CONTRIBUTORS' GALLERY

Joel Alexander - [Box 15, Southgate Sta., Seattle, WA 98125] is a graduate student in archeology at the Washington State Museum. An article detailing some of his archeological work for the novel he is currently working on will be appearing in Outright '79. His new novel, "Big Rig," is still being written, following the style of his last book, "The Jade Falconer." In the spring of 1982 she started her first self-publishing company, "Jewel Press," and has self-published a book of her poetry, "Magpie and Such." The book is a collection of poems from her own personal files which contains the non-fiction "ット大里村," a piece published in "Roxon "90" which has been reprinted so often that Riggs has lost count.

Mary Schenck - [26 Cleveland Ave., Westfield, NJ 08862] is an artist whose artwork is frequently to be seen in current magazines. She is a graduate of the Art Institute of Chicago. She is a freelance writer and editor of "My Secret Life in the Halls," a biographical novel about a woman's search for a lost friend who has been missing for years. She lives with her husband, Mark, and four cats, and claims to be bisexual.

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George Schneider - [135 E. Johnson St., Madison, WI 53703] is an illustrator and cartoonist, with an understanding of human nature. He lives with his wife, Sarah, and their two cats, Mr. and Mrs. Schneider.

Dave Sherman - [10 Broadway, NY 10064] is an artist and painter, known for his innovative and very contemporary style. He is the author of several novels, including "The Man from the Future," which has been reprinted in "Roxon "90." She lives with her husband, Mark, and four cats, and claims to be bisexual.
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SF³
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Madison, WI
53701-1624
A big "Hello" to all you sci-fi fans out there from beautiful downtown Madison, WI! Your roving reporter, Rona Rocket, is here with all the inside tidbits about all your favorites in the MadCity.

Our top story concerns the addition of a brand-new fan to the household of Julia Richards and Carl Harris. He made his debut on 1982 August 27, at 11:57 (much to the relief of Hanna, who was very overdue, poor dear.) p.m. "Adrian Meredith Richards (They resisted the temptation to name him "Planet"). Harris weighed in at a whopping 8 lbs. 5 oz., and was 20 inches long. No featherweight, this! Mom and child (and Pop) are doing well. The addition of "nanny" Vicky Loebel has eased the pressures on the parents who have just finished up their PhDs and are in the process of moving to California, where jobs in the mundane world await them. Vicky, who plans to stay with the Richards-Harris family for some time, is a well-known D&D player and DM in SF^3 circles.

Another prominent D&D personality also paid us a visit this fall—Dr. Bill ("Drugs") Hoffman flew in from Portland, OR, for a week. He even dropped in at Nick's on Wednesday night long enough to get a Coke spilled in his lap during one of the the more antic moments of an eventful evening, an evening highlighted by a long series of puns and gags inspired by news of the release of the Reader's Digest Condensed Bible.

I hate to be a wet blanket, but here's a report on a major disaster for one of our people: The catastrophe happened over Labor Day weekend while local entrepreneur, Hank Luttrell was at Chicos. Some kind of thingamajig on his water heater went on the fritz (Please pardon the technical language) and two and a half feet of water filled the basement storeroom of his bookstore. I am talking Soggy City, here, folks! Once the water was drained away there was an absolute ton of papier-mache to clean up. Then, to cap things off, his flake of a landlord pulled several bizarre moves, like ripping off the roof and stuffing it down the chimney. I kid you not! Hank hastily found himself a new place to set up shop. (And his ex-landlord ran away to Mexico.)

Now 20th Century Books is right in the hub of things in downtown Madison, just off the Capitol Square at 108 King Street, where Hank officially opened on November 8th. The store will be very easy to get to from Wiscosm when all you true believers hit Madison in March. And as if that silver lining to Hank's thundercloud wasn't silver enough, get a load of this: He's opened a second store, in McCrory's dime store, at a local shopping mall.

Speaking of medical news, Diane Martin is literally jumping for joy these days, since she had her hip wired for electronic pain relief. She carries around a little box that sends electric charges into that nasty old bursitis, miraculously turning it off. She's thrown away the cane that was her constant companion for the past two years and is busily wearing out shoes. Congratulations, Diane!

The publishing world has been hearing from us lately. Sara Campbell is the proud author of a thought-provoking analysis of Blade Runner in the December issue of Fantastico Films. An excellent piece of work, must reading for all those interested in serious SF films. Another budding author is James Corrick, brother of SF^3 president, Perri Corrick-West. His story, "When the Revels are Ended" adorns the pages of the December issue of Isaac Asimov's. Be sure to look both of them up!

We've had other visitors in Madison lately, including the 1982 TAFW winner, Kevin Smith; last year's TAFW winner (and Aurora artist), Stu Shiffman; Aurora poetry expert, Terry Carey; and
Aurora columnist, Ctein. They fanned out on Jeanne Gomoll's floors and furniture for the three nights they spent in Madison. In spite of the discommodious sleeping arrangements and the killer wasp (Jeanne ran out of spray starch.), the group insisted that they'd had a good time here before making their escape to Minneapolis for PlurCon. Later on in the month, Linda Lounsbury (one half of last year's DUU team), visited Madison for an academic conference sponsored by the State Historical Society.

On October 14th, Jeanne Gomoll endured having what felt like a two-inch layer of caked make-up smeared on her face and spent two and a half hours in the UWA-TV studios to provide inter-episode chit-chat for the recently-aired Hitchhiker's Guide to the Galaxy. Though one interview segment lasted barely three minutes, clever Jeanne managed to plug both Aurora and WisCon, while commenting on some common SF themes satirized in Hitchhiker. Jeanne wasn't the only one to grace the media recently. Richard Russell and Yours Truly were interviewed on local pop radio station, WISM, as part of their regular public service information program.

Speaking of Jeanne, some ominous grumbling was heard from her direction when—just three days after the SF3 telephone directory had been published—four people had the unmitigated gall to move! It's rumored that she has been inquiring about four-for-the-price-of-two hit contracts through the local Mafia book distributors.

The new phone books are here! Cubes #1 and #2 (edited by Jeanne Gomoll and Diane Martin, respectively) have been published. Cube is a semi-frequent newsletter designed to apprise locals of up-coming social events and address changes. If you plan to visit our fair city make sure to send us a SASE for your very own copy. Editorship will rotate among the group members.

Planning is moving along at its usual rapid pace on WisCon 7. Actually, there's been a minimum of ego-outbreaks so far, programming is developing fast, and scheduling has already begun. Ain't it amazing!

Lynne Morse has sent a couple of post cards, complete with micro-dots, from Italy, where she's studying until August. She's enjoying her sojourn so far, although she does express a desire for American food and news about what her friends are doing back in the good ol' USA.

Rex Nelson is back in the Madison scene after he and the Navy had enjoyed as much of one another as they could stand. Welcome home!

Madeline L'Engle's A Wrinkle in Time was produced by the Madison Children's Theatre this fall. As an added treat, the author spoke to an enormous audience at the Inn on the Park (where we held WisCons) on October 15th. According to at least one attendee, L'Engle was "fascinating". Local artist Georgie Schnobrich found a chance to show off her considerable skill again when a birthday cake was ordered up for Jim Cox. A very convincing Conan, battling a snake named "60", adorned the surface of this delicious concoction. Georgie is becoming deservedly famous for her culinary masterpieces.

Alexis Gilliland wrote an article in the most-recent-but-one Boonfark, responding to Patty Lucas's article on evolution in Aurora 20. His article was rather strange, since it was so obviously a response to Patty's article, yet he mentioned neither her nor Aurora by name, making only vague allusions instead. Is he afraid we'll sue him? Or did he just forget? Well, at least we're making some kind of impact.

We all know what a lot of work it is to put together an effort as magnificent as Aurora. And we know how some people will go to any lengths to avoid this work. Some people out-do themselves, however, by fleeing from town, from the state, even. In fact, all the way to Chicago. (You know who you are?)

Those who have chosen to stay in town and lose all their free time to the SF3 machine have planned ahead: scheduling work for themselves well into the next decade. However, to maintain some pretense to fanthiness, they have published the next three issues of *Aurora*:

#23 - Education and SF  
#24 - Underappreciated Women SF Writers  
#25 - Humor and SF  

The publishing cooperative of *Aurora* welcomes your submissions. I'd even go so far as to say they covet your submissions. For articles and book reviews, send them an outline or proposal first. For covers, they want preliminary sketches. You can submit other art directly, or get a chance to illustrate specific articles. The writers' guidelines are available for a SASE.

As you can see, these SF-cubers keep themselves busy...sometimes too busy to my way of thinking. Sometimes they don't even bother pretending to generate good gossip!

Somehow they always manage to generate mistakes, though, or as we call it in the magazine trade, "errata".

Colophon to the contrary, Terry Garey is a much-valued member of the SF3 Publications Committee.

The SF3 office is not located at 1128 University Avenue. It resides instead, more or less, in the (very dry) basement of 20th Century Books, 108 King St., Madison, WI 53701.

The Martin Morse Wooster quotation in last issue's news column was from a private letter (to Jeanne Gomoll), not from Pong.

The editors had a few problems getting their information straight in Contributors' Gallery of #21. They listed Grant Canfield, Bill Rotsler, and Stu Shifman by mistake. Greg Rihn and Steve Fox's self-portraits appeared, but no bios. And Peter Theron, co-artist for the back cover, was accidentally omitted. For those of you tactless enough to ask, Jeanne Gomoll is a graphic artist (at least that's how she spells it), and Stu Shifman was choir for the Flushing WorldCon. The *Aurora* crew is getting a little testy if you ask me.

In Jan Bosted's book review column, Richard A. Lupoff's story, "With the Bentfin Boomers in Little Old New Orleans", was mistakenly attributed to Harlan Ellison.

Well that's all the mistakes, gossip, and general news I could find this time. See you in the next issue!
LETTERS

On Delany on Le Guin
Cy Chauvin
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Science fiction is peculiarly malleable, and invites the construction of parallels, and I believe that this is what Delany has done in his remarks about Le Guin's novel [in Aurora 21]. Alexei Panishin gave an excellent example of this at work:

When I began Rite of Passage in 1961, a parallel between the basic situation of powerful scientifically advanced ships and powerless retarded Colony Planets that I promised, and the Have and Have-Not nations occurred to me. When I gave the book to Chip Delany to read in the summer of 1967, however, the parallel didn't occur to him. He thought it was "too obviously" about the blacks and whites in America. Some six months later, when I was proofreading the galleys of the novel at the time of the Tet Offensive, it struck me that anyone reading the book would necessarily think it was about the US in Vietnam. Finally, when the book was published, one of the first reviews of it that I saw said, "In reading Rite of Passage, I was reminded of the Sephardim and Ashkenazim in Israel. I wonder if Panishin had this in mind?" ["SF in Dimension", Fantastic, Feb. 1972]

These parallels are obviously constructed by the reader, and are not "uncritical" "appropriations" by the authors. Nor are the parallels fixed. Gay novels may focus on successful love affairs, and thus for a new generation of readers the relationship even Delany sees won't be there. But Durston, however, will always have a fixed relationship with the western plot — no one will ever compare it to a doomed homosexual novel, or to the black and white struggle in America! That's because a space opera is directly derived from the western novel, while The Left Hand of Darkness is not derived from any other type of novel. I hope this response doesn't seem like that of a stubborn reader clinging to his views in the face of all reasonable evidence to the contrary. I simply feel that Delany is projecting his own ideas into Le Guin's novel — ideas that can fit, but any esthetic failure resulting is of Delany's creation, not Le Guin's.

Avedon Carol
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When I first read The Left Hand of Darkness I think I credited Le Guin with a consciousness she may not have had. I thought she was saying that both the tragic death of Estraven and the slow-down in the diplomatic cause Genly had come to Winter for were directly the result of Genly's homophobia and perhaps a bit of misogyny. Genly screws up basically because he doesn't trust Estraven, and the only reason he seems to have is that Estraven just doesn't act enough "like a man". It seemed pretty obvious to me that the problem Genly was confronting wasn't so much diplomatic and bureaucratic obstruction as it was his own unwillingness to accept Estraven's openness. He seemed constantly uneasy about the effeminate appearance of the people he runs into; I could almost hear him thinking, "This guy is faggy" every time he met someone. And Estraven didn't have to die if Genly hadn't been such an idiot. So, at the time I was reading it, RHOD seemed to be saying that homophobia was foolish. But I've come to realize that Le Guin wasn't really saying this, that I was just reading it into the book, making it the book I wanted to read. And I think Chip is right about this — that the best Le Guin was willing to show us was another terminal case of a queer not being able to direct himself properly, and paying the consequences. (Like having a tree fall on you if you don't fall in love with Kier Dullea in The Prest?) It's just too much of a coincidence, too, that anyone with a vaguely homosexual interest still has to come to a bad end or turn out to be crazy or something. (And, Cy, Le Guin does make the people of Winter male, whether she means to or not. Her defensive explanation of the use of "he" as the appropriate pronoun only drives the point home farther.)

Nominees for "Under-Appreciated Writers"

Anne Laurie Logan
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Andre Norton: Norton certainly has a great many devotees in SF fandom (and out of it!), but there is still a widespread feeling that her books are trivial hackwork fit only for adolescents and
fantasy costumers. She is, however, and has for many years been, a significant and fertile influence on a great many writers ranging from Harlan Ellison (Check the dedication in her book, The Stars Are Rare!) to new writers like C. J. Cherryh. For many of us, fans as well as pros, Norton was the first SF writer to tell us that science fiction didn’t have to involve only middle-class white male engineers and their exploits building rocket ships, fighting galactic battles with conventional weaponry, and subduing alien and inferior races (read: women, non-whites, and the non-middle-class). For this alone, and even if all her books were as trivial and unimportant as a lot of people who’ve never read any of them assert, she would deserve our respect. If it hadn’t been for her fiction, a lot of us wouldn’t be here quibbling over the lit’tle worth of science fiction and science fiction fanzines today.

Doris Piserchia: This woman’s work is weird, alternately hilarious and disturbing. Even when she over-reaches herself—she frequently does—her books are refreshing, distinctive, and boundary-stretching. She deserves a wider audience, and I’m glad to see that (now that Spacelangel and The Spinner have been distributed through the SF Book Club) she finally seems to be attracting one.

Underappreciated Women SF Writers

Jessica Amanda Salmonson
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as explained in "All the News That Fit"; Margaret St. Clair. She was writing SF with themes of sexuality in the 50s; no one else was. She always included strong female characters one way or another; it was quite rare when she started. She wrote The Voyages of Noa, Dolphins of Altair, The Shadow People, and...scores of short stories (some with feminist themes) under her own name and under the name of Idris Sebright. Her novels are all out of print, which is an abominable state of affairs. She’s never received the critical attention she richly deserves.... You could inform the world that she has other novels unsold (at least one, I think). She also has a collection of stories, Catch the Sky and Others.... Of her novels, only Message from the Eocene isn’t particularly good. Dolphins is simply an unrecognized classic, perhaps the first time dolphin intelligence was investigated in an SF novel. If you focused on her work, it might heighten fan interest in it and cause some enterprising publisher to reissue her books, maybe put together a second collection.... She’s been in this field a long time, and her perspective is being lost or ignored.

You should also consider someday doing an issue on various woman writers who only did one or two neat books and who’ve been ignored or forgotten. Gertrude Friedman’s The Revolting Boy, for instance.... I’ve never seen it reviewed by anyone ever, yet it’s simply super.... The late Miriam Allen DeFord was Margaret St. Clair’s close friend and was also writing "new wave" before anyone heard of it; she has one collection...called Xenogenea.... There are lots like this, none whose work could be discussed for a whole issue but each deserving an essay or in-depth review on her contribution to this field.

Among [Aurora 21’s] reviews, I was impressed by the contrast between Jeanne Gomoll’s positive and Linda Frankel’s more nearly negative appraisals of The Wanderground. Though the reviews are dichotomized, I think there is no reason to try to figure out which opinion is "correct". Both analyses are essentially correct. There is an element of danger, and an element of constructiveness, in most political perspectives, and The Wanderground represents a political perspective far more than it represents a story (or set of stories). One thing both critics overlook, though, is the non-political aspect. (No doubt because the politics overwhelm it). Individually, the stories in The Wanderground do not hold up well. (Long ago, when I was putting together Amazona!, before The Wanderground was published, I looked at the stories and tried to find an excerptable section. Though seemingly a collection of short stories, in fact none of them stand alone.) Taken together, however, they have a building effect, a cathartic effect, and work quite well. The book is praiseworthy as experimental science fiction on fantasy. The debate of the book’s value becomes less clear-cut only when evaluating its politics, which have, as the two critics showed, negative and positive interpretations.

The Wanderground and Social Politics

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...Men and women most frequently fail each other... and both the number and seriousness of the failures would seem to be the result of either (a) most men assuming they already know what women want, or (b) when men have asked, realizing the presumptuousness of that assumption, women have not known what they wanted. And, to show there are more similarities than differences between the sexes, you could take that sentence and substitute "men" for "women" and "women" for "men", and it would still just be as true—although, admittedly, probably not with the same sad result. (A different sad result, perhaps.) Assumptions made about the "differences" between men and women are what really blow me away, though. Women are emotional; men are logical. Women are whimsical; men are practical. Women are closer to nature; men are pro-technology.
Linda Frenkel [in her review of The Undergound, *Aurora* 21] sees the basic absurdity of these assumptions, which are only a step away from those of the well-intentioned but nonetheless arrogant Victorian male who "indulged" his fluffy-headed little woman because he "realized" she didn't have sense enough to cope with the Real World. I mean, what utter simplistic bullshit! And it remains utter simplistic bullshit whether it is cited by an MCP to "prove" the superiority of men over women or by a feminist to "prove" the superiority of women over men. These are "learned" differences and self-fulfilling prophecies; we are taught that women are more emotional than men, and men are more logical than women, so women feel "unfeminine" if they are logical and men feel "unnatural" if they are emotional—which makes both want to hide that aspect of their character unless they "unlearn" these supposedly gender-based distinctions.

While it's possible I'm just over-reacting, I think I know what's really bothering me—and if it's a fault, it's not a fault of *Aurora* &P but of much feminist writing. I am reminded of a certain kind of conservative publication, and some conservative newspaper columnists, which and who would heately deny the charge that they could ever, in any way, be considerate racist. Certainly they may never come right out and say that Blacks are inferior to whites or that they deserve to be kept at the bottom of the social pecking order. Yet when these conservatives cite, not once but many times, statistics about, say, the number of Blacks on welfare or ghetto violence or poor school performance, without ever dealing with or attempting to understand any but the most superficial underlying reasons, it is hard not to conclude that they are, in fact, racist, and that their purpose in citing these statistics is to support racism. They would just tell you (and a few of them may sincerely believe) that they're "telling it like it is" and that the statistics speak for themselves. But while the statistics may be true, they don't speak for themselves. On their face they seem to "justify" many of the prejudices held against Blacks; only upon careful examination are they seen to be the result of prejudices held against Blacks.

I'm not saying a precise parallel exists here—but I do think a close one can be developed for the two cases. Certainly feminists generally do not come out and say Men are The Enemy—but after many citations and condemnations of "male attitudes", "male values", "male-dominated societies", etc., one can easily reach the conclusion that they do hold such a view. The implications underlying the conservatives' unexamined statistics, that Men are lazy, violent, and dumb; the implications underlying the similar "telling-it-like-it-is" of these feminists are that men are dominating, insensitive, and unemotional. Neither find anything wrong with pointing these things out in this way without an examination of their underlying causes—"the facts speak for themselves". These conservatives deny they are racist and, no doubt, these feminists would deny they are sexist. But in some cases—at least if you accept that old joke which says you're not paranoid if the world really is Plotting Against You—you can see that the male paranoia I was talking about isn't paranoia.

In any event, I think what is really being spoken of are "sexist" (rather than "male") values and attitudes. It does not matter that many men hold such attitudes, since many women do also; it's not a question of gender but of individual enlightenment. Alexis Gilliland, in your letter column, mentions a point which emerges from *Daughters of Sin: The Sexual Tragedy of Arab Women—older women in the Arab society, "repress the younger ones who eventually displace them". But this is true of our own society; most of our "delusions of gender" are learned, after all, at our mother's knee, and many women oppose the ERA specifically and feminism in general because they have been taught to view them as "unfeminine". This being the case, it is both unfair and untrue to hold that only men are unenlightened. There are physiological differences between males and females (and, as our French friends say, vive la différence) and some of these may even have some effect on our attitudes—but even physiologically there are more similarities than differences and the majority of our attitudes are learned, not inherent.

Suzette Haden Elgin Route 4, Box 192E Huntsville, AR 72740

First, I want to register my strongest objections to the scurrilous misrepresentation of Madison that appeared in the news column of *Aurora* 21. It is there contended that Madison are boring, that its people are boring, that boring encounters take place there, that its murders and unmentionables are boring, etc. Now let us add just one datum to this broth of libels, to wit: while I was in Madison I not only was not bored, I found it to be a veritable garden of exotic delights. If you bill the place and its people as boring, you have therefore implied that my life has been a desert of tepid salliva prior to Wishon, and I resent that. I have lived in Geneva, in the south of France, in Washington DC (Calcutt-on-the-Potomac), in Sarasota, in San Diego, in Kansas City, in Denver, in Arkansas...I think I've seen about everything they've got to offer. And I didn't find Madison boring. Withdraw that unkindly thrust.

To Art Widner (Aurora 21)...the way that human perceptions are organized and solidified as the humans in question mature causes them to become so ossified that they are unable to find anything at all unless it is something they're looking for. This is a protective mechanism, and one shared by most of us. But it means that direct mental contact with an organization that had not similarly structured reality would force the human mind to recognize the either drastic alterations/limitations in what was "really there" or to recognize any number of things that "can't possible be there".
Adults (human adults) short-circuit in contact with such minutely exotic perceptions as those induced by native plants of Earth, native plant by-products, and mildly large amounts of native gases...not to mention such everyday stuff as encountering just one new concept. To assume anything other than disaster in telepathic contact between humans and aliens—provided such contact meant shared perceptions—is not parsonimous or pragmatic, just romantic. I'd be delighted to be wrong, but my experience of the terror students experience at the first sign of Something New—even when one approaches them with it gently—does not make me very confident of my error. As for the gradual desensitization process, of course I don't approve of the effect that's had when media violence is what people are being desensitized to! For the process itself, if used to de-ossify perceptions by small increments, it offers one possible alternative to the instant till otherwise predictable in the text we are discussing here.

To Debra Schroeder...thank you for a fine review of the Ozark Trilogy, and a demonstration of your understanding of the books. I have two very linguistintripicking objections. There are two predicates used in the review that have presuppositions I can't support. First, there is "Elgin admitted that this work was sexist"; no, I didn't. I agreed that it was sexist, and that's an important difference. To "admit" in English means accepting a connotation of blame, as in "Aha! Then you admit it!" I truly felt that I was doing a public service in providing human with clear examples of what it is that women readers have been objecting to as sexist in books by males, and I therefore feel no blame. The Trilogy is intended to provide examples for examination. I surely do agree that the books are sexist, and that they are deliberately sexist—but I don't admit anything. Second, there is my male Ozark colleague who is said to have been offended...no, he wasn't. He was not offended, he was just surprised and doubtful. Okay?!! And of course I don't think men are total klutzes; if I thought that, I sure wouldn't have written three whole books intended to demonstrate a point to men. I'm pleased to have you give me the benefit of the doubt.

Art Widner

[Suzette Haden Elgin's article, "Why a Woman is not Like a Physicist", in Astrolia 21] was an extraordinarily lucid exposition of an extremely complex subject. The only thing I didn't understand was why she perceives "...the only language available to women is one constructed by men, shaped by men, and controlled by men..." There are "women's languages" in many pre-literate societies, and there are wide variations in stress, pitch and juncture, non-verbal clues, if not so much in vocabulary. And if there isn't a different language for women, why isn't there? It would seem to be easy enough to make one up and very difficult for males to prevent it, assuming "they" wanted to.

So there are a lot of words for "weapons". (Arabic is even worse. I'm told they have a thousand words for "sword".) How about spices and cookery? The multiplicity of paraphernalia in garment making and repair has often amazed me.

WAHF

We also heard from: John Alexander, Brad Foster, Alexis A. Gilliland, and Sarah Prince.

New Moon

A Journal of
Science Fiction & Critical Feminism

VOL. I, NO. 1 (April 1981) #1
Manifestos, interviews, reviews, poetry. Cover by Paul Smith.

VOL. I, NO. 2 (Winter 1981-82) #2
Bibliography of women SF writers, reviews, fiction, poetry. Cover by Robert Kellogg

VOL. I, NO. 3 (Winter 1982-83) #3
Articles by and about Samuel R. Delany, reviews, transcripts of WisCon 5 panels. Cover by A. Sagwind

VOL. I, NO. 4 (Spring 1983) #4
Sex and Gender debate. Stories, reviews, articles.

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Modes of Space Travel

by Richard S. Russell

The Chinese used rockets for amusement and as weapons from several centuries BC. Marco Polo brought samples back to Europe. The long stick attached to the rocket provided stability in flight. Roughly the same kind of rocket is still used in fireworks.

Around 170 AD, Lucian of Samosata wrote *A True Story* (actually a collection of tall tales) in which he and his shipmates are carried aloft by a typhoon and thence sail to the Moon and the Sun.

In *Voyage to the Moon* (1657), Cyrano de Bergerac got there by affixing bags of dew to his clothing. The early morning sun caused it—and him—to rise.

The "star-spangled banner" which Francis Scott Key saw by light of "the rocket's red glare" flew over Fort Mchenry during the War of 1812. The British fleet was bombarding the fort with Congreve rockets.

An American, William Hale, invented the tail fin in 1846. It was curved, so as to cause the rocket to spin, thereby eliminating the need for a stabilising stick.

In *From the Earth to the Moon* (1865), Jules Verne described a rocket fired out of a tube dug deep into the Florida earth. The propellant was an explosive much like dynamite. The rocket was fired in an easterly direction. The rotation speed of the Earth at the equator is 40,000 km (its circumference) every 24 hours or 1667 km/hr. At the latitude of Verne's story (roughly that of Cape Canaveral), it's somewhat less (~1465 km/hr), but it still provides a healthy boost for a spaceship.

H. G. Wells postulated that *The First Men in the Moon* (1901) would get there in a comfy room coated with Cavorite, an anti-gravity material.

An American, Robert Goddard (illustrated), and a Russian, Konstantin Tsiolkovsky, experimented with liquid-fueled rockets in the early 1900s, generally using alcohol.

The first magazine featuring science fiction in general and space flight in particular was Hugo Gernsback's *Amazing Stories* (1926).

The first actual space flight was substantially heightened on Halloween (October 30) of 1938, when a radio dramatization of Wells's *The War of the Worlds* (1898) was taken seriously by the listening audience, inspiring widespread panic.

During World War 2, German scientists, notably Werner von Braun, developed the *Vergeltungsflieger* (vengeance weapon) rocket. The first model, the V-1, was known as the buzz bomb because of the noise it made approaching London. When the fuel ran out, the buzz stopped and the bomb fell. The V-1 had a fairly short range of less than 100 km and so was launched from occupied France. Later the Germans developed the larger (15 m high) V-2, launched with even greater accuracy from Peenemunde in northern Germany. The war ended before the intercontinental V-3 could be perfected.

A rocket was the means by which the Soviet Union propelled Sputnik into orbit on 1957 October 4; it massed 84 kg. Just a few years later, on 1961 April 12, Yuri Gagarin became the first person to attain Earth orbit; his craft massed 472 kg, a 50-fold increase over Sputnik.

The biggest problem in space flight is getting into Earth orbit, only 200 km overhead, just 0.05% of the distance to the Moon. There are two reasons for this. Earth's atmosphere must be overcome, and it lies almost entirely in the first 200 km. But, more importantly, Earth's gravity must be overcome. Think of this as trying to roll a marble out of a dent in the ground. The hardest part is getting up the steep slope near the bottom of the "well"; Earth's "gravity well" works much the same way.

On 1961 May 25, President John F. Kennedy vowed that the United States would land on the Moon by the end of the decade. On 1969 July 20, Neil Armstrong stepped off Apollo 11's lunar lander (illustrated) and onto the surface of the Moon. The event was televised. A plaque left behind at the site reads: "We came in peace for all mankind."

Moving anything requires energy. Rockets get their energy by burning fuel, most often liquid hydrogen. Since there is no air in space to support combustion, the rocket must also carry its own oxygen, also in liquid form. Since liquid gases must be kept at very low temperatures, there's also thermal insulation. Plus engines, a guidance system, telecommunications...
tions, and, finally, a payload. But the greatest mass to be moved is the fuel. A fairly efficient fuel can raise its own mass to a height of 50 km. This means, by geometric progression, that a ship will attain orbit 200 km up with only \( \frac{1}{4} \) of the mass it started with. The other \( \frac{3}{4} \) is burned-up fuel. And only \( \frac{1}{4} \) of the starting mass served to raise the payload; the rest was used to raise the extra fuel.

One way of improving the efficiency of a rocket is to drop off the fuel containers as they are emptied, rather than boost their mass any farther. After years of doing this, NASA finally equipped a rocket with wings for a return (but unpow- ered) flight. Over 30,000 fans of Star Trek prevailed on NASA to name its first space shuttle the Enterprise (1977).

Another way to improve efficiency is to use a more powerful fuel, such as atomic power. By setting off a series of atomic bombs in rapid succession behind a pusher plate mounted on shock absorbers, a spacecraft could get into orbit very rapidly. But not in our atmosphere, thanks.

Another possibility is to send only the payload up, leaving the power source behind on Earth. A long extension cord? No, use of a very powerful laser beam to supply intense heat to a propellant in the rear of the rocket all the way up to orbit. This would eliminate a good deal of weight, but such lasers aren't currently available, and the idea has never been tested.

Beyond the Moon is Mars. The most efficient way to get there is by means of a Hohmann transfer orbit. A spacecraft is launched from Earth orbit when Earth is opposite the point in Mars's orbit where Mars will be when the spacecraft arrives. The spacecraft fires its rockets at the beginning of the trip and then coasts. Mars's gravity will stop it. The trip would take about 243 days.

Another way to get around within the solar system is the sunsail ship. A large (~50 km) sheet of aluminized Mylar would catch light rays from the Sun. The very pressure of the light would move the sail and the ship attached to it. Arthur C. Clarke's "Sunjammer" (1965) uses this technique. The farther one gets from the Sun, the less useful the sunsail would be, so Larry Niven and Jerry Pournelle's The Mote in God's Eye (1974) postulates an interstellar flight of a Moon-sized sail abetted by 45 years of laser beams from the home planet.

Interstellar, as opposed to interplanetary, travel faces a formidable obstacle in terms of distance. There are 100 billion stars in the Milky Way Galaxy. It takes light, at 300,000 km/sec, all of 4.3 years to reach the nearest of them, Alpha Centauri. A supersonic plane flies at about 1,200 km/hr, or \( \frac{1}{12} \) km/sec. The fastest vehicle manufactured on Earth is the Pioneer 10 space probe, which travels 150 times faster than the supersonic plane, or 50 km/sec. At that speed, it would take 25,000 years to reach Alpha Centauri.

In his novel Universe (1941), Robert A. Heinlein accepts the need to take this much time. His characters build a huge spaceship and set out. The builders will never see the new star, but their descendants will.

James White, in The Dream Millennium (1974), also accepts the tremendous time lags necessary, but suggests that the spaceship builders can make the trip themselves through suspended animation. Vonda McIntyre's "Astere" (1977) has a heroine whose heart has been cut out to enable her to withstand the disruption of circadian rhythms necessitated by remaining conscious during a trip which her passengers sleep through.

To reduce the time requirements, one could accelerate the spaceship more rapidly. One way to do this is to ionize the fuel and spit it out of the ship at near-light speeds. This approach, however, still makes it necessary to carry fuel along.

This objection can be overcome by the likeliest candidate for fast, rapid interstellar travel: the Bussard ram-scrowp, powered by hydrogen fusi-

\[ H_2 \text{ progressively faster as it gained speed, so there would be no practical limit to the distances it could cover or the speeds it could attain.} \]

Of course, there's a theoretical limit on speed: the speed of light (~c), 300,000 km/
sec. But interesting things happen as one approaches that speed. Einstein (illustrated) identified a "dilation" effect, in which time inside a spaceship moves more slowly than it does for an external observer. Thus, even though a journey may seem normal (to take hundreds or thousands of years) and to cover comparatively huge distances—the people on board may age only a few years. The ratio involved is expressed by the Greek letter $\tau$ (tau), thus: $\tau = 1 - (c^2 / \alpha^2)$. Poul Anderson's Tau Zero (1970) takes a spaceship crew into a time dilation so pronounced that they survive the collapse of the universe.

Stanley B. Schmidt, in A Thrust of Greatness (1976) also makes use of time dilation to achieve intergalactic flight. But his "spaceship" is the one we're all living on: the Earth itself. To escape a cosmic disaster, the human race scoops out Antarctica, mounts colossal engines, and blasts off, using magma for fuel. This idea is probably beyond the bounds of physics for engineering reasons.

Certainly beyond the bounds of physics—and for more fundamental theoretical reasons—are various modes of faster-than-light (FTL) travel. E. E. "Doc" Smith, in The Skylark of Space (1928) has a spaceship powered by a large copper bar. An energy field causes all the random molecular motion in the bar to become coherent, all going in one direction, taking the spaceship with it. A fringe benefit is that the effects of inertia are also overcome, meaning that the $\tau$-based increase in mass as the spaceship approaches $c$ fails to materialize, and there is no limit to speed.

Anti-gravity, as in the spindizzy fields which power James Blish's Cities in Flight (1970), is also based on the idea that inertia disappears under certain circumstances. Anti-gravity is an accepted convention in SF, though no physicist would touch it.

Another idea for FTL travel appears in Frederik Pohl and Jack Williamson's Wall around a Star (1982), where the information needed to construct a human being is scanned and then transmitted by tachyons (theoretical but improbable FTL particles). The trick is that the receiver needed to reassemble the human being must be transported to the destination by "conventional" means.

Further afield still is the idea of the space warp, where one can travel from Point A to Point B without passing through much of the intervening space. Joe Haldeman's The Forever War (1974) gets its soldiers around the galaxy by diving into collapsars (black holes) and emerging near the intended destination from the corresponding "white holes".

Topology provides a theoretical basis for the space warp. Suppose this page is curled over so that Points A and B above come into contact. The 8-cm distance between them is reduced to zero. If three-dimensional space could somehow be "curled" through a fourth dimension, perhaps greater distances could be bridged. (But don't count on it.) Heinlein's "And He Built a Crooked House" (1941) and Madeleine L'Engle's A Wrinkle in Time (1963) both use this "tesseract" (four-dimensional cube) effect.

Other techniques of space travel include matter transmission, as in Star Trek, Algis Budrys's Rogue Moon (1960), or Niven's "Flash Crowd" (1973); combinations of space and time travel, as in Isaac Asimov's "Thiotimoline to the Stars" (1973); discovering spacecraft of alien civilizations, as in Pohl's Gateway (1977) or Clarke's Rendezvous with Rama (1973); or the star-powered Kuas across the Galaxy (1982) from Andrew Offutt and Richard Lyon. But probably the most intellectually honest mode of space travel is the one described by Suzette Haden Elgin (1982) as the "asterisk method": Having made ready, she got on the ship.

She left the ship and proceeded to...

In fact, neither scientist nor science-fiction author knows what the future really holds. But we're on our way.

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### Gathering

by Margaret Key Biggs

in my gondola
i go from star to star
picking up slivers of light
to piece together a mosaic of music,
but when my work is done,
i fly to the cup of the moon
where light does not ever follow,
for some part of each eye
must belong to me alone,

and there i float in ebony silk
where strange winds free my flesh,
wash my thighs and breasts
in pleasing gentle whispers

as i swim weightless
in the velvet black sea
to gather new dreams
to inspire kaleidoscopic fantasies
only a woman can redeem
Astra Lucia, 
Lady of the Wheel

by Elissa Hamilton

When artificial gravity flips Tarot—
When the china flasks plasters with tea leaves
she opens her heart,
his bead curtain of spare parts
and ball bearings, her knowledge
of the fringe laid flat
before the souls
cut loose from home.

This colony has been in orbit
for a century now,
pockmarked and pitted
and nicked by particles
otherworldly and ancient—
spinning like a lazy mandala
with a ravaged face.

In her quarters
Sister Lucia calls upon the stars
lined outside her window,
cheering on the zodiacal parade;
choosing on a muscle of prophecy;
measuring conjunctions
by the speed of the hub.

Astra Lucia
pilots fortune
into the hearts of admirals,
tows the lifelines
of transients reckoning spent fuel.

Comfort to the soul
and Heisenberg decoded;
for a handful of credits
the sky becomes unbelievably
clear.

Lucia colonizes Fate.
It follows her
at speeds greater
than that of light,
attracting the weary
pulled apart by circumstance
or living in eclipse without end.

And orbiting her own
implied universe,
Astra Lucia shows them The Way,
plotting courses efficient and final;
committing Kepler's Laws
to alchemy.

Ambition
in Black and White

by Annette Curtis Clause

Rock
dark spires
attempt to pierce the sky
their grotesques
brittle in the
thin chill mind
a diamond night
the world
black, star and frost

Dome
she waits
until her contract's up
her fingers
creamed above the
panel's glare
her mind a stone
her eyes
black, star and frost

Night
she dreams
of thrusts and warps and drives
a yellow
sun that shone on
gentler times
she made her choice
and reaps
black, star and frost
All fanzines are recommended. But not, of course, to everyone.

At almost the last possible moment, Jeanne Gomoll writes to me saying the folks at *Aurora* need a fanzine review column. Yesterday they need it. Would I do it? Sure, sure, I said. I’m a science fiction fan and believe in time travel. Of course I’ll do it yesterday. No sweat. So then Jeanne flattered me and I said all right already, I’ll do it, I’ll do it. (I won’t tell you what she said. Jeanne can be so cute sometimes.)

If this review column is a bit haphazard, it’s her fault.

I think I’ll just jump right into the reviews, since I don’t like lectures on What Makes Good Fanzines, by B.N.F. Critic, S.M.O.F. But I should probably point out that the fanzines I’m reviewing here are not the ones you usually see mentioned in fanzine review columns, which is precisely why I’m reviewing them. A lot of attention is given to the large genzines, especially if they contain controversial articles on The State of Fandom or on How There Are Really No Good American Fanzines Being Published. While these debates go on (and on and on) fanzines that appear to be good examples of what makes a good fanzine (i.e., they’re entertaining, well-written, and graphically pleasing) are getting lost in the shuffle.

Harlot, for example, has not been given nearly as much attention as it deserves. Edited by Avedon Carol and Anne Laurie Logan, *Harlot* certainly fills my bill for what a good fanzine ought to be. Sometimes serio-comic, sometimes fannish, sometimes light, at other times serious. In issue #3, Logan, in her column "Rhododendron", writes about the need for some "promising new editors" in the science fiction field. "If I had my way, we’d trade in the next three 'new Mortons', six 'new LeGuin's', and seventeen 'new Tolkien's'...for one new Fred Pohl or five new H. L. Golds." Logan thinks the lack of a good editor is what’s behind recent failures such as Joan Vinge’s *The Snow Queen* ("...the book...moves...slow.") and John Varley’s *The Ophiate Hotline* (It was like the man had contracted for a 180-page book, sat down, turned out exactly 180 pages, and quit."). She advises "Put the lead back in blue pencils!", Carol’s editorial, "Killer Dyke" deals with the old chestnut, the size of SF conventions and the influx of media and other fringe fans. Gerri Balter’s "Young and Pretty" survey, fast becoming legendary in some circles, drags "politics" (some of us call it "real life!") into the pages of *Harlot*. Balter surveyed 30 young and pretty women in Minneapolis on their attitudes toward themselves and towards women who are neither young or pretty. "What’s it like to be young and pretty?" she asked. "It’s great. You can get whatever you want." "You walk into a room and you are surrounded by men. Ask, and you receive. If they make a fuss, just pout and they melt." "You don’t have to do anything, and you get everything." Balter also interviewed 10 men, and the disparity between what they thought about young and pretty women and what the women think of them is quite interesting.

In "An Interview with Kevin D. Hamb" (that is, Kevin Smith, editor of *Dot*, Smith interviews himself after the fashion of Arthur D. Hlavaty. We find out that Mr. Smith (or Mr. Hamb) is an Oxford graduate, pigletian, an accountant/physicist, libertarian, a counter-culturist, a science fiction fan, poohbrier, a writer, a member of the persecuted highpe... hylx...—one of those long words that means "very intelligent"—minority, and an eeyore in training, in that order. We never do, however, find out whether or not he has a big dick.

Book reviews round out the fanzine, and *Harlot* has a good, solid, intelligent lettercolumn—naturally, since *Harlot* is a good, solid, intelligent fanzine.
Blatant is a small (12 page) genuine published by Awedon Carol, the woman who says, "I have neglected to mention that I am a crazy raving left-wing radical?" Well, what she says always makes perfectly good sense to me. Blatant, says Carol, is not a feminist zine, it's just published by a radical feminist. There's a distinction, say? Most of Blatant is utterly fanzines—guest editorials by Alexis Gilliland, columns by Ted White, zine reviews, letters from Harry Warner, Jr., and etc. In Blatant 11, Carol writes on that old dead horse (as in, "Still beating"), There Are No Good Fanzines Being Published Anymore, and says some of the most intelligent things I've heard on the subject. About encouragement of fanzine editors, she says:

I don't know, perhaps Ms. Hoffman and Mr. Calkins and Mr. Willis and Mr. Borgezon had this same experience back in the days I can't measure up to now. Maybe Lee was constantly opening fanzines from people who privately admired her work to find fmx review columns which never once mentioned her name. Maybe Walter A. Youngfan went to his mailbox time after time again to discover that no one thought enough of his zine to commit to print a single word of praise for it. Perhaps Richard Borgezon used to wonder if anyone ever read his zines before they round-filed them—and for all I know, all of the great fanwriters of the past felt like Duke McCuff in the hands of Ted White. Maybe these people were characterized by such extraordinary strength of ego that being lambasted, unfavorably compared with their predecessors, and ignored merely firmed them up and taught them to love fandom and make better fanzines. I doubt it too. I think those people were encouraged by each other, in much the same way so many of them have encouraged me. And I think that's why they kept publishing and writing as long as they did.

Carol packs a lot into 12 pages, even feminism (heh heh). I only wish she would expand just a little bit more and print more of the letters she quotes from.

Weber Woman's Wrevenge is a feminist genuine from Australia published by Jean Weber. (Weber is expatriot American; she has relatives living near my home town.) It's a mixture of serconishness, awe and fanziness, and although it's a genuine, it has a very personal quality. This is probably because Weber's editorials are more than just gripe columns about how this issue is late and what's in it, and because she comments in and around the other contributors' articles (such the same way British fanzine editors do). Her editorials are long, chatty, full of news, philosophy, meanderings, all the stuff that usually goes into personalzines. Issue #6 contains an article by Judith Hanna, "The Housewife's Role", which includes the following advertisement, "Position Vacant: Housewife":

Applicants are invited for the position of manager of a lively team of four demanding individuals of differing needs and personalities. The successful applicant will be required to perform and coordinate the following functions: companion, counselor, financial manager, buying officer, teacher, nurse, chef, nutritionist, decorator, cleaner, driver, child care supervisor, social secretary, and recreation officer. Also in #6 is fiction by Julie Vaux; an article about the Hypatia Cluster, an Australian group which works to promote awareness of the contribution of women in the space sciences; a review column on Australian science fiction and fantasy; and a long, long lettercolumn.

Now you must close your eyes and imagine the theme music for some really awful horror movie. Let your mind wander through the misty graveyards of the Frankenstein sect. (Remember the daycare?) Think about swamps and the things that live there; one of them is about to tap you on the shoulder. Call up in your mind nameless horrors and lurkers from the deep. All set? Feeling real creepy? [voice over] "...I know now that those repulsive, squirming lumps in that first fanzine were the physical manifestations of the Spirit of Fandom. I know now, though it is difficult to comprehend even with my enlarged mental horizons, that these amoral creatures inhabited and possessed my new typewriter. I know now that the serious scientific fiction fanzine I have been producing for these past four years has been warped and redone into an appalling travesty mentioning Beckett and Faulkner and Dick and ignoring Norman and Spinrad and Ellison. I know this now for that veil was lifted, I know not how, and there on my typewriter was the stencil. And I saw those words almost too repellent to mention, those blood-curdling, awful, and eldritch words, I saw them there before me: Space Junk 6, The Lovecraft issue!!!"

Thus begins Rich Coad's special Lovecraft issue of Space Junk, and a blood curdling, awful, and eldritch issue it is, too. From the cover by Kent Johnson—a most portmanteau portrait of Joe Strummer (of The Clash) in the Clutch of Gluthlu to Dan Steffen's backcover featuring "Lovecraft Laffs—knee-slapping humor from deep under the ground", this fanzine is an adjective-abundant, ichor-dripping and (yes, really) knee-slapping excursion into Lovecraftians. Jim Turner's "The Call of Oxydo!" describes weird occurrences at a late-night laundromat. "At the Foothills of Madness: The Strange Case of Arthur Widner, Jr." by myself, is the bizarre and terrible story of a firstman. Dave Langford contributes "The Call of Kho'd", a transatlantic "Necromoonseason" report. And Bill Gibson writes of his personal feelings about Mr. Lovecraft in "Lovecraft and Me". All of this is, of course, illustrated
with artwork beyond the mountains of you-know-what by Bruce Tonneley, Dan Steffan, and Jay Kinney. Rich's next issue of Space Junk will be another "special", this time on sex. I don't know about Rich, his mind works strangely. Best not to dwell on it.

Avedon Carol would like to have Ethel the Frog explained to her. I'm not sure I can do it. Perhaps something from the editors will help:

"So, 'What's in store for Ethel the Frog?', you ask. God only knows." Well. That doesn't help much, does it? But there's more:

So far, in the two and a half years that it has taken to produce five issues, those of you lucky enough to have them all have seen typical SF fanzine material, in-depth biography, rock 'n' roll nonsense and first-rate literature. We may make our next issue into a cookbook if you send in your favorite recipes.

To let you know what the editors of Ethel the Frog are sending on, and perhaps to confuse you further, issue #5 is dedicated to the memory of the rock critic Lester Bangs and to Hugh Beaumont. You remember. Hugh Beaumont. Okay, okay. I'll be serious. What Ethel the Frog is, Avedon, and anyone else who wants to know, is a fanzine published by people who are as much rock fans as SF fans, with a strong tendency towards what the old folks call punk and what the young whisper-snappers call new wave. Ethel the Frog is a crossover zine, and the editors are much more interested in what's going on now than in fannish tradition. This is evident in their unabashed inclusion of what Steve Pick called "first-rate literature." Poetry and short short stories they do include, though I'm not much tempted to call it first-rate. Some of it gets close to being okay, and the poems in #4 by "New York Blues" and "How I Hurt My Head Fa-lling off the Goodyear Blimp") does! have! its! moments!

A much more successful crossover zine is Candi Streecker's Sidney Suppey's Quarterly/Confused Pet Monthly. Streecker is currently giving Rich Coad some competition for the title of Most Lowbrow Highbrow. This issue of SSQ/CPM begins with the question, "Let me ask you something. How do you respond to a beer-can hat?" Streecker is a sharp observer of mass culture. She quotes from husband Matt Householder: "Working-class avant-garde pop culture is what I like", (Matt Householder on his way to a flea market). This pretty well sums up Streecker's view of life, too.

The line about the beer-can hats is from her article "The Self-Amusing Personality." The self-amusing personality, or SAP for short, is someone who stands outside their culture, looking on in "amused horror," says Streecker. "It seems that something has made our vision of the world go a bit askew, and that this in turn makes us more observers than participants. Instead of accepting the satisfactions that derive from being players in our society, we actively create our own amusement by examining the output of that society." Streecker notes that one meets a higher percentage of fellow SAPs in the various fandoms than in the "real world", but that it's still difficult to make connections, because SAPs from one fandom won't interact with SAPs from another.

Luckily there is an "organization" that attempts to include SAPs from all walks of life: The Church of the SubGenius. You may have come in contact with the Church, or at least noticed its icon, "Bob", in some fanzines—namely Punk. The Church of the SubGenius does seem to be the fandom of fandoms, so I strongly recommend you read Streecker's report on it. (If you're intrigued and can't wait, send $1 to The SubGenius Foundation, PO Box 160300, Dallas, TX 75214.)

Other highlights of the SSQ/CPM is Candi's article on the Ed "Big Daddy" Roth monsters and Kustom Kars of the early '60s; "The Ends of an Era", her renditions of classic car front and rear ends, and her illustrated version of a vacation trip taken by her parents as told by her mother via postcard. Streecker is a great comic artist, I should mention. Someday her name is gonna be a household word. (This has been a plug from the "Make Candi Streecker's name a household word" foundation.)

I saved Rats on Fire for last because it's so disgusting. Edited by Denise Brown, Rats on Fire #9 is "a combination scandal sheet and Raccoon 1 Program Book. Rats is Dead Dog Detroit Fandom's Offishul Voice of Doom." It is the Globe, the National Enquirer, the Weekly World News of fandom. All the lowdown on Detroit fandom is right here. Read how Gregg Trend was pussy-whipped at a party for wearing a Kliban t-shirt one time too many. Read Tony Cvetko's advice on getting laid. (I wouldn't take his advice if I were you.) Read the Anti-Gossip column by "Anonymous" who says: "Anti-Gossip thinks it's time we did away with the lies and get down to the nitty-gritty. Life is a box of soiled kitty-litter, Anti-Gossip says, and you shouldn't have the chance to get out of it." Find out who's Detroit Fandom's Winning Ass. Most of all, Read the chilling story of Anti-Fan's nefarious plot to "get" Jeanne Geomall with a herd of easy-headed unicorns. And there's more! Much, much more! But can we take much more? For those degraded enough, there are Rats on Fire t-shirts available, for only $6.00. What a deal, huh? Not even Kliban t-shirts are that cheap.

Addresses

Barlot: Avedon Carol, 4609 Woodfield Road, Kensington, MD 10795. Or: Anne Laurie Logan, PO Box 191, East Lansing, MI 48823

Blattant: Avedon Carol, address above.

Weber Woman's Writetwenge: Jean Weber, 13 Myall Street, O'Connell, ACT 2601, Australia, (continued next page)
To the Vision Seekers
So You Will Remember Your Mother
Astronaut Song
By Wendy Rose

Where do you think you got
the flesh with which
to name the bend of
your best symbols?
Where gets
the dreamer his dream,
the hunter his
arrows, the doctor her way
to plant and pray
proper songs
for sunrise and birth?
Where grew the hand
to guide infant trials,
the straight-sculpted lines
against which to stand
on shredded cedar smells,
and — wet with the yellow mist
of childhood — where did you learn
to walk for your visions?

You search too close
the cotton-topped plains,
too long the granite
of the mountain pass;
too much you wander
the high glacier slopes,
too many times go
hungry and hopeful.

The root-stained knees you touch
are those of clay-forming women
among her pots, or granite-gold ladies
who hold together the sand and agate
beach cliffs; and the melon breast
that waters each harvest, that with
a sharpened stick sings
the seeds to the ground, that
with her drum-steady voice
explains and explains, that with
round, rough and brown hands takes us
to her own guiding moon
in a summer-dry starship; women
all women where you come from; earth
the name to remember.

[NOTE: The poem appearing on
this page is from a larger
unpublished manuscript, The
Halfbreed Chronicles and
Other Stories.]

Copyright © 1981 by Wendy Rose
George and Lisa Rosaga had no trouble finding the cottage.

"This is it!" Lisa exclaimed, pointing through the window of their small station wagon as it wobbled over the rutted road.

"This is no cottage," said George, "This is a full sized house!" They both stared at it for a moment, standing there as tall and comfortable as the trees, its walls hollowed with windows on both stories and its patio protectively encased.

Lisa stretched her middle aged muscles, which had become stiff during the tedious eight hour drive from Chicago to the Wisconsin north woods. They each carried two suitcases, and George fumbled with the locks.

The late afternoon sun bounced off the lake into the front picture window, and they listened to passing motorboats and the greetings of the birds.

"My psychiatrist was right, Lisa," George said softly. "I do need this little vacation after all, before I try to go back to work."

"You were in the hospital almost three months," Lisa said, "and that's a long time." She put her arms around him, and over his shoulder surveyed the furnishings of the living room.

"George, look at this sofa!" she exclaimed, breaking their embrace. She pointed to its pink and orange flowers and laughed.

"This sofa is exactly like the one Mom and Dad had when I was a toddler!! Maybe it's the very exact same one!" Lisa walked over to it and examined the massive cushions for tiny rips and stains that only a child knows exist.

"It's hideous," said George, curling up his lips at the old sofa. It had a back like a camel; its arms were tiny cylinders and its feed were splayed hooves.

"Oh, but I had so much fun on it!" Lisa said. She threw herself on the cushions, pulled her feet up and stretched her arms.

"Mom was an absolute fanatic about this sofa," she elaborated. "She wouldn't let anyone sit on it, even if we were fresh from the bathtub. But I used to jump on it when she wasn't looking. In fact," Lisa continued, though George had stopped listening, "I used to think I could teach myself how to fly! Like a bird! If only I could jump far enough and high enough... Can you imagine that, George? I used to think I could learn how to fly like a bird."

Lisa drew up her knees and laughed like a child. "I had forgotten all about that until I saw this sofa."

George had gone upstairs. "Hey, honey come up here and look at these bedrooms!"

Reluctantly, she obeyed.

The bedrooms were large and furnished with two double beds each. Both rooms had doors that led out into an upper porch. They both sat on each of the beds, and finally chose the room with the hardest mattress.

"And these beds!" she shrieked. "I used to jump on the beds, too, when I was a kid."

"Oh, come on, Lisa, all kids jump on beds, even our own, when they think we're not listening."

"Yes, but for me it was different. I used to think that if I jumped high enough, I'd go right through the ceiling and into the sky!"

This time, George joined in her laughter, and they chased each other around the bed until they became breathless. Comfortable and tired, they started to doze without removing their clothes. Saffron sun yielded suddenly to the moon, full and bright.

"Don't forget your sleeping pill," Lisa reminded him as she felt herself slipping away.

"Don't need it," he replied.

"But the doctor said..."

"Don't need it," he repeated.

"Sure?"

"Sure."

One by one the stars added their pinpoints of light until the whole northern sky seemed draped with tinsel. Almost six hours later, Lisa woke refreshed and full of energy. George breathed heavily beside her, and she listened for the rustlings of birds, who were always first to know when morning began. But all she heard was the conversation of the trees.

She got up and slid carefully through the door onto the porch. George still slept. She stood on the porch and looked around in the glow of the full moon. The clearing was just large enough to accommodate the house and a gravel parking area. It was surrounded by hundreds of trees of all heights and shapes and shades of gray-green. Their multitude of leaves twinkled almost imperceptibly in a slippery night breeze sent by the moon.

She breathed deeply and smiled, exhilarated by the cool, dark air. A voice spoke inside of her, a wordless voice, a soundless voice, yet its message was clear:

"Jump off the porch, Lisa, and fly!"

Lisa looked down over the railing to the
bare ground only two stories below. It wasn't a long distance, but just long enough. If she jumped off and broke her leg, how would she explain that to George? She chuckled, remembering the flying lessons she gave herself as a girl. Oh, yes, how she had wanted to fly like a bird!

"And now you can," the voice said, like a separate entity who was reading her thoughts.

"Is this a dream or is this really happening?" she asked herself quizzically.

"Try it and find out!" she answered herself.

A terrifying energy filled her, and her muscles began to quiver. She gripped the wood of the railing, knowing that as long as she held the rail, she would not yield, she would not surrender to the wild temptations now pushing up within her. But the harder she gripped, the faster her muscles quivered, until her whole body vibrated with pent-up power, like an airplane whose propeller had come alive, and strained to be let airborne.

"You've been practicing for years," the voice said, reassuringly and daringly. "You're not going to fall!"

And Lisa let go of the railing, scrambled atop and stood erect. She jumped. The instant her feet left the railing she knew she'd made a mistake. A sickening tug tugged her stomach and the voice came to her rescue. "Head first, Lisa, not feet first, remember?"

As the ground rushed up to capture her, she extended her arms and dove towards it. Yes! Head first! She was on her way up again before she realized that she had hit the ground. The night wind pulled her hair away from her face, and she began to accelerate. Suddenly she saw herself, three years of age, riding in her father's convertible at 70 miles per hour; that was the year she had begun the flying lessons.

She aimed for the treetops, and they came suddenly into view, looking like a gigantic broccoli patch. Beyond the treetops loomed a velvet sky polished with glistening stars.

Lisa became afraid when she saw the sky, so close, so willing to take her up, and she looked down longingly at the doll house of a cottage where she had been standing not five minutes previously. She had been afraid of falling off the railing and now she was about to fall out of the sky! Fear overwhelmed her, and she felt herself slow down and sink. The faster she sank, the more frightened she became. She knew she had stopped flying and was now falling to her death.

"Where did I go wrong?" she called out silently.

The little voice admonished her. "Get hold of yourself, Lisa! You're in a full stall. Accelerate and aim for the sky right now!"

Lisa arched her back and threw her head up. She stiffened her torso and straightened her legs. Her arms extended back and upward, and she closed her eyes against the sight of the dark treetops opening up to swallow her.

Once again, the rush of the fall gave way to an abrupt ascent, and Lisa began to fly. But it was too late. A large tree, rising up above the others, stretched out one of its branches and slapped her into another stall. This time she could not recover in time to escape the tangled mass of treetops. She fell erratically, from branch to branch, gasping and gripping as best she could in order to slow the fall and minimize injury. She barely felt the scratches and stubs of resilient twigs, and when she hit bottom, she grunted involuntarily, all the breath knocked out of her.

Lisa lay there momentarily, sorting out her senses. Jiggling her bones once by one to see if anything was broken. When she could breathe again, she rose and stumbled about until she got her bearings. Her body ached. This was no dream, this was really happening! Oh, if only her mother could see her tonight! Lisa snickered as she remembered her mother's favorite admonition "No, Lisa, get off that couch, you'll ruin it with your feet. Furniture is for sitting on, not jumping off of!"

"But Mom!" she'd say, "I'm giving myself flying lessons!"

"Well, you just run along outside and give yourself flying lessons."

"I can't. I need these grooves in the carpet to see how far I flew," and Lisa would show her mother how she measured her progress by counting the repetitions of pattern in the carpet, according to where her feet landed. Her mother had only laughed.

But would she have laughed tonight? It was Lisa's turn to laugh, and laugh she did, loudly and drunkenly, because she felt as if in
drunken stupor, limp and weak.

"Mother, watch me! You just watch me!" she yelled, once again a five year old child, very much like her own five year old child who was now sleeping soundly far away in Grandma's Chicago home.

Lisa tried to run, but the darkness concealed twigs and vines which caught her feet and rested there. Her arms flailed in front of her to sweep away the spider webs and mosquitoes and other buzzing night creatures. She wanted to get a running start before she tried it again. The porch leap had just been too scary. This time, if she could get a running start, she wouldn't have so far to fall if she didn't make it. Again she tried to run, and again the underbrush held her back. When she reached the perimeter of the clearing she didn't immediately notice that the car was gone. All she saw was a bright lemon light originating from the second-floor bedroom where she and George had retired for the night. Then she noticed the empty driveway, and knew that George was looking for her.

A twinge of regret touched her heart, that George, in his fragile condition, should have stumbled into her secret. For a little while she considered returning to the house and consigning the whole experience to dreamland. She wandered across the lawn and down to the edge of the lake. The little laps of water caressed the sand in rhythmic waves, gently and melodiously. She heard the beat of wings and looked up to see a dark bird skim across dark water highlighted by the moon.

That was it! She would fly across the water, not the ground! It would be so much safer that way. The pier stood sturdy and long, a diving board, a veritable runway. Lisa started way back in the grass in order to get up a good speed before she reached the end of the pier.

Once again, all her muscles began to quiver, and the propeller inside of her came alive, whining faster and louder, until her churning legs bent down deeply and sprang upward off the end of the pier. Immediately she arched her back and turned her face skyward. She flung her arms back and cupped her palms against the rush of air, while her legs stiffened and toes pointed, as rigid and straight as a ballerina. Her take off was faster this time, and the little voice congratulated her. "Lisa, this is it! You are learning. You're like a little foal taking its first steps, but soon you'll be galloping across the clouds of heaven."

The air rushed by so fast now it stung her face, and pulled back the flesh. Her ears hurt from the pressure, and her hair stood out at end. With a flash of new fear, Lisa wondered if she could slow herself down without causing another stall which would plunge her into the lake.

"Of course you can!" came the little voice. "Just relax your back ever so slightly, and above all, don't panic."

So Lisa did relax her back very slightly, and wonderously slowed herself. Through trial and error, she discovered that she could slow and speed up at will just by stiffening or relaxing her back. This she did several times, and became carried away with exhilaration, until she finally looked down and realized she'd flown across the entire lake and was now soaring swiftly above the row of cottages opposite her own. Another terror gripped her. Her back collapsed, and she felt herself go into another stall. The treetops zoomed up again, but this time Lisa was more quick to react. She restored the arch in her back, stiffened her extremities, and threw her face skyward. Instantly, she began flying again and once stabilized, called out to the little voice, "How do I turn?"

The little voice answered her, "To turn left, rotate your right palm downward, and bring your left arm closer to your side. For a right turn, do the opposite."

Lisa tried it. Nothing happened. She tried it again, more severely, and her body went into a left turn that was so steep it nearly flipped her over onto her back. Little by little, she learned just how far to move her palm and her opposite arm so as to get just the kind of turn she wanted.

She flew swiftly and directly back across the lake toward the cottage. The sky to the east was already beginning to take on a pale, dusky hue. She wanted to make sure she was there next to her husband before he awoke, so she wouldn't have to make too many explanations.

The pier came into view as a tiny walkway, and Lisa began her descent. She realized that she had no technique for landing, and called out on the little voice again, and said, "How do I land?"

The voice answered her,"Next time! I'll teach you next time!"

"What about now?" Lisa cried, but the little voice was silent, and Lisa felt betrayed and angry. There was only one way to land, and that was to let herself stall out. Carefully she judged the distance to the shore and the
rate of her descent. If she could land just at
the street line, she'd be safe, and not too wet.
"Slower, Lisa, you're coming in too fast," the little voice advised, and Lisa said, "Shut up!"
But she did slow down and then began to
dower her legs. Her knees went limp and her
feet aimed for the sand. She still kept her
back arched and her arms firmly outstretched.
She hit the sand in little jerks, skidding for
a few feet before letting her body collapse and
roll over. She breathed rapidly from excitement
and intense physical effort.
She lay there in the sand for a few
minutes, savoring the safety of its support,
and then she remembered George. He had noticed
her absence! Had he driven off into the woods
thinking she had run away?
Anxiety filled her as she got up and
walked quickly to the house. Maybe he had seen
her in the sky! She walked around the back of
the house and sighed with relief that the car
was in its place on the gravel patch. She ran
to it and placed her hand on the hood; yes, it
really had just been driven, the engine was
still warm. What would she say to George? She
had no business leaving him this way! She knew
how terrified he would become if he woke up and
found her missing! The doctor had specifically
warned her not to behave in any new or unusual
way, at least not for awhile, until George
became stabilized.
Her cheeks flushed with shame, and she
quietly slipped into the house, trembling that
he might still be awake and frightened. What
if he had seen her in the sky? What if he had
seen her jump off the pier? Poor George had
already wrestled with so many strange and
bizarre visions, scenes that played for his
eyes and his eyes only. He wanted so much to
be free of them, and he so needed to be free of
them!
The light above the kitchen sink was on,
and Lisa smelled the cigarette smoke before she
saw George sitting pensively at the kitchen
table, smoking. The ashtray in front of him
was filled to capacity. George didn't even have
a newspaper in front of him, just that heavy
glass ashtray. He raised his eyes to meet hers
as she stood uncertainly in the doorway.
"George," she said, "what are you doing
up?"
His eyes widened. "What am I doing up?
I don't know. What are you doing up?"
"I woke up and couldn't get back to
sleep, so I took a walk in the woods."
"There's sand all over your jeans," he
observed.
She looked down as if she'd seen it for
the first time. "Oh! I laid down and must have
dozed on the beach for awhile," Lisa hoped her
voice didn't sound too strained. She had never
before told a deliberate lie to George, and now
she felt as though he could read her mind. But
he believed her.
"Oh, that's what I figured."
She could tell from the tone of his voice
that he hadn't lost touch with reality again,
that he was still the George she could reason
and converse with. He was still speaking
English with all the ordinary words, and not
the made up ones he had been so fond of last
winter.
"I guess you couldn't sleep either," she
said. "No," he said. "I woke up and you were
gone and I called you and you didn't answer."
His voice was still flat, but all the words fit
together.
"I went out into the woods for a walk,"
Lisa repeated, confident now in her deception.
If he had seen her over the lake he'd have said
so by now.
They sat together at the kitchen table
for a while, he smoking quietly and she just
staring into the dusky living room. As they
sat, first morning light seeped in from behind
the curtains, and the light above the kitchen
sink seemed to dim.
"Are you all right?" Lisa ventured.
Maybe it was only her sense of guilt that told
her things weren't all right, that prodded her
to look at George for signs of the forbidden
knowledge. She wished she could tell him, she
wished she could show him. She wished she
could say, "Hey, honey, come with me and see
what I can do! Then you can tell Mom that you
saw it with your own eyes!" But, Lisa realized
with sobering maturity that there were certain
forms of knowledge that one must keep to
oneself.
"Yes, I'm all right," he said. "Let's go
upstairs and sleep for a few more hours."
"All right."
They walked silently upstairs and climbed
into bed. They slept restlessly till the sun
travelled a good distance across the sky. They
rose and Lisa made breakfast. He very well
could have seen her after all; he hadn't had
his usual sleeping pill last night.
They had breakfast in relative silence,
and Lisa tried to brightened their moods.
"What shall we do today? Anything in
particular? There's a boat and some fishing
rods in the shed."
"Oh, it doesn't matter to me," he said.
"Well, how about going into town for the
water ski show?"
CONTINUED ON PAGE 32
In Julian May's Pliocene Exile series, the misfits and malcontents of the 21st Century have discovered the final frontier of their oppressively well-regulated galaxy: time. The direction of time travel is one-way, however, and has but one destination, a period in the Pliocene epoch of Earth's prehistory (about six million years ago). Those who go through the time gate go into exile, taking with them only the essentials they believe they will need to survive. And their problems, and their sometimes fanciful images of their own identity. They are prepared for anything. And are they surprised!

The forest primeval of Earth's past has been colonized by an exotic race of beings who find the steady trickle of humans into their midst extremely useful. These aliens are two peoples, the Tanu and the Firnulag. They are exiles themselves. Banished from their home planet for making continual ritual warfare a way of life, they crash landed in what will one day be southern Europe, about 1,000 years before the humans begin arriving.

May's story throws a group of troubled time travelers into the lap of the Tanu at a point when the aliens have discovered that their own problems of low fertility and lethal mutations can be solved by the introduction of hybrid vigor: blending human chromosomes with Tanu. The human exiles are forced to serve the Tanu as broodmares and studs. Any human who shows the least tendency toward possessing dangerous (to the Tanu) psychic powers (as many 21st Century humans do), becomes the prisoner of a torc. A torc is a ring-like metal collar, representing the height of Tanu technology. The receptors within a golden torc greatly enhance the wearer's mental powers. The Tanu wear these themselves, and bestowed them on a few valuable and trusted captives. Silver torcs are mind-expanding, but have control circuits that enforce cooperation. Gray torcs are control devices that provide telepathic communication between Tanu and the less gifted humans, disciplining them with sensations of pleasure and pain.

How the group of adventurers deal with all this, how they individually and collectively rebel against enslavement—or exploit it—unfolds for two volumes.

At Chicon 4, Julian May said that her intention was to write a story that would attract readers outside the SF genre as well as within it—and one that would sell well. Her books have such a wide base of appeal that she may well succeed on both counts. May puts such an original stamp on things that one can never call her derivative, but, like film-makers Lucas and Spielberg, she makes sure to spice her adventure with references and allusions to the good old stuff we're too sophisticated for, but eventually succumb to, anyway. Her large cast of characters is an entertaining and carefully selected mixture. As types, many of them have a certain familiarity: the self-interested hard-boiled starship pilot, the fighting amazon, the elderly scientist, the Viking, the barbarian, the questing lover, the Connecticut Yankee, and Puck himself... We've met them before. Yet they and the rest are all memorable individuals, never stereotypes.

May has a lot of finesse. The literary derivation of her aliens, for example, is a piece of mischief. Considering the numbers of fantasy writers who have overused Celtic mythology to the point of nearly wearing it out, it takes a certain impudence in May to turn the supernatural Tuatha de Danaan (the Children of Danu) and their opponents the Firbolgs, into Tanu...
and Firvulag, and make them ancient astronauts (à la von Däniken) as well. Most of May's aliens are references to Celtic and the related Gaulish gods and goblins.

Lady Epona's name, for example, is borrowed from Epona, the mare goddess, while Lady Damone is appropriately Damona, the divine cow. Ayfa and Scathe come from Aife and Scathach, women warriors who taught the Irish hero Cuchulain. They remain warrior women in May's book. Strong willed Queen Medb becomes Myvar; Dian Cecht the healer becomes Dionnet; and Creidhne, a powerful craftsman of weapons, gives his name to Lord Grey, a powerful and crafty intriguier. The list is long. Sometimes the connection between alien and god is evident, and sometimes whatever connection there is, besides the name, is too subtle to discover without study.

The Tanu represent May's version of the Seelie Court, the enticing fairies who dazzle mortals and betray them, while the grotesque Firvulag are the Unseelie Court of dark, sinister goblin-like fairies. The fierce shape-changing leader of the Firvulag is Yecche, and his name, I strongly suspect, is a variation of each uisg, the "waterhorse" of Scotland who carried people to their doom. Torcs themselves were an authentic part of Celtic culture. These ornamental neckings had religious significance, and were believed to have magical powers.

Finally there is Aiken Drum, named for a Scottish mischief sprite. This human lives up to his namesake. When Aiken Drum takes upon himself the name of Lugonn to battle Pallol of the laser eye, those who know that Lug the aspiring sun god defeated the old one-eyed sun god Ballor will guess the outcome at once. On the whole, catching May's allusions is more satisfying than annoying.

One especially nice touch is the fact that the humans are superior to the Tanu in the area of psychic powers, and have a technological edge too. How refreshing when off-worlders have frequently and so conspicuously been parent/teacher figures or omnipotent bogeymen (bogeypersons?) to humanity. Another pleasure is the ambience of people and setting. High decadence in the Pliocene has the flavor of wearing evening dress on safari. One may be amused or revolted, but it is piquant. And contriving that her characters be responsible for the creation of the Mediterranean Sea is both a clever reference to the kind of folk tale that attributes natural landmarks to the works of heroes, and hard to top as arouding end to act 2.

May's use of time travel is more than just another way of saying "Once upon a time". That the past is the only alternative to an existing culture underscores the sense of social alienation the main characters feel as the story starts, making their motivation understandable. It gives a dramatic, committed, shipwrecked quality to the action that follows. And it also implies a link with the future, for surely the Tanu are remembered; and the proto-humans, the primitive Ramapithicines who are our ancestors and whom the Tanu use as mentalists, are surely stimulated to evolve into those who will later visit them.

The Saga of Pliocene Exile is a game that can be played on many levels. Curiously, the elaborate world of the Galactic Milieu itself—the future that May's characters reject—was constructed by the author as a setting for a different series of novels. But first, she said, she wanted to write something simpler. Two more volumes are planned to follow.

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**Message to a Friend in Another Solar System**

by Sheila Finch-Rayner

I am a star traveller, solitary trade
drawn by the lure of distant brightness
I stretch myself in interstellar places
where novae pulse and nebulae spin.

The consumption of deep space is mine
rolling in darkness between the suns
unscattered from the ache of time
the bondage of a planet's way.

I am my own companion in the galaxy
needing no satellite to my song
the heart captured is soon silenced
love burns the universe clean to bone.

Yet when the light years prove too lonely minds can touch though hands can not
I am strengthened by your signal
remembering you, I am not alone.
The summer of 82 was the biggest season at the movie box office on record, and a great number of the attractions were fantasy or science fiction. Or what, in Hollywood, passes for SF. The past five years haven't changed the general public's mind about what science fiction is—the success of Star Wars certainly didn't erase the old Buck Rogers image—and this year hasn't signaled any change, either. We will probably be doomed to two years of E.T. clones, with lots of cuddly little EEMs and lonesome/winsome prepubescents.

While we did get two movies this season which were true speculative breakers, one—Blade Runner—was roundly panned by domestic critics; and the other—Quest for Fire—may have been much better accepted, but it was so far off the wall that it was viewed more as a semi-documentary. (Besides, it was French; foreign movies don't count.)

Despite the beating it took this year, I predict that Ridley Scott's Blade Runner will be remembered kindly. It might even build something of a cult-status. I can just see critics rediscovering it five years hence, the way they've re-noticed Terry Gilliam's Jabberwocky in the wake of his Time Bandits. ("Where were those critics when I needed them?" Gilliam snorted in a recent interview.) Blade Runner is the single most mature and constructive film of the summer season, and despite its flaws—what challenging movie isn't flawed—it is lyrical, daring, and outrageous. It will probably stand the test of time as a genuine classic.

I'm unimpressed by arguments from different quarters that the movie is unfaithful to its source, Dick's Do Android Dream of Electric Sheep. I would disagree; though the movie is drastically different in substance and surface detail, in its essence it expresses everything Dick did in the novel. (But what use is this argument, really, to the movie-goer who has never [and probably will never] read the novel?) I also prefer to disregard all the blah-blah about the elaborate optical effects. Certainly they're brilliant, and of course they help achieve the most complete vision of a future society ever attempted. Yet I was most interested in the film for its brave plunge into existentialism; I was captivated by its urgency and emotional intensity; and, most of all, I was amazed by the excellence of the acting ensemble—one virtue for which SF films aren't usually noted.

Rutger Hauer, as Roy Batty, the anti-hero, is particularly powerful and affecting. I can't remember when SF cinema has come up with a more interesting or satisfying character (unless one counts Star Trek as cinema). Halfway through the film, as Batty begins to dominate the story, the film leaves behind all pretense of being a detective yarn and deals with a nobler classic SF theme: that of the precocious synthetic human. It's with this fierce, febrile character that the film deals most effectively with questions of being and nothingness. Hauer handled the role with astonishing restraint and sensitivity. If it was a mistake for Ridley Scott to focus so strongly on the plight of the replicants, as so many critics have complained—God, it's great to see somebody making the right mistakes!

Blade Runner is not really about a cop and a bunch of homicidal maniacs. It's not about a man who falls in love with a bogus woman. It's not even, as so many critics about Things Humanity Was Not Meant to Tamper With, like lousy architecture or recombinant DNA. "I'm lost", replicant Pris sniffles at one point. "I'm sort of an orphan." It becomes clear that all of the characters in this movie are orphans of sorts—adrift, alone, frightened, robbed of identity. They have no choices. They are stuck in an impossible situation, in a cold and hostile place, and they can only lash out in odd, desperate ways.

Somehow, this film manages to deal thoughtfully and constructively with the problem of universal malaise, entirely without the aid of spaceships or levitating puppets. It's a sight worth remembering.

Quest for Fire is another daring and unique movie which should earn classic status. Its only real flaws are some rather silly anthropological concepts from adviser Desmond Morris (the man who suggested that women are afraid of big hairy spiders because they're subconsciously terrified of pubic hair). Beyond those flaws, the movie is refreshingly humanistic. Rather than portraying a future filled with neat-o gadgets, it shows that virtually everything we have now, and take for granted, is absolutely miraculous. While I think it was unnecessary to hire Anthony Burgess...
to devise a group of languages for various tribes— the actors themselves could just as well have winged it— the use of alternate vocabulary did have a terrific effect, and it's a good thing they didn't take shortcuts in that area.

The acting is wonderful, especially that of the Matt-and-Jeff sidekicks: Ron Perlman as the gruff, chimped-out one, and Nameer El-Kadi as the bewildered little guy with the sweet face. These two are always following the hero around with "What-the-hell-is-he-doing-now?" expressions on their knobby faces. The scene where they discover their buddy going native with the Ivaka is priceless.

(Also, I don't care what everybody else says— I loved the mastodons.)

Hollywood is uncomfortable with speculative film. It isn't sure how to sell the stuff. Remember the glory days of about 10 or 12 years ago? 2001: A Space Odyssey became famous only through cult status; it took years for the studio to make its money back on the thing. Universal had no idea how to sell It Came From Outer Space; it remained on repertory, and consequently the marketing on it was almost non-existent. According to actor Bruce Dern, the studio thought that only 14-year-olds would be interested in the movie. (Nowadays, such mistaken judgement would lead to enthusiastic marketing, aimed specifically at the juvenile set— which is exactly what happened to Blade Runner.)

Mainstream critics also seem unable to comprehend the SF genre; it's always that stuff with the optical effects and weird ideas. (My very favorite film review ever was Gene Siskel's verdict on Alien: "It was okay enough, in a mild sort of way, but the spaceship was a disappointment. It was just so dark and cramped and claustrophobic. It wasn't like those realistic spaceships in Star Wars!!")

As a result of Hollywood's confusion, we're being told that we're in the midst of a genuine SF-fila boom, while what we're really being handed is a bottle of placbos. This is the 1980s version of MGM recession-era musicals.

I'm certainly not carping— the state of SF film is a lot more solid now than it was in the just-post-Star Wars period. Now that producers have evidently tired of aping Star Wars, there seem to be looking around and noticing that there are a lot of old SF films they can remake, and also there seem to be some science fiction books which some people actually read... Hey, maybe they could be adapted!

Interestingly enough, both Blade Runner and Quest for Fire are adaptations of pre-existing, classic novels. (The original for Quest for Fire is a 1912 French charmer called Le Cheyenne de Feu, by J. P. Rosny, I.) While tube and screen hardly have great track records for making decent book-to-screen adaptations— God, I shudder every time I hear someone else wants to make a film based on a Bradbury novel!— still, Blade Runner and Quest for Fire may be some basis for hope.

I remember when Steven Spielberg used to make interesting movies. At one time he was quite innovative and daring. Now I'm not sure what's happened to him. He conducted a fiendish rape of Close Encounters which reduced it to a simmering pile of glucose jelly. He arrawrestled Tobe Hooper for control of Poltergeist. (Who was the real director may remain a Great Hollywood Mystery.) Then he made E.T. Certainly I enjoyed sobbing over it as much as everyone else. Yet, somehow I know I won't recall a single detail of it a year from now.

Like Raiders of the Lost Ark—which, again, I found charming but faceless. It's terrific in the first half, then whips itself into a manicada frenzy of relentless slam-bam editing. (A style of editing, in fact, which is the chief characteristic of TV sitcom pacing— all peaks and no valleys.) It has a lovely beginning: aliens wandering around a redwood forest. Spielberg's greatest talent is in making the viewer see through new eyes, and that ability has never been as sharp as in this film. He lost me, though, when he took away the alien's sense of otherness, the slightly alarming, even frightening quality, and made him cuddly, like a throwback to that terrible Disneyesque scene he slapped onto the end of Close Encounters.

Still, it's a nice little movie, and one of the best children's movies I've seen in years. (Although, if I were seven years old, I'd prefer Time Bandits by far.) But the chief marvel of E.T. is that it's taken this inoffensive effort to make Spielberg the darling of Cannes.

Star Trek 2: The Wrath of Khan was an inspiring movie. It stank of cleverness. The writer(s) got the story out of its rut cleverly; the producers cleverly hired Nicholas Meyer, a highly literate (though technically per-estrian) director who was able to use the characters in a clever manner; they were clever enough to come up with a neat new character, Saavik; they were even clever enough to get Von-da McIntyre to write the novelization, which turned out very satisfactorily. In fact, their only dumb move was to hire James Horner (Battle Beyond the Stars) to do the music, which is really a small price to pay for all that cleverness smeared across the
If *Star Trek*'s producers really want to be smart they'll:

1. develop Saavik along the lines of the novelization, which developed her into quite a complex and interesting character; and
2. avoid resurrecting Spock. It would be cheap to treat us to an enormously sentimental funeral just to have him pop up again: "I'm back, just fooling you!"
3. and make Sulu and Uhura captains of their own ships. It's never too late.

I admit that I enjoyed *Cat People*. Yes, it was incredibly sexist, especially the SN and bondage climax, but I was raised on horror movies, and it's been a long time since I've seen a movie that kept me squirming and screaming so constantly. (I was only slightly fazed by *Night of the Living Dead*.) The acting was adequate; the cinematography was striking, all neon hues; and the makeup was fabulous, particularly Natassia Kinski's big transformation scene.

So, yes, on a mindless level—if you can ignore Natassia Kinski begging to be tied down and caged, and if you can endure John Heard, who is as exciting as a carton of homogenized milk—the movie is terrifying, and very slickly made. Its biggest problem isn't really the sadism, though; it's that it has no sense of humor. *Alien* has its own quirky sense of absurdity, and all of Hitchcock's movies are quite comical—the best ones are like mean cosmic jokes. Humor is what heightens suspense and horror, and *Cat People* is deadly serious—which is why it will be a dim memory when people are still getting petrified over *Whatever Happened to Baby Jane?*.

The *Sword and the Sorcerer* would hardly be worth mentioning, except that it came out around the same time as *Conan*. *SAS* was something of a 5-picture, whereas *Conan* had stars and a famous director and a big, big budget. Personally, I preferred *SAS*. It was funny. It had ham-handed jokes which were so cheesy that they actually worked. It had its moments of awfulness (such as a rat attack in a dungeon which could have been one of the poorer outcomes from *Willard*) which were so awful they were great. It also had moments which were truly interesting—including a great scene at the beginning, involving the resurrection of Kosa, a fabulously nauseating demon. I had fun at that movie. *Conan* was blah, frankly. Arnold Schwarzenegger was okay as Conan—I thought he did an adequate job—but let's face it, Conan is a dull character anyway. Give me Lee Meriwether (hero of *SAS*) any day. He looks like a ratzy Errol Flynn and is constantly bating people over the head with turkey thighs and making crude jokes about his sword. All Schwarzenegger gets to do is punch camels and bite vultures.

I'm sure there are a lot of fans out there who, since the sight of Disney presenting *High Technology* as though it were so many bunny rabbits, happy rodents, and dancing mushrooms. But I've never expected anything serious out of Disney—especially not since *The Black Hole*—so I rather enjoyed *Tron*.

Computer technology is treated with spotty logic at best, but it's just that happy, silly grabbing at concepts previously best left to Texas Instruments that I found fun.

The two love-interest characters are disgusting, simpery types. For instance, the female gets to throw her arms around Bruce Boxleitner and coo, "Oh, Tron, there isn't a circuit that can hold you!" On the other hand, David Warner, playing his usual, gets even doggier lines: "I'll be lucky if the MCP doesn't blast me into a dead zone. I want those conscripts!" Yet somehow he carries them off. Only foreign actors have this ability; foreign actors and Charlotte Heston. I am easily impressed by even so-so animation, because I led a deprived childhood. (Deprived, that is, of all Disney-animated films.) Even so, I can tell that *Tron* looks real nice. Obviously computer-generated graphics will become more integral to SF films in the future. *Tron* was interesting from a purely abstract point of view, but I was far more interested in the short "Genesis Effect" rigged for *Wraith of Khan*. The graphics in the latter served the purpose of story rather than being the story. *Firefox* is, in short, the most detestable movie I've ever endured. It has so little to do with SF, actually, except for the many images it rips off from the *Star Wars* films for the even further glorification of violence. I was terribly depressed by the sight of Clint Eastwood dressed up in a shiny black spacesuit, sitting in his shiny black cockpit, trying to summon up the thought impulse which will fire a missile at various enemies pursuing him. ("Think in Russian", his adviser suggests.), and positively stroking the fettish dials and knobs adorning the cockpit. I was even further bothered by the film's strong suggestion that all Russians are mean, power-crazed psychotics who should be bombed. But worst of all was having to listen to the audience's enthusiastic reception of the film.

SF cinema is at a definite turning point, to judge from the past season. The only question is, which way is it turning?

The general public is obviously not receptive, at the moment, to thought-provoking (i.e. "depressing") movies. It wants reassuring entertainment that the outlaw will fire the bullet or the outlaw will fire a missile at various enemies pursuing him. It has certain gotten cuteness, and will get ondles more in the future. It will get downright beefcake types who will shoot, bomb, and mutilate the hell out of the bad, the guilty, and even the merely scuzzy. It will continue to see morality treated as unnecessary ick.

But maybe, just maybe, someone will slip again and produce an aberration. An oddity. A piece of science fiction. They managed it twice this summer. Things may be looking up.
BIOLOGICAL HAZARDS OF TIME TRAVEL

By John Alexander

From where they stood, they could look up and down the street at the gray, weathered wooden buildings; but what they noticed first was the silence. Except for the gentle wind that whined softly through the empty houses, it was deathly silent. Bodies lay everywhere, heaped and flung across the ground in attitudes of frozen surprise.


Science fiction has dealt with the problem of alien contact from the mightiest colossi to the lowliest microbe, but seldom has it addressed the biological effects of cross-time contact with equal rigor. If the premise of time travel is to be accepted in fantasy literature, the possibility of exposure to past and future diseases must be addressed.

When Michael Crichton wrote the passage above, the distinction between his fiction and actual fact had already begun to evaporate. As early as 1962, American Ranger rockets bound for the Moon were carefully sterilized to prevent terrestrial microbes from biasing later results if Apollo astronauts should find life on the Moon. This practice was discontinued when it became clear that no earthly virus or bacterium could survive lunar conditions. The possibility of extraterrestrial contamination was still taken seriously enough that the first two Apollo crews to return from the Moon underwent lengthy decontamination to prevent any lunar contagion from wiping out all life on Earth. It is ironic that the amount of money spent on this project was based on the probability of lunar life divided by the population of the Earth. Essentially, each of us was valued at less than 1/1000 of a cent.

The "Andromeda Strain" scenario was later set aside in the case of the Moon, but Mars still remains an open question. Terrestrial microbes are known to withstand Martian conditions, so it was great dismay that Viking scientists learned that the Soviet Mars landers, which preceded the Vikings, were not sterilized.

The question of molecular compatibility of extraterrestrial organisms is problematical, but here on Earth where life has flourished for billions of years, the danger of time travelers transporting microbes to the past or introducing plagues into the future would be certain. Authors have often imagined a germless future into which time travelers might reintroduce long-dead diseases. Robert Silverberg's short story, 'Absolutely Inflexible' addresses this issue off-hand while concentrating on a rather hackneyed time paradox. C. L. Moore's "Vintage Season" similarly deals with tourists from the future going back to witness the onset of a plague. The premise of such stories is that the microbes which cause diseases will be irradiated. It is more likely that they will still be around, and we will have engineered genetic immunity to them.

Someday while bouncing your grandchild on your knee, you may be at a loss to explain to her the little round scar you bear on your left shoulder. "What is smallpox?" she will ask. Smallpox was starved to death. Whenever a case was reported, the World Health Organization would isolate all victims, and immunize all possible contacts. When the immune system of a host overcomes the virus, or the host dies without allowing the virus to spread, the virus also dies. When smallpox ran out of hosts, it became extinct. [Except for some being kept alive in certain research labs.]
Viruses straddle the borderline between the chemical and the living. Unable to reproduce themselves, they must invade the nuclei of a host's cells and replicate themselves by pirating the host's own RNA replication mechanism. This intimate relationship requires the virus to biochemically fit hand-in-glove with its host. Because of its vicarious means of reproduction, a new generation of virus can be produced with each new cell invaded. In a year's time the virus may have evolved into a completely new strain. This is why exposure to last year's flu bug imparts no protection to this year's variety. Because viruses evolve in constant contact with host populations, it is an astronomical improbability that a virus totally unknown to humans would even be dangerous, let alone devastating. It is for this reason that humans can't catch dog distemper, for example. The situation in similar, but not quite as specific with more complex bacteria and microbes. For an alien organism to "tap" into a host's chemical system, it would require a suitable commonality. The chances of that commonality existing, if left to coincidence, would be astronomically remote. An extraterrestrial agent might effect a host one-on-one, but would probably not be able to use the host for replication on the genetic level.

This principle points out the fundamental flaw with the premise found in The War of the Worlds and The Martian Chronicles. We all recall the striking scene in which H. G. Wells's protagonists comes upon the Martian war machines which had ground to a halt. Birds are perching at the brown rotting flesh of the Martians.

The chance that the birds could metabolize alien proteins is remote. Wells wrote that the Martians had been felled by germs that had "taken toll of our prehuman ancestors since life began here. But by virtue of this natural selection of our kind we have developed resisting powers", and the Martians had not. Unfortunately, Wells had missed the point completely; it is precisely because the Martians had never known terrestrial microbes that they would be immune, because the microbes had never known them.

When, half a century later, Bradbury wrote, in The Martian Chronicles, "I went into a house on one street. I thought that it, like the other towns and houses, had been dead for centuries. My God, there were bodies there! It was like walking in a pile of autumn leaves. Like sticks and pieces of burnt newspaper, that's all." Bradbury's supposition that travelers from Earth might have introduced a calamitous plague of the virus chicken pox was inspired by the fate of Polynesians and Native Americans who had been decimated by European diseases like smallpox and measles. These populations had been susceptible to human diseases only because they were human. The conquest of Mexico, for instance, was at least in part made possible by the ravages of European disease which emptied Aztec cities 20 years before the arrival of Cortez.

That time travel might have profound effects upon the course of evolution has been addressed in stories like William Tenn's "Brooklyn Project" in which an instrument package sent back into the Paleozoic causes the first fish to crawl out of the ooze to change its mind, in turn causing the project engineers to spontaneously change into sentient amoebas. Tenn's logic was flawed, but his point was valid. "A Sound of Thunder" by Ray Bradbury has the incidental death of a butterfly ripple a series of subtle changes into the future, noticed only by the time traveler on his return. The introduction of modern microbes into the past might easily cancel out all subsequent history, but I won't open that can of worms. I will however, consider the effect of bringing long-dead strains into the present.

Naturally introduced epidemics have set clear precedents in their effect on the course of history, i.e., the colonization of the New World. Endemic diseases, too, have altered history. Plasmodium malaria in the Com­ pagna is thought to have contributed significantly to the collapse of the Roman Empire. Agricultural practices and the siltation of rivers greatly expanded the breeding grounds of the malarial vector the Anopheles mosquito causing a crucial manpower shortage just as the Goths started to break down Italian necks. The Black Death of course is the most infamous example of the cultural effects of epidemics. The Modern Era began in 1340 when bubonic plague roared across Europe, wiping out whole districts and killing off as much as half the population of the continent. The manorial system was doomed when serfs could name their own price due to labor shortage. The lands, property, and trade concessions of the dead were channeled into new hands. Priests who had the unfortunate task of delivering extreme unction when the dying were disproportionately exposed to the disease and died in numbers accordingly. The shortage of qualified Latin-educated clerics resulted in the greater use of the vernacular in educated circles. A century and a half of periodic plague laid the foundations of what was to be the Industrial Revolution.

The most well-documented case of the effects of a major epidemic is that of the influenza outbreak of 1919. Soldiers returning from the trenches in Europe unwittingly transported a highly virulent flu strain literally around the world. Dispersal of a single disease on such a scale had been without precedent. It has never been widely appreciated that more victims fell to the flu to end all flus than to the war to end all wars. It was the memory of this worldwide catastrophe that prompted what to the public appeared to be a false alarm in the early 1970's, but the clinical danger was very real. How soon we forget.

Since viruses are often species specific, a greater danger would lie in bacterial and fungal infestations. Plague, for instance, is the bacillus Pestesvella pestis. The further one goes back in time, the more genetically removed one becomes from modern lifeforms and hence from the danger of viruses. Contact with some distant ancestor of a bacillus such as anthrax, however, might be devastating.

*In biology, a vector is any organism that is the carrier of a disease-producing virus.
Time travel might actually be used as a means of introducing biological warfare agents into the present. These could be used both against populations and food supplies. People often do not appreciate just how vulnerable many of our food staples are to extinction. Every living organism possesses paired genes for every characteristic that is expressed in its body. A population generally has a number of alleles to draw from so that a spectrum of variability is maintained for each characteristic. If one allele in a pair is susceptible to a disease an organism might be saved by possessing another that is more resistant. Plant and animal husbandry, however, has the effect of narrowing this spectrum of variability down to those characteristics that are desirable. Without the benefit of gene splicing, such characteristics cannot be selected discretely. Others accompany them on the same gene that is selected for. If a disease is specifically adapted to a strain, it could wipe that strain out completely.

The United States and the Soviet Union today possess stockpiles of biological agents that have been deliberately bred to destroy specific strains of food crops. Henry Suttton’s novel Vector deals with the accidental exposure to the population of a small town in Utah to such agents. Since similar incidents involving nerve gas have actually occurred, this hardly qualifies as science fiction. The German surrender in May of 1945 prevented the introduction of biological weapons into WW2. Had the Germans resisted but a few weeks longer, the British had planned to drop bombs containing anthrax over the German countryside. Had this occurred, much of Central Europe might have been rendered uninhabitable until well into the next century.

Perhaps the most interesting case of how an organism can wreck havoc is that of the Dutch Elm Blight. Problem: During WW1 there was a great deal of ferrous matter being directed at Allied soldiers. Solution: Dig trenches. Problem: Soldiers too busy absorbing ferrous matter to dig. Solution: Import coconuts from China. Unfortunately these laborers carried their belongings in baskets made of Chinese elm wood into which the larvae of the elm bark beetle had burrowed. Residing in the gastro-intestinal systems of these little buggers were the spores of the Chinese elm fungus. Problem: The elms of the Low Countries were wiped out within a decade. Solution: Quarantine Dutch wood products.

People being what they are, commerce couldn’t be interrupted by a paltry thing like an epidemic. Elmwood burls packed as furniture fittings arrived at a furniture factory in Dayton, Ohio in 1931, whereupon they were turned into bedknobs. American elms, which had no more immunity than their Dutch counterparts, began dropping in Baltimore by the end of the year. A normal expansion rate of 5-10 miles per year was greatly accelerated as inadvertent transport caused the disease to leapfrog up and down the Eastern Seaboard. In 1951 Syracuse began to lose its elms; New Haven, Connecticut, the "Elm City" ceased to be so; by 1963, Bloomington, Indiana, had lost all of its elm population. The disease reached Colorado by that same year, and Idaho by 1967. Had this been a food crop rather than an ornamental tree, our economy might have been thrown into turmoil. In 1925 an epidemic of wheat rust spread from Kansas to North Dakota in the space of a week, so this is no small risk. Millions died in the Irish Potato Famines of the 19th Century and the Bengal famine of this century.

The theme of devastating microbes has been touched upon in works like The Andromeda Strain which deals with forms of extraterrestrial origin. Seldom, however, in the voluminous literature of time travel has this all too obvious problem been directly addressed. In the unlikely event that time travel were to become possible, it is clear that decontamination procedures, perhaps even dictated by international law, would be imperative for time travelers, both when leaving the present and when returning. The closer the time one visits to the present, the more imperative this requirement becomes.

Addendum:

On the premise that an author should never say "never," to my chagrin upon rereading Ray Bradbury’s "Storm of Thunder in The Golden Apples of the Sun, I found that he did indeed decontaminate his time travelers (at least one way into the past) for bacteria, and addressed most of my major points raised in "Biological Hazards of Time Travel". Such an intelligent man, that Bradbury.

—John Alexander

Tomorrow’s Facets
by Margaret Key Biggs

in the curve of darkness
comes a primordial ball of light
cutting across the adamantly defensive arc
bursting into effervescent, new dimensions
too long denied, too long sought
as brilliant womanjewels shine
brightly enough to pale the sun.
SPACE AIN'T THE

I have been informed that this column will appear in the Space and Time issue of Aurora. As I have already given you a column on time exploration (issue #17), I thought it would be nice to tell you about the future of space exploration.

Unfortunately, there isn't any. Space exploration is at best comatose and at worst moribund. Unless we see a radical change in governmental priorities from the 1982 and 1984 elections, the human race will be doing very little exploration for at least a decade.

Why am I so pessimistic, while the space shuttle itself is a success? The shuttle is not part of space exploration; it is the beginning of space exploitation. The shuttle program may even, unintentionally, turn the public against space exploration. I'll make this clearer by taking you all on a short romp through history. (Into the Wayback Machine, Sherman!)

In the 1960's there were two separate space plane projects. One was the NASA project that became the space shuttle. The other was an Air Force project that went under various names—it was part of the X series that gave us the first supersonic plane and the X-15. You may have heard of it as Dyna-Soar. This prophetically (unfortunately) named ship was a small people-carrying ship that could take a couple of astronauts to and from a space station, carry a small payload, and do a bit of reconnaissance on the side. The current Soviet "shuttle" is much like Dyna-Soar. In size, it is to our shuttle as a Piper Cub is to a jetliner.

Dyna-Soar made sense to the Department of Defense (DoD). Why not? There are military cars, trucks, ships, airplanes, and you-name-it. Why not military spaceships? It is just one more mode of transportation. Maybe space turns out to be a useless place, but it would hardly be prudent to assume that without checking it out. A lot of military types made that mistake about the airplane 70 years ago.

Space, as it has turned out, is a very useful place, so the DoD was right to want to go there.*

Civilian and military space transportation needs are different. Civilians need to be able to lift heavy payloads, with ultra-high reliability. The military needs a maneuverable ship, with a very short launch time and quick turn-around. Getting all those qualities in one kind of space plane would be very tough, but not necessarily impossible. So Congress, under the goad of the Nixon regime, said, "We are only going to pay for one space plane—you don't really need two. Now you two (NASA and DoD, that is) get together and work something out." The DoD and NASA screamed loudly, but to no avail.

Ten years later, NASA has a very mediocre shuttle and the DoD has a rotten space plane. The DoD has no way to get into space except with the shuttle, so they are making the best of a bad deal.

There are a couple of consequences of this odd-couple arrangement. First of all, because Reagan has cut back the NASA budget, NASA has scrapped almost all space exploration. That is the only way they could survive the cuts without reducing the shuttle budget.

Why don't they reduce the shuttle budget? Because the military needs it (Remember?), and the Reaganoinds give the DoD priority over everything else. NASA already has the DoD covering most of the shuttle costs (although careful bookkeeping makes this inobvious), and the DoD has priority for its missions. On those missions, it will be the DoD, not NASA, who is in command.

Secondly, I have been told that Reagan is in favor of a multi-purpose space station: one to serve research and industry as well as the DoD. Assume that is true, but consider what Congress will do to the funding request. The next time Reagan throws another temper-tantrum about the national debt, Congress is going to come right back and say, "Do you really need that big a space station budget?". And Reagan will have to admit that he doesn't need it but

* This should not be taken to mean I like, support, or agree with the U.S. military establishment! I only want you, the reader, to realize that sometimes the DoD has good reasons for behavior.
he will say we need it for national security. Given the priorities this administration has shown us already, I don't think I am being pessimistic to think that if we get any space station at all, it will be a purely military one. Frankly, I think that is all Reagan will ask for.

So we have a shuttle being used primarily for military missions, serving a military space station. Aside from large space telescope, and Jupiter orbiter, maybe, we are doing no new space exploration. I think that is a very bad situation. Military budgets are unsatisfactory; each new president kills or creates new military projects according to the ideology of that new administration.

Suppose the successor to Reagan is not quite as scurvy as war toys not as callous about the less-than-affluent? Out will go such boondoggles as the B-1 bomber, the neutron bomb, the MX missile... and the space station. Perhaps even the shuttle will be cut back. After all, if it is used mainly for ferrying military payloads and people, and servicing a military space base, that makes it a military project.

The neutral, scientifically objective persona projected by NASA and the space program has always been politically shaky. We associate missiles with atom bombs, not astronauts. If the shuttle becomes overly military, it will be politically indefensible. If you think the space budget is controversial now, take a look at it in a few years!

Other governments aren't doing much better. The Soviets maintain a modest space exploration program, but their main interest has been and will continue to be in space exploitation. The efforts of the rest of the world are too modest to even consider.

Meanwhile, I suppose my libertarian readers are cheering madly about how we are getting that nasty old government out of the space game, leaving private enterprise and space industrialization as the wave of the future.

This is nonsense. First, I have been watching (and participating in) private space ventures for ten years. There is not one group, to my knowledge, possessing the money and technical and business acumen needed to create and fly people-carrying space vehicles. Yes, there are people trying—some have even launched a rocket or two. None are competent enough to pull it off.

But, for the sake of argument, assume we do get private space travel, soon. Will the company be doing exploration? No way! They are going to be trying to make a buck. Space exploitation is risky and costly enough. Basic exploration of the unknown takes time and money—far more time than investors can tolerate. In many cases, it costs so much that it can never pay back any single-interest group, like a corporation.

Someday, perhaps a mining cartel will go mine an asteroid. But not until they know if it is worth doing and they are not going to fund a deep space mission with no idea at all if there is anything there worth finding. Well, not until they run out of nearby resources they can get to confidently. That will be a while.

Can you seriously imagine a multi-national corporation building Project Cyclops? How about sending a probe to Barnard's Star? I'll settle for a Titan lander mission. Even the World Space Foundation, which only needs a million or two to build working solar sails, can't raise the bread.

Governments, not businesses, support basic research and exploration. Exploration usually pays off in the long run, to those with broad interests. Governments have to take the long view—businesses rarely can afford to. Governments can invest in diffuse returns that reward entire societies. Business did not discover the New World, create the British Empire, explore the outlying provinces of China and North America, or open up the Orient to the Western world. Yes, business cheered on all these ventures, and aided and abetted and took advantage of new markets, resources and products the explorations uncovered. But business did not initiate nor undertake those explorations, hoping to uncover some hypothetical commercial treasure. Business doesn't work that way.

Government does work that way, and it is a most useful and legitimate function of government. Ours, unfortunately, is getting out of space exploration as fast as its little conservative feet can carry it. The "invisible hand" is not going to come to the rescue.

Perhaps, by the end of the decade, there will be serious efforts at space exploration, again. But the great adventure may have died just as it was beginning.

I used to hope to see humans reach Proxima Centauri. Now I'll settle for living long enough to see them walk on Mars.©
Now, what was all that fuss about going back a few million years and picking up a few small mammals?

Does ex. Time-Machine, eh wot?

NO... he's not a special student! He just used his personal chrono-coach to get extra sleep in the morning too often!
"Whatever you want to do, dear, it doesn’t matter to me," he repeated.

She left the dirty dishes on the table and walked out onto the cedar porch. The warm sun engulfed her. Her eyes followed the narrow dirt path leading from the porch down to the beach, to the pier. She gazed at the pier and tried to see herself there in the dark, as she was last night, leaping off the edge like some madwoman, like one of those patients who had shared the hospital ward with George. She shuddered. Thank God he was out of there now! But last night had really happened!

"What’s so interesting out there?" George asked.

"Nothing!" Lisa jumped. She hadn’t realized he’d followed her outside. He, too, had been gazing out at the pier.

"Lisa, I love you so much!" he burst out, and took her into his arms and hugged her hard. She returned his hug, torn between the guilt and the thrill of what had happened last night. She wished she had never yielded. That ugly old sofa had triggered all of this, and now those flying lessons were to be her nemesis.

"Lisa, do you remember last year when I started to have those... those... you know, those images?"

"Those visions! George, they were visions."

"Yes, do you remember?"

Lisa began to feel uneasy. She didn’t want to hear about it.

"Yes I remember."

"Well, last night..." His eyes seemed to focus on something within his brain and his voice fell to a whisper. "Last night while I was looking for you, I think I had another one. Lisa?"

"Don’t", Lisa clamped her hand across his mouth. He had seen her after all!

"No, George, don’t say it! I love you very, very much, and together we will make you well again."

"It’s nothing you can do much about, honey," he said, pursing his lips in defiant loneliness.

"Oh, yes, it is," she said. She kissed him fervently, three and then four times, all over his face, and vowed to make absolutely certain that he took his sleeping pill before she went night flying again.
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