Motley

Jim Benford **number 1, August, 2012**

As a new member of this august organization, I will introduce myself at some length. I've been in fandom for almost 60 years now, starting from reading science fiction in 1952. That was shortly after our family returned from the occupation of Japan, where my father worked for Gen. MacArthur, who he did not like, but did respect. My twin brother Greg, who I'm sure you know of as an SF writer, discovered the Atlanta Science Fiction Organization, ASFO, and attended a few meetings before dad was reassigned to Germany.

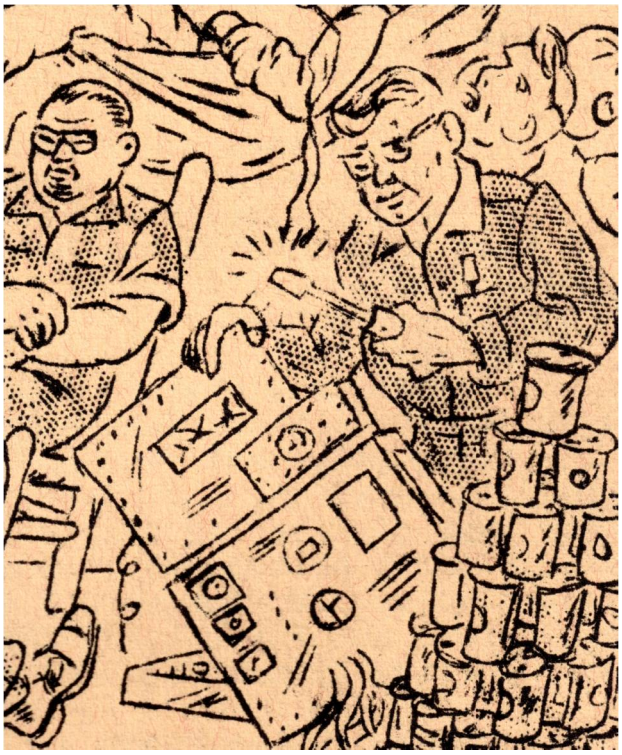
We published our 1st fanzine, *Void* #1, in early 1955 in Germany. 13 issues came out by 1959, when we were living in Dallas. Production was then taken over by Ted White in New York, Greg wrote editorials from college, and I drifted away into studying physics. Greg and I both went to California for graduate school and contacted the very lively social fandom of California. I made many lasting friends, some of whom I still see today,

After grad school in La Jolla, my wife Hillary and I moved to Northern California where I still reside in the splendid San Francisco Bay Area. I've had a long career in applied physics research: 140 scientific papers, 6 books, countless projects. I worked for Physics International on very high power pulsed electrical devices, largely those producing intense electron beams, when specialized in developing powerful microwave sources using them. After 26 years, I left in 1996 to establish Microwave Sciences, my own company. That was a terrific decision: it was extremely successful and made my prosperity. I officially 'retired' in 2008 but still have active programs and a lot of pro bono work, primarily about starships.

Yes, starships. Starting about 20 years ago I have increasingly worked on space propulsion, largely advancing the ideas of Bob Forward, who I knew well, about beam- driven sails, sailships. In 2000, I led a team that demonstrated, for the 1st time, flight of sails with a microwave beam in the laboratory. Two years ago I joined Icarus interstellar, the leading starship research organization, where I lead Project Forward, whose goal is to advance these this concept.

I wrote and sold several short stories in the 70's, but decided to concentrate on research, which paid better, for sure. I've had a low level of fannish activity over the decades since the 70's, contributing for example to ~~Bob~~ Robert Lichtman's FRAP and a small private apa. I attend world cons about every 5 years, and know a lot of science fiction writers.

I'm joining because I'd like a broader experience of fandom. I hear that it's has seen better days. Maybe I can help out. I hope this 300 mailing will be spectacular.
Other statistics: I've had one wife all these 46 years, 2 children and now 5 grandchildren. Our daughter Vanessa lives in Melbourne, has 3 children. Our son Dominic works for NASA Goddard, lives in Maryland has 2 children, twins in fact.



Here's a picture of me as an electronics hobbyist from the cover of Void #13 (that's Tom Reamy on the left)

and a photo of me as I am today.

I'm going to use material from other contributors in Motley, starting with the following piece by my twin brother Greg.

A CAMBRIDGE EVENING

Gregory Benford

The invitation was on heavy bond in a delicious oyster color. I opened the Trinity College envelope noting it bore no stamp, apparently placed in my Institute of Astronomy mailbox by hand. Flowing script invited my wife Joan and me (see photo) to evening meal with Professor Martin Rees.

Very good; the full High Table college show, then. In 1976 I was on sabbatical as a visiting fellow in Cambridge, England. I went there to study pulsars where they'd been discovered, but quickly became more interested in the luminous jet just seen in radio frequency maps of M87, the nearest active galaxy.

Martin Rees was then the Plumian Professor of physics and the director of the Institute of Astronomy, appointed just after the departure of Fred Hoyle. He had agreed to host my sabbatical, a stay that began my astrophysics career; I've spent the decades hence mostly on pulsars and galactic jets. In Cambridge I learned much more than I anticipated.

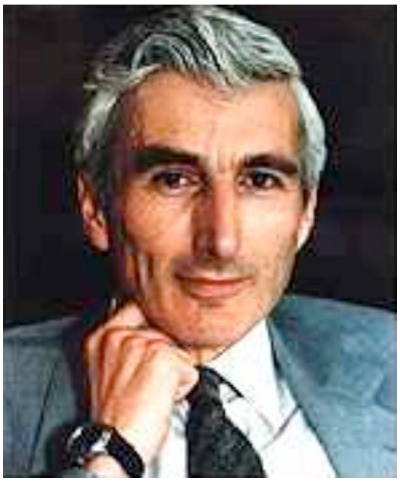
Joan & me, about that time

Precisely on time, Joan and I walked through the Great Gate, the main entrance to the college, leading to the yawning Great Court. In the centre of the court stood an ornate fountain, traditionally fed by a pipe from Conduit Head in west Cambridge, not the unreliable Cam River nearby. A solemn porter in a black bowler hat welcomed us, remarking gruffly on the chilly air, and nodding at the invitation as I presented it. "Ah, the Rees room."

Trinity College undergraduates passed in gowns of dark blue. A statue of the college founder, Henry VIII, greeted us from a shadowy niche above the doorway. Martin Rees stood beside it, a slight man with a hawk nose and incisive gaze, bowing to Joan with a broad smile. I imagined we'd eat at the high table, as I had before for lunch, but instead Martin took us into a private dining room. I walked in with Joan and saw at the table two men and their wives: Paul Adrien Maurice Dirac and Stephen Hawking. Martin had said nothing to alert us.

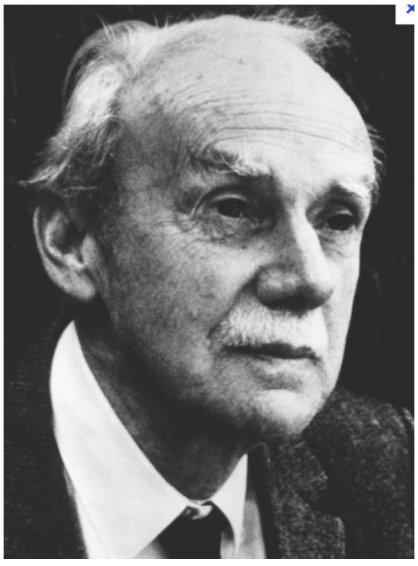
Newton, Nehru and Maxwell were alumni of Trinity, and Dirac stood in such company; soon, so would Hawking and Rees.

Rees



The dining room was small, with room for six at the table. Soft lighting cast glows on the dark wood walls amid the scene of 700 years of academic elitism. The leadened plates stamped with the famed Trinity monogram framed a small salad. The flatware was heavy, dark silver and tall stemmed glasses ranked to the side. The servers wore formal tuxedo styled clothes and professionally disinterested faces. The headwaiter handled all dishes with white gloves and led the two solemn under-waiters.

DIrac



I said very little through the salad, letting Joan carry our side. She entertained them with stories to adapting to English home appliances, her tinkling laughter softening the atmosphere. I reflected. Dirac had won a Nobel in 1933 for the first relativistic theory of particles, the Dirac equation. “The great papers of the other quantum pioneers were more ragged, less perfectly formed than Dirac’s,” my friend Freeman Dyson had said to me when I was in graduate school. Freeman had taken Dirac’s Cambridge quantum mechanics course as a precocious 19-year-old. Of Dirac’s discoveries, Freeman said, “His papers were like exquisitely carved marble statues falling out of the sky, one after another. He seemed to be able to conjure laws of nature from pure thought.”

This is an evening to keep your mouth shut, I thought, sitting at the centuries-old table and sipping a light Chardonnay (French, of course) served with the salad. Next, a tasty soup arrived, attended in strict silence by the stiff waiters. I noted that the French red wine was older than I was, a 1938 from the Fellows’ Cellar. A Haute Medoc, it was deep and rich with a surprising plum aftertaste.

Famously, Dirac’s wife Manci spoke little, and he even less. His colleagues in Cambridge jokingly defined a conversational unit of a dirac -- one word per hour. Dirac was a slight man and autistic, widely known as hard to draw out. He said this concentration proved crucial to his success as a theoretical physicist, for he could remain focused on a problem for a long time. He also could order information about mathematics and physics in a systematic way, employing his visual imagination and determination. (Decades later, I saw medical practice focus on this supposed disorder, “fixing” it with drugs and therapy. How many geniuses have we lost this way?)

I asked him how he concentrated solely on his research. “Don’t talk,” he said with admirable brevity and a smile. He also said he only stopped work on Sunday, when he took long strolls alone. He had struggled to find the Dirac equation for months, getting nowhere, then took his usual Sunday walk—and the entire solution came to him when he was crossing a small bridge. He hurried to a nearby pub, asked for lunch and wrote the equation on the back of the menu so he would not forget. He seldom looked directly at anyone, but this time he stared me in the eye. “There it was, out of nowhere.”

“Do you still have the menu?” I asked, eyes wide. When I said it would be a charming historical momento, he dismissively waved his hand. He had used it to start a fire in his chilly college rooms.

The Navy bean soup done, talk moved on. Some mention of English politics arose, at a time when Maggie Thatcher was moving to the fore, Martin squelched with, “I’m entirely infra-red,” which meant something like Trotsky. He had no wife then. Hawking’s wife rolled her eyes at this statement, saying nothing.

As the waiters smoothly placed plates of veal ala brochard before us, Hawking changed the tone of the conversation with his halting words. He wanted to talk about science fiction. Martin had told him I wrote the stuff. I'd had the impression that at Cambridge science fiction was something serious scientists never would do, and seldom discuss -- especially at a table where Newton changed the world over bowls of steaming lentil soup, and said so. Hawking gave a slanted grin. "Fred Hoyle has left us, but he is not forgotten."

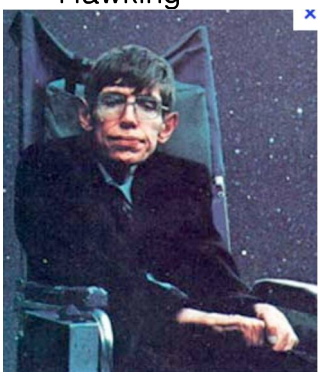
Hawking talked in slurred tones about what we now call his "chronology protection conjecture". Why does nature apparently abhor a time machine? He said, "It seems that there is a Chronology Protection Agency which prevents the appearance of closed timelike curves and so makes the universe safe for historians."

Martin pointed out that there was strong experimental evidence in favor of the conjecture — from the fact that we have not been invaded by hordes of tourists from the future. All this discussion Hawking eventually included in a book in the 2000s, along with his fears that our TV broadcasts, would bring ravening aliens to our door. He thought about such speculations in the 1970s, but apparently kept them largely to himself during his climb to fame.

Dirac spoke about the walks he took around Cambridge, relating favorite routes in great detail, but otherwise had no small talk. Slowly Hawking turned the conversation around to what books we read, asking each of us. He then announced that since he was thirteen he had never bothered with the assignments in Literature classes, preferring science fiction. Dirac remarked, "In science one tries to tell people, in such a way as to be understood by everyone, something that no one ever knew before. But in poetry, and I suppose in fiction, it's the exact opposite." To my surprise Rees assented. "But science fiction leads to science," he said. Dirac was silent and looked puzzled.

Stephen spent a long while relating memories of sf short stories he'd read.

Hawking



Like many fans, Hawking could recall ideas but not authors or titles. He was a big Robert Sheckley fan, I deduced, from what his remembered plots. Rees said he thought science fiction was like a literary dialect. It had its own vernacular and insider terms, its unusual pronunciation patterns and rhythms. A native sf "speaker" uses the argot of an audience, one that knows what Delany later called the sf reader protocols – signals of broader meaning. A good example is,

“The door dilated,” implying a changed world. Nods all round, though Dirac said he had read little sf beyond Wells and Brave New World. “Perhaps I should.”

We all agreed that aliens in fiction serve as a distorting mirror to show what humankind is not. Hawking spoke with jerky gestures, fighting the erosions from his Amyotrophic Lateral Sclerosis, which I knew as Lou Gehrig’s disease. His speech was slurred, brief and almost unintelligible, his conciseness a skill that later worked well in *A Brief History of Time.* Hawking’s fame was rising on his striking research ideas--that empty space wasn’t empty after all, and black holes aren’t black.

His wife, with her tight, focused look, scoffed at ideas like aliens, likening them to imaginary beings. Stephen retorted tartly that so were angels. A sudden silence around the table. I sipped the wine, which was excellent and still blossoming with rich new tones. This incident prefigured the issue of her Baptist faith versus his firm atheism, which eventually split them up.

I recalled this evening lately, looking over notes I made that very evening. My wife Joan died of cancer in 2002. In 2005 Rees was elevated to a life peerage, sitting as a crossbencher in the House of Lords as Baron Rees of Ludlow, a seat in the County of Shropshire. By then Astronomer Royal, he told the British Interplanetary Society, '"It is better to read first-rate science fiction than second-rate science; it's no more likely to be wrong and is far more stimulating than second-rate science. And I think it's good to read the great classics of science fiction.”

After a five course meal we had the finishing treat: an English, less sweet, version of crème brûlée, known as "Trinity burnt cream.”
Now Martin is master of Trinity College and the best known astronomer in the world. Recently, in *Our Final Hour*, he predicted that one of the two following outcomes is inevitable for humanity:

**Extinction from runaway effects of new technology (nanotechnology, robotics) or else from uncontrolled scientific research; terrorist or fundamentalist violence; or destruction of the biosphere; or else*
** Our expansion into space, survival through colonization. He now advocates free markets and believes that the wealthy will push back the frontiers of space.*

Not infra-red any longer.

I never saw Dirac again, but have kept up with Hawking and Rees through the decades, visiting Cambridge often. They both use science fiction in their popular writing, whereas in the 1970s that was not the sort of thing you mentioned at High Table. Our world has changed, partly because of those men.

What distinguished them the most, I think, was their quiet verve, their wish to grapple with life. They were eager to deal with whatever came at them. Dirac probed our fundamental understanding of the world in his monk-like solitude. Hawking persevered against his crippling disease to become a major cosmologist. Rees cannily wove his way into great power, urging the Institute for Astronomy to the forefront of the field, becoming Astronomer Royal, and a major figure bringing science to the public as well.

The evening left a deep impression on me. On the walk home, I remarked to my wife that I would probably never have a better evening--at least, with my clothes on. She took that as a challenge and made the evening even more so.

From my time there I gathered background that eventually appeared in my 1980 novel *Timescape*, which explores how scientists confront the unknown. Cambridge is steeped in tradition, but its scientific culture is radical.

Motley is from Jim Benford, 1041 Los Arabis Ln., Lafayette, CA 94549. Phone is 925-3514667. E-mail: jbenford@earthlink.net.

Intended for the 300th mailing of FAPA.