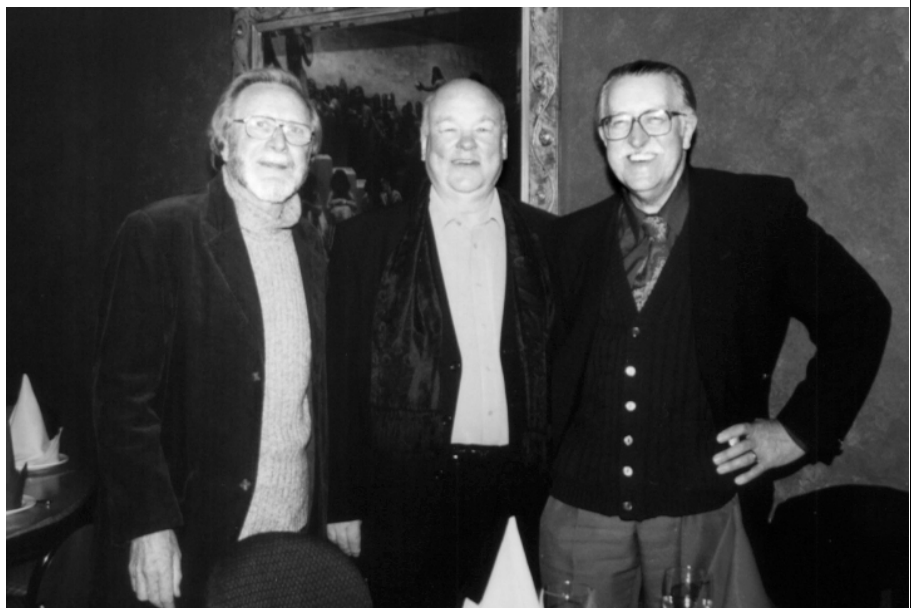
All through various mundane jobs and career moves, Baxter has been a devoted bookman. Of course he reacted like that to the desecration of a book. Any member of the tribe would. In fact, he has quite a bit to say about flyleaves and endpapers. Inscriptions by authors are one thing, but Baxter resents the sort of nobody who inscribes to another nobody messages of no significance even to the recipient. He tries to avoid having endpapers stamped by the bookseller, even when that allegedly makes the book more collectible. Endpapers, he remarks, are like the silences in a Pinter play, a pause between the cover and the text (p. 79). They are not to be marked on lightly. Condition matters. It is a major concern for book people. The *book* is more than just the words inside it. It is a whole object, a thing in itself.

Any one of us knows what it means to get up in the dimmest hours of the breaking dawn and travel to some remote, dingy district where other members of the book-tribe drift out of the gloom in search of bibliographic treasures. Most of them are shabbily dressed — there are few dapper book people, particularly when on the hunt — and all of them have soon-to-be-filled bags in hand.

We all have book-stalking stories. Great Buy stories. The One that Got

Away stories. The 'I bought *one*' story, with the subtext of, 'If I'd bought the whole stack I'd be a rich man today.' The dustjacket stories. Baxter tells of a find of ex-library Graham Greene books, not worth much for themselves, but a fabulous hoard of dustjackets, which could be put on better copies. I once bought a jacketless first edition of Stephen King's *Carrie* for two dollars back in the late '70s. I got King to sign it at a convention when that was still possible. I found a very ratty ex-library copy of *The Shining* for 25 cents, swapped that for an equally ratty ex-library *Carrie*, then extracted the wrinkled but intact jacket from the pasted-down mylar protector . . . We've all done that. In American bookseller idiom, this process is called, suggestively, 'mating.'

Baxter has some great bits here, wonderful digressions, one about the various intrigues regarding the authorship of *The Story of O*, another about verified copies



Lee Harding, John Baxter and Mervyn Binns (Melbourne, July 2003). (Photo: Helena Binns.)

of books bound in human skin. What bookman would not be at least curious to see such a thing? Yes, the book world has a dark side. Morbid as it may have sounded at the time, the story of the Poppy Z. Brite books that smelled like burnt human flesh makes more sense in this context. (Not a story that Baxter tells, but I am sure he could appreciate it: A suicide or would-be vandal incinerated himself in a postal lobby. The smoke penetrated the post boxes, leaving four copies of a signed-limited Brite book smelling of charred human flesh. Rather than discard them as damaged books, bookseller Barry Levin wrapped them in plastic and listed them as unique collector's items for about four thousand dollars each — and got it. Ms Brite expressed regret that she could not afford one.)

Books, for members of the Book Tribe, are a way of life. Baxter describes what we all do. Whenever he settles in a new place, he immediately checks out the local book scene. His cast of characters includes authors, eccentrics, and grotesques. His scenes are great bookshops and obscure ones, sales in alleys, and what the English or Australians call 'boot sales' — which were once called 'tailgate sales' in America when cars had tailgates. It is precisely the universality of what he describes that makes *A Pound of Paper* so appealing. Even when the details are different, when the scene is in Sydney, London, or Paris, we've all been there. It is almost as if Baxter is bringing shared memories alive on the page.

— Darrell Schweitzer, October 2004

## Epilogue: If the house caught fire . . .

**BRG:** At the end of *A Pound of Paper*, John Baxter printed the answers that various friends (including several famous Australian SF fans) gave to the query: nominate the one book you would snatch from your shelves if your house was burning down. I asked Darrell for his nomination:

**DS:** To answer your question about what book I would grab if the house were on fire and I could save no other, I suppose the realistic answer is that in such a situation I would doubtless snatch a pillowcase off the bed and try to fill it with swag the way a burglar would, assuming I was in the upstairs bedroom where many of the best books are. I would doubtless

reach for my Mervyn Wall collection, *The Unfortunate Fursey* etc., which is a small group of hardcovers and magazines (copies of *The Irish Review* with the texts corrected in his hand, including a serialised novel thus) but I would also go for the signed/limiteds of Lord Dunsany's *The King Of Elfland's Daughter* and *Don Rodriguez*. There's also a signed/limited of Talbot Mundy's *Queen Cleopatra* right next to those two, and an Arkham House *The House on the Borderland* next to those two.

Depending on my prospects for escape at this point, I might well tie the pillowcase shut with a belt and hurl it out the window to (hopefully) a better fate than the books left behind, the way a desperate mother might hurl a child.

But I suppose if I were somehow limited to one book, I might well go for *A Dreamer's Tales* by Lord Dunsany (Luce, no date, circa 1917), which is a book that I first bought for 10 cents when I was a teenager and which opened many horizons for me, including my writing career

(because stories derivative of Dunsany were the first I was able to sell). Ironically, I don't even have my first copy, but have replaced it with a copy of the gift edition, which is bound in vellum and has gilt edges. It still has the same wonderful Sidney Sime illustrations.

One thing I would definitely take from the row of the books on the bedroom dresser, along with the Walls and the signed/limited Dunsanys, is a copy of *The Martian Chronicles*, the large illustrated Heritage Press edition (a reprint of the Limited Editions Club edition) signed to me by Bradbury. I doubt I will ever meet him again, so that is irreplaceable. The book itself is rare enough, one of the handful of Heritage Press books to be worth anything.

I would also try to get my copy of the surrealist *Codex Seraphinianus* into the swag-bag, but of course if I had to heave that out the widow, there would be concern that I'd bend a corner . . .

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## Funeral games

by Darrell Schweitzer

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[First published in *The New York Review of Science Fiction*, July 2003.]

I REMEMBER IT AS A SUNNY, LATE winter morning, about two years ago now, as time and chance and the press of other things prevented me from writing this essay when the impressions were immediate. But they are still vivid enough: late winter, when the snows have melted and car tires leave great, muddy gouges in unpaved driveways.

I was standing with about twenty other people on the porch of a sprawling Victorian house, one of those hodge-podges of stone and wood with peaked gables, a turret or two, an enormous porch, and a 'barn' in the back yard (actually a large garage-and-shed) which, I deduce from their proximity to one another (that is, with less-than-an-acre yards), must have passed for middle-class development houses circa 1890.

Wayne, Pennsylvania, where I grew up, has sections of such housing. I may well have stood on this porch as a kid, trick-or-treating, but now I was there for something all book-people have experienced. I was in line, early in the morning, in the company of strangers, near-strang-

ers, and a few familiar faces, waiting for a book sale to start.

This was the house of the late Ms \_\_\_\_\_, a lady whose name was apparently well known in the mail-order and internet business. She also sold books by appointment. She had a large invitational clientele. I never knew her, and had in fact had passed by this house many times without ever knowing what wonders were hoarded within. After her (recent) death, her family held a series of sales, first for her invitational clientele, at which everything was offered for 50 per cent off. But today was different. It was the everything-for-a-dollar blow-out, not advertised, but more or less open to anyone. I had been tipped off by a bookseller friend. I simply showed up, acted like I belonged there, and I more or less did.

But as I listened to the conversation around me, as people reminisced about what a great bookseller the dead woman was, what excellent things they had bought from her, what a shame it was to see her magnificent collection picked over like this (even as the speakers, like a school of piranhas, were prepared to wipe it out completely), I realised that I was intruding on a funeral. All the sad-and-weepy personal stuff aside, this was

the send-off that mattered in the book-selling world. A bookseller's funeral.

I take my title from a book, of course. *Funeral Games* is a novel by Mary Renault in which she extends the metaphor of 'funeral games' — the various athletic contests and such that the ancient Greeks held in honour of a dead king — to describe the scramble for power as Alexander the Great's generals carved up his empire among themselves after his death. The Greek version was much more polite than the Etruscan and (later) Roman versions, where the 'games' turned bloody — one flattered the dead by adding to their number, and the undertakers invented gladiatorialism.

Bookseller funerals are always polite.

Now the doors were opened. We filed inside, ever so politely, nobody pushing, no elbows making contact (despite all the jokes you hear at more ordinary book sales, where the 'usual suspects' make comments like, 'We're all here! That's the end of this sale!' and 'I think I'll get a pair of spikes for my elbows next time!'). Some people said a few words to the family members and helpers who admitted us.

Then the race was on. Even here there was a unspoken code, an etiquette. You

may not shove. The younger and more agile persons may twist and weave a little, and slip by. But you never grab something out of someone's hand, or even right under their nose (in the latter case, unless you say 'Excuse me' first).

I was at a disadvantage at this point, because most of these people (who were of the invitational clientele) had been to the earlier half-price sales, not so much to buy (since Ms \_\_\_'s prices, even reduced by 50 per cent, tended to be quite high) as to case the joint. They knew exactly where everything was. All I could do was follow the crowd, while a little alarm was going off in my head: *Emergency! Emergency! Where is the science fiction section? Where are her Arkham House books?*

Sometimes, half a second before I reached a given shelf, someone swept the entire contents into a box with their arm. (I think they'd done more than case the joint. They'd very likely sneakily arranged the desired books just so during a previous visit, ready for the quick grab on the dollar-day.)

This was a piranha-frenzy, but, yes, a very, very genteel one, with voices in low tones, everyone making quick, purposeful motions. Before long piles of books began to assemble themselves, in the middle of the floor, under coats and dropcloths. Another part of the booksale code — you never, never take a book someone else has selected. That is tantamount to stealing (and in a place like this would get you kicked out). If there is any doubt, you hold up the book and ask aloud, 'Does this belong to anybody?' and if it *does*, you can be certain the owner will be upon you in an instant, even if he's on the other end of a long gallery. Book people have special senses. They can feel someone else's fingers on their books from great distances. Then you politely give it back, and everyone goes about their polite ravaging.

What you do is bring a cloth or use your coat to drape over your goodies once they have become too heavy to carry. In the summer, bring a light jacket, not so much to wear as to mark territory with. Another technique, which doesn't work so well in a crowded room, is to acquire the nearest cardboard box, fill it with your stuff, and push this along the floor with your foot.

The purposeful crowd spread throughout the house. I felt the inevitable anxiety: *The Heinlein first editions and the run of Weird Tales are in the other room which I haven't discovered yet.*

All this overwhelming courtesy reminded me of the etiquette of trash-pickers. No, I don't mean bums going through trashcans — although if someone drops *books* into a trashcan he is by definition a barbarian, whose opinion and contempt do not matter. (In the

wealthy neighborhood where I grew up, I once discovered an entire such can full of hardcover books. I pawed through them while a passerby saw me, and didn't pause. Nothing special, but the books didn't belong *there*. I later resold the first edition of *Lizzie Borden, the Untold Story* I rescued.)

I am instead referring to *high-class* scavengers like the ones you meet at major outdoor computer fairs. Toward the end of the day, the large companies represented in the 'flea market' section start disposing of their unsold inventory. So you climb into these huge dumpsters the size of railroad cars, often deep enough (if the accumulation is insufficiently high) that nobody's head sticks up over the edge. Safety necessitates speaking *loudly* and maybe even stationing someone on guard at the dumpster's edge, to make sure that incoming projectiles don't come crashing down on somebody's head. Everybody helps everybody else find whatever they're looking for: free televisions, spare parts, sacks of diskettes, or whatever. They lend screwdrivers and wrenches back and forth.

Trash-picking, I like to explain, is a gentlemanly occupation, closely related to archaeology. Complete strangers cooperate with one another, following an unspoken code. ('You, Sir, are a gentleman and a scholar', a techno-scavenger said to me once, 'but don't worry. Your secret is safe with me.')

There was no danger of incoming books landing on someone's head at Ms \_\_\_'s place, but it felt very much like truly elegant dumpster-driving. It was part of the same cultural experience.

I realised, ultimately, that this wasn't an ancient Greek funeral (with foot-races and discus-hurling) that I'd barged in on here. It was a *Ferengi* funeral. Watchers of *Star Trek: Deep Space 9* will remember those comic, rascally, cheapskate interstellar traders with the big ears who live by a sacred scripture called *The Rules of Acquisition*. There was a wonderful episode in which Quark the Ferengi has been tricked into thinking he was dying. Therefore he does what any sensible member of his species would do under such circumstances. He endeavours to make a *profit*, so that he will be honorably remembered, which is all-important to a Ferengi. (Indeed, a dream-sequence affords us a glimpse of Ferengi Heaven, a gaudy, gold-plated shopping mall, where you present your account books to the equivalent of St Peter, to show you made a profit in life, before they let you in.)

So Quark offers pieces of his own body for sale on interstellar eBay. It seems that Ferengi corpses are freeze-dried, chopped up into little bits, encased in plastic disks, and sold as coasters.

Relics of famous Ferengi become expensive collector's items.

Quark makes a 'killing', if you will pardon the expression, a bigger profit than all his lifetime of sales put together. Later when he discovers that, as part of a complicated conspiracy, his medical records have been switched, he is *not* dying after all, and an enemy has maliciously run the bidding up to incredible levels, Quark is terribly torn. He would almost rather die than give up that profit.

So here we were scrambling for the bits and pieces of the late Ms \_\_\_'s life and career, thus increasing her profit and her honor, since bookseller-Ferengi are ultimately remembered for the greatness of their hoard and the quality of their final, going-out-of-business sale. She was doing well, it seemed, from the praise I was overhearing from all around me. What great stuff she always had. What a shame to see her place taken apart like this — even as it was being taken apart.

But what about the *loot*? You want to hear about the *loot*? A tale of acquisition must include descriptions of the haul. I understand, having, as Quark would say, 'the lobes' for these things.

The Rare First Editions shelf (in what must have been the dining room) was almost bare by the time I got to it, 2.3 seconds into the sale. One of the few volumes left was a book called *The Corrector of Destinies* by Melville Davidson Post from 1908 ('being the tales of Randolph Mason, as related by his private secretary, Courtlandt Parks'), a beautiful, almost new copy with a Mylar protector over the boards. *What is this? I've vaguely heard of Melville Post. Some kind of Sherlockian mystery?* I drop it in my totebag (which grew to a box, which grew to a pile on the floor under my coat) to buy and sort out later.

If there was an Arkham House shelf or a pile of *Weird Tales*, I did not find them. One of the things I always do (and I am sure most of you do, too) when visiting an unfamiliar house is to glance at the books on the shelves. They tell so much about the person who lives there.

Ms \_\_\_ was a conventional literary person, although one of considerable refinement. She sold what she knew and liked, which was very sensible of her. You will never succeed in bookselling unless you can think like your customer, and appreciate what they appreciate. Her stock included a lot of poetry and art books, and a lot of odd little items from the nineteenth century with interesting bindings. There was no science-fiction section, though I found a couple of late Heinlein first editions (*To Sail Beyond the Sunset*, and *The Cat Who Walked Through Walls*) along with a British first of Arthur C. Clarke's *The Ghost from the Grand Banks*

in the mainstream literature/modern first editions section. (Not that they're particularly worth anything. Not that I have since been able to resell them, but when something like that is a buck, you take it now and ask questions later.) The one old science fiction book was Ralph Milne Farley's *The Radio Man* in hardcover, published by FPCI, 1948. I suspect I was the only person there who knew what that was. It had been left behind on that nearly swept-clean Rare First Editions shelf.

It was interesting to note that no one showed much interest in the mainstream/modern first editions area. *Those* shelves were packed solid, hours into the sale. I could go through them at leisure, after the initial frenzy had long abated, pick out the above-mentioned Heinleins and the Clarke, and also find a Salman Rushdie book I didn't have, *The Jaguar Smile, A Nicaraguan Journey*.

Upstairs, in a little side room which had gotten messy — debris on the floor, papers, envelopes, even a few boards from a few crumbling leatherbound volumes on a nearby shelf — I found a first edition of Kipling's *With the Night Mail* in the midst of that same pile of debris. A nice copy, with one plate loose. I shall have to carefully examine another copy to see precisely where that plate goes before I glue it back in. Then the book will be worth about \$100.00.

In that same room was an entire shelf of Christopher Morley first editions that had apparently interested no one. Poor Christopher Morley. His star has fallen.

After a while, as the crowd thinned out a bit (politely, politely . . .) it was time to really *pick* over the remains. Now (as long-time customers, my fellow Ferengi who had actually known Ms \_\_\_\_\_ lamented) the house was beginning to look a bit shabby, many of the shelves (save for mainstream modern first editions) almost bare, books fallen onto the floor. It was time to grab the expensive literary reference books in what must have once been an office — books that had not been for sale when Ms \_\_\_\_\_ was alive. Wow. *The Penguin Companion to World Literature*, a boxed, four-volume set, in immaculate condition. It counted as one item. I got it for a buck. I found an odd little book called *The Poet, the Fool, and the Fairies* by Madison Cawein (Bos-

ton: Small, Maynard and Company, 1912), a volume of verse, with nicely gilt-decorated boards. Immaculate condition. The title item seems to be a play of sorts ('A Lyrical Eclogue'). Is this worth reading/owning/selling? Buy now, research later.

Two hours into the sale, as I had assembled my first couple of crates of books, and was milling around the check-out table, I noticed Peter Ruber's *The Last Bookman* (a coffee-table-sized volume of tributes to Vincent Starrett, a great member of our tribe, Candlelight Press, 1968) among the cookbooks by the kitchen. After the feeding frenzy, you have to look for odd mis-shelvings like that.

I'd gone through everything, in every room of the house that was open to the public. How did I feel picking through the books in the shelf over Ms \_\_\_\_\_'s bed, the ones which were her obvious favourites, which she read through before she went to sleep each night? Did I feel like a ghoul, a scavenger, a tomb-raider? . . . Hell no. She was *one of us*. She would have *understood*. We were helping her orphaned books find good homes. Even though I had never known her, I honoured her, by making her last booksale all the more memorable (at least to me). While I can remember what books I bought from her stock, she lives on through them. It's all part of the Code. Quark the Ferengi would understand too, and salute her.

So there I was at checkout, maybe two and a half hours after this all started. I had just scarfed the copy of *The Last Bookman* (which ultimately turns out to be only worth about \$50, according to ABE-Books.com listings, but was still a pleasant find) when I learned, again from overheard conversation that the 'barn' out back *was also full of books!*

Oh my God . . .

The sellers had made a major strategic error, which worked to my advantage. I deserved some advantage after everybody else got the jump on me in the first minutes of the sale. They should have put up a huge sign saying, MORE BOOKS IN BARN, but possibly, since even this sale was not, theoretically, open to the public, perhaps they didn't want to get mobbed. Or else they just didn't think of it. In any case, few of my fellow book-vultures

(some of whom were elderly) had braved the ankle-deep mud in the unpaved driveway and the puddles in the back yard to go out to the barn. It was almost untouched. *That* was where I found the early William Morris book, the Dunsany first edition, the Rider Haggards, the history, photography, and old periodicals section.

It went on and on. Most of this material was tangential to my own interests, but stuff I could easily resell. I made, of course, a huge profit that day. My car was full when I left. I resold much of the loot to my friend the bookseller who had tipped me off about this sale in the first place. We both understood exactly what was going on. She had been unable to get away from her shop to attend. The service I had performed for her, for which I was rewarded by mark-ups on the books I resold to her, is called, in the trade, 'scouting'. If you buy for a dealer, you are a book-scout.

Some of the remainder I resold elsewhere. Some went into my own collection. It was not the very best book sale I had ever been to, but it was a very good one. A year or so later I got myself onto eBay, thus greatly expanding my capacity to resell things that I might not, myself, particularly want to keep. So of course I think back and wonder: *what should I have taken, that I left behind?* At the end of such a day, as your car fills up, you begin to feel a sense of 'restraint'. Maybe I have enough. Maybe I should leave a little for somebody else. What am I going to *do* with all this stuff? In retrospect you always come to appreciate a further Law of Acquisition that Quark the Ferengi has not yet explicitly revealed to humans: *restraint is for losers*.

Hail and farewell to the valiant Ms \_\_\_\_\_, whom I never knew. Thus do I praise and remember her. Thus did we all praise and remember her. By the time the sale was over, I was no longer an interloper, but one more of her 'mourners'. I could have addressed anybody there by their first name, if I knew their first name.

This kind of 'funeral' sure beats having yourself chopped up into little bits and sold as coasters.

And a profit, of course, is not without honour.

— Darrell Schweitzer, February 2003

# Gregory Benford

## Leaping the abyss

[First published in *Reason*, April 2002.]

Stephen Hawking seemed slightly worse, as always.

It is a miracle that he has clung to life for over twenty years with Lou Gehrig's disease. Each time I see him I feel that this will be the last, that he cannot hold on to such a thin thread for much longer.

The enormous success of his *A Brief History of Time* has made Stephen a curious kind of cultural icon. Its huge success has made him a curious kind of world-scale metaphor. He wonders himself how many of the starlets and rock stars who mentioned the book on talk shows actually read it.

With his latest book, *The Universe in a Nutshell*, he aims to remedy the situation, with a plethora of friendly illustrations to help readers along. In it, Hawking offers imagistic explanations for such complexities as superstring theory and the nature of time. The trick, of course, is translating equations to sentences, two very different languages. Pictures help enormously, though purists deplore them as oversimplified. I feel that any device is justified to span such an abyss of incomprehension.

As I entered, his office staff was wary of visitors, plainly suspecting I was a 'civilian' harbouring a crank theory of the universe. But I'd called beforehand, and then his secretary recognised me from years past. When I entered the familiar office his shrunken form lolled in his motorised chair, staring out, rendered goggle-eyed by his thick glasses — but a strong spirit animated all he said. You could sense the inner fire.

He had lost his vocal cords years ago to an emergency tracheotomy. His gnarled, feeble hands could not hold a pen. For a while after the operation he was completely cut off from the world — an unsettling analogy with the fate of mathematical observers who plunge into black holes, their signals to the outside red-shifted and slowed, by gravity's grip, to dim, whispering oblivion.

A Silicon Valley firm had come to the rescue. Engineers devised tailored, user-friendly software and a special keyboard for him. His frail hand now moved across it with crablike intent. The software is deft, and he could build sentences quickly. I watched him rapidly flit through the menu of often-used words on his liquid crystal display, which hung before him in his wheelchair. The inven-

tion has been such a success that the Silicon Valley folk now supplied units to similarly afflicted people worldwide.

'Please excuse my American accent,' the speaker mounted behind the wheelchair said with a California inflection. He coded this entire remark with two key-strokes.

Though I had been here before, again I was struck that this man who had suffered such an agonising physical decline had on his walls several large posters of a person very nearly his opposite: Marilyn Monroe. I mentioned her and he responded instantly, tapping one-handed on his keyboard, so that soon his transduced voice replied, 'Yes, she's wonderful. Cosmological. I wanted to put a picture of her in my latest book, as a celestial object.' I remarked that to me the book was like a French impressionist painting of a cow, meant to give a glancing essence, not the real, smelly animal. Few would care to savour the details. Stephen took off from this to discuss some ideas currently booting around the physics community about the origin of the universe, the moment just after the Big Bang.

Hawking's great politeness paradoxically put me ill at ease; I was acutely aware of the many demands on his time, and after all, I had just stopped by to talk shop. I am an astrophysicist and have known Stephen since the 1970s.

'For years my early work with Roger Penrose seemed to be a disaster for science,' Stephen said. 'It showed that the universe must have begun with a singularity, if Einstein's general theory of relativity is correct. That appeared to indicate that science could not predict how the universe would begin. The laws would break down at the point of singularity, of infinite density.'

I recalled that I had spoken to him about mathematical methods of getting around this, one evening at a party in King's College. There were analogies to methods in elementary quantum mechanics, methods he was trying to carry over into this surrealistic terrain.

'It now appears that the way the universe began can indeed be determined, using imaginary time.' We discussed this a bit. Stephen had been using a mathematical device in which time is replaced by imaginary time, as a notational convenience. This changes the nature of the equations, so he could use some ideas from the tiny quantum world. In the new

equations, a kind of tunnelling occurs, in which the universe, before the Big Bang, has many different ways to pass through the singularity. With imaginary time, one can calculate the chances for a given tunnelling path into our early universe, after the beginning of time as we know it.

'Sure, the equations can be interpreted that way,' I argued, 'but it's really a trick, isn't it?'

Stephen said, 'Yes, but perhaps an insightful trick.'

'We don't have a truly deep understanding of time, so replacing real time with imaginary time doesn't mean much to us.'

'Imaginary time is a new dimension, at right angles to ordinary, real time. Along this axis, if the universe satisfies the "no boundary" condition, we can do our calculations. This condition says that the universe has no singularities or boundaries, in the imaginary direction of time. With the "no boundary" condition, there will be no beginning or end, to imaginary time, just as there is no beginning or end to a path on the surface of the Earth.'

'If the path goes all the way around the Earth,' I said. 'But of course, we don't know that in imaginary time, there won't be a boundary.'

'My intuition says there will be no blocking in that special coordinate, so our calculations make sense.'

'Sense is just the problem, isn't it? Imaginary time is just a mathematical convenience.' I shrugged in exasperation at the span between cool mathematical spaces and the immediacy of the raw world; this is a common tension in doing physics. 'It's unrelated to how we *feel* time. The seconds sliding by. Birth and death.'

'True. Our minds work in real time, which begins at the Big Bang, and will end, if there is a Big Crunch — which seems unlikely, now, from the latest data showing accelerating expansion. Consciousness would come to an end at a singularity.'

'Not a great consolation,' I said.

He grins. 'No, but I like the "no boundary" condition. It seems to imply that the universe will be in a state of high order at one end of real time, but will be disordered at the other end of time, so that disorder increases in one direction of time. We define this to be the direction of increasing time. When we record something in our memory, the disorder of the



Greg Benford.

universe will increase. This explains why we remember events only in what we call the past, and not in the future.'

'Remember what you predicted in 1980 about final theories, like this?' I chided him.

'I suggested we might find a complete unified theory, by the end of the century.' Stephen made the transponder laugh dryly. 'Okay, I was wrong. At that time, the best candidate seemed to be  $N=8$  supergravity. Now it appears that this theory may be an approximation to a more fundamental theory, of superstrings. I was a bit optimistic, to hope that we would have solved the problem by the end of the century. But I still think there's a fifty-fifty chance that we will find a complete unified theory in the next twenty years.'

'I've always suspected that the structure never ends, as we look to smaller and smaller scales — and neither will the theories.'

'It is possible that there is no ultimate theory of physics at all. Instead, we will keep on discovering new layers of structure. But it seems that physics gets simpler, and more unified, the smaller the scale on which we look. There is an ultimate length scale, the Planck length, below which spacetime may just not be defined. So I think there will be a limit to the number of layers of structure, and there will be some ultimate theory, which we will discover if we are smart enough.'

'Does it seem likely we are smart enough?'

Another grin. 'You will have to get your faith elsewhere.'

'I can't keep up with the torrent of work on superstrings.'

Mathematical physics is like music, which a young and zesty spirit can best seize and use, as did Mozart.

'I try,' he said modestly.

We began discussing recent work on 'baby universes' — bubbles in space time. To us, space-time is like the sea seen from an ocean liner, smooth and serene.

Up close, though, it's waves and bubbles. At extremely fine scales, pockets and bubbles of spacetime can form at random, sputtering into being, then dissolving. Arcane details of particle physics suggest that sometimes — rarely, but inevitably — these bubbles could grow.

This might have happened a lot at the instant just immediately after the Big Bang. Indeed, some properties of our universe may have been created by the space-time foam that roiled through those infinitesimally split seconds. Studying this possibility uses the 'worm-hole calculus', which samples the myriad possible frothing bubbles (and their connections, called wormholes).

Averaging over this foam in a mathematical sense, Stephen and others have tried to find out whether a final, rather benign universe like ours was an inevitable outcome of that early turbulence. The jury isn't in on this point, and may be out forever — the calculations are tough, guided by intuition rather than facts. Deciding whether they really meaningfully predict anything is a matter of taste. This recalls Oscar Wilde's aphorism, that in matters of great import, style is always more important than substance.

If this picture of the first split second is remotely right, much depends on the energy content of the foam. The energy to blow up these bubbles would be compensated by an opposite, negative energy, which comes from the gravitational attraction of all the matter in the bubble. If the outward pressure just balances the inward attraction (a pressure, really) of the mass, then you could get a universe much like ours — rather mild, with space-time flat on such relatively tiny scales as our solar system, and even flat on the size range of our galaxy.

It turns out that such bubbles could even form right now. An entirely separate space-time could pop into existence in your living room, say. It would start unimaginably small, then balloon to the size of a cantaloupe — but not before your very eyes, because for quite fundamental reasons, you can't see it.

'They don't form in space, of course,' Stephen said. 'It doesn't mean anything to ask where in space these things occur.'

'They're cut off from us, after we made them,' I said. 'No relics, no fossil?' 'I do not think there could be.'

'Like an ungrateful child who doesn't write home.' When talking about immensities, I sometimes grasp for something human.

'It would not form in our space, but rather as another space-time.'

We discussed for a while some speculations about this I had put into two novels, *Cosm* and *Timescape*. I had used Cambridge and the British scientific style in *Timescape*, published in 1980, before

these ideas became current. I had arrived at them in part from some wide-ranging talks I had enjoyed with Stephen — all suitably disguised, of course. Such enclosed space-times I had termed 'onion universes', since in principle they could have further locked-away space-times inside them, too, and so on. It is an odd sensation when a guess turns out to have some substance — as much as anything as gossamer as these ideas can be said to be substantial. Again, the image of mathematical physics as French impressionism.

'So they form and go,' I mused. 'Vanish. Between us and these other universes lies absolute nothingness, in the exact sense — no space or time, no matter, no energy.'

'There can be no way to reach them,' his flat voice said. 'The gulf between us and them is unbridgeable. It is beyond physics because it is truly nothing, not physical at all.'

The mechanical laugh resounded. Stephen likes the tug of the philosophical, and seemed amused by the notion that universes are simply one of those things that happen from time to time.

His nurse appeared for a bit of physical cleanup, and I left him. Inert confinement to a wheelchair exacts a demeaning toll on dignity, but he showed no reaction to the daily round of being cared for by another in the most intimate way. Perhaps for him, it even helps the mind to slip free of the world's rub.

I sat in the common room outside his office, having tea and talking to some of his postdoctoral students. They were working on similarly wild ideas and were quick, witty, keenly observant as they sipped their strong, dark Ceylonese tea. A sharp crew, perhaps a bit jealous of Stephen's time. They were no doubt wondering who this guy was, nobody they had ever heard of, a Californian with an accent tainted by southern nuances, somebody who worked in astrophysics and plasma physics — which was, in our age of remorseless specialisation, quite a remote province from theirs. I didn't explain; after all, I really had no formal reason to be here, except that we were friends.

Stephen's secretary quietly came out and asked if I would join Stephen for dinner at Caius College. I had intended to eat in my favourite Indian restaurant, where the chicken vindaloo is a purging experience, and then simply rove the walks of Cambridge alone, for I love the atmosphere — but I instantly assented. Dinner at college high table was one of the legendary experiences of England. I could remember keenly each one I had attended; the repartee is sharper than the cutlery.

We made our way through through

the cool, atmospheric turns of the colleges, the worn wood and grey stones reflecting the piping of voices and squeaks of rusty bicycles. In misty twilight, student shouts echoing, his wheelchair jouncing over cobbled streets. He insisted on steering it himself, though his nurse hovered rather nervously. It had never occurred to me just how much of a strain on everyone there can be in round-the-clock care. A few people drifted along behind us, just watching him. 'Take no notice,' his mechanical voice said flatly, 'many of them come here just to stare at me.'

We wound among the ancient stone and manicured gardens, into Caius College. Students entering the dining hall made an eager rumpus. Stephen took the elevator and I ascended the creaking stairs. The faculty entered after the students, me following with the nurse.

The high table is literally so. They carefully placed Stephen with his back to the long, broad tables of undergraduates. I soon realised that this is because watching him eat, with virtually no lip control, is not appetising. He follows a set diet that requires no chewing. His nurse must chop up his food and spoonfeed him.

The dinner was noisy, with the year's new undergraduates staring at the famous Hawking's back. Stephen carried on a matter-of-fact, steady flow of conversation through his keyboard.

He had concerns about physicists' Holy Grail, a unified theory of everything. Even if we could thrash our way through a thicket of mathematics to glimpse its outlines, it might not be specific enough — that is, we would still have a range of choices. Physics could end up dithering over arcane points, undecided, perhaps far from our particular primate experience. Here is where aesthetics might enter.

'If such a theory is not unique, one would have to appeal to some outside principle, which one might call God.'

I frowned. 'Not as the Creator, but as a referee?'

'He would decide which theory was more than just a set of equations, but described a universe that actually exists.'

'This one.'

'Or maybe all possible theories describe universes that exist!' he said with glee. 'It is unclear what it means to say that something exists — in questions like, does there exist a man with two left feet in Cambridge. One can answer this by examining every man in Cambridge. But there is no way that one can decide if a universe exists, if one is not inside it.'

'The space-time Catch-22.'

'So it is not easy to see what meaning

can be given to the question, why does the universe exist. But it is a question that one can't help asking.'

As usual, the ability to pose a question simply and clearly in no way implied a similar answer — or than an answer even existed.

After the dining hall, high table moved to the senior common room upstairs. We relaxed among long, polished table, comfortable padded chairs, the traditional crisp walnuts and ancient aromatic port, Cuban cigars. And somewhat arch conversation, occasionally skewered by a witty interjection from Stephen.

Someone mentioned Stephen Weinberg's statement, in *The First Three Minutes*, that the more we comprehend the universe, the more meaningless it seems. Stephen doesn't agree, and neither do I, but he has a better reason. 'I think it is not meaningful in the first place to say that the universe is pointless, or that it is designed for some purpose.'

I asked, 'No meaning, then, to the pursuit of meaning?'

'To do that would require one to stand outside the universe, which is not possible.'

Again the image of the separation between the observer and the object of study. The gulf. 'Still,' I persisted, 'there amazing structure we can see from inside.'

'The overwhelming impression is of order. The more we discover about the universe, the more we find that it is governed by rational laws. If one liked, one could say that this order was the work of God. Einstein thought so.'

One of the college fellows asked, 'Rational faith?'

Stephen tapped quickly. 'We shouldn't be surprised that conditions in the universe are suitable for life, but this is not evidence that the universe was designed to allow for life. We could call order by the name of God, but it would be an impersonal God. There's not much personal about the laws of physics.'

Walnuts eaten, port drunk, cigars smoked, it was time to go. When we left Stephen guided his wheelchair through the shadowy reaches of the college, indulging my curiosity about a time-honoured undergraduate sport: climbing Cambridge.

At night young men sometimes scrambled among the upper reaches of the steeply steepled old buildings, scaling the most difficult points. They risked their necks, for the glory of it. Quite out of bounds, of course. Part of the thrill is eluding the proctors who scan the rooftops late at night, listening for the

scrape of heels. There is even a booklet about roof-climbing describing the triumphs and centuries-long history.

Stephen took me to a passageway I had been through many times, a short cut toward the Cam river between high, peaked buildings of undergraduate rooms. He said that it was one of the tough events, jumping across that, and then scaling a steep, often slick roof beyond.

The passage looked to be about three metres across. I couldn't imagine leaping that abyss from the slate-dark roofs. And in the dark, too. 'All that distance?' I asked.

'Yes,' he said.

'Anybody ever miss?'

'Yes.'

'Injured?'

'Yes.'

'Killed?'

His eyes twinkled and he gave us a broad smile. 'Yes.' These Cambridge sorts had the real stuff, all right.

In the cool night he recalled some of his favourite science fiction stories. How much stranger the universe was turning out than even those writers had imagined. Even when they discussed the next billion years, they could not guess the odd theories that would spring up within the next generation of physicists.

A week after this evening, I got from Stephen's secretary a transcript of all his remarks. I have used it here to reproduce his style of conversation. Printed out on his wheelchair-computer, his sole link with us, the lines seem to come from a great distance. Across an abyss.

Portraying the flinty faces of science — daunting complexity twinned with numbing wonder — demands both craft and art. Some of us paint with fiction. Stephen paints with his impressionistic views of vast, cool mathematical landscapes. To knit together our fraying times, to span the cultural abyss, demands all these approaches — and more, if we can but invent them.

Stephen had faced daunting physical constrictions with a renewed attack on the large issues, on great sweeps of space and time. Daily he struggled without much fuss against the narrowing that is perhaps the worst element of infirmity. I recalled him rapt with Marilyn, still deeply engaged with life, holding firmly against tides of entropy.

I had learned a good deal from these few days, I realised, and most of it not at all about cosmology.

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