SCIENCE FICTION ADVENTURE MAGAZINE

VOLUME 3 NUMBER 1 – MAY 2008

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EDITOR'S COMMENTS: I guess I had better mention that this is written and edited by Dale Cozort for the May 2008 distro of FAPA. All original writing in this zine is copyrighted of course.

It has been too long since I've done one of these. I had never missed an issue of any APA I had been in until the last three issues of FAPA. I'm finding that writing for two APAs at the same time is a bit of a stretch. I'm now co-editor of Point of Divergence, the Alternate History APA and we're trying to get that back on a regular schedule. That sucks down the time. We put out our 50th issue in March, and I tried to make my zine special. It turned out not to be as good as I hoped due to a hard disk crash, but I at least got the quantity out there—56 pages.

I've been trying to figure out how to approach FAPA. I started out treating it as essentially Point of Divergence without the requirement that the subject be alternate history. The feedback I got from the first couple of issues showed that I needed to take another approach. The biggest difference between FAPA and POD seems to be the attitude toward fiction. POD is in part a fiction workshop and putting fiction in zines for workshopping is strongly encouraged. .In FAPA the attitude seems to be "If it's in here it is fan fiction. If it's fan fiction it's not worth reading because if it was any good it would be in the prozines." Some people made exceptions to that rule for ***Char***, and I do appreciate that. If anyone got hooked on it and want more I can send you the rest via e-mail.

In any case, different APAs. Different cultures. Is one objectively better than the other? No. Just different. This is a very different zine than my first few zines for FAPA, with less emphasis on fiction and more on life as a science fiction fan and sometime writer. I hope you enjoy it. If you were enjoying the stories and want more, then let me know.

Thanks

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UNCLASSIFIABLE WRITING: LYING FOOTSTEPS

You hear them in front of you or close behind you. Steady. Confident. Like a machine.

Step, step. "I can do this forever. Can you?"

Step, step. "I'm not a mere thing of flesh and blood like you. Are your muscles aching yet? Lungs burning? Mine aren't."

Step, step. "No hint of faltering. No change to the pattern. Just step, step forever or until you break. Can you match that?"

Step, step. "Have a little something in reserve? Something you're saving for the end? I have more. You can hear that in my footsteps can't you?"

Step, step. "You're going to break. Getting hard to put one foot in front of the other now, isn't it? At some point you aren't going to be able to anymore, and I'll just keep going."

Step, step. "Why put yourself through this? You know you're going to lose in the end."

You can hear it in the footsteps. In front of you or close behind. Steady. Confident. Lying.

A SLICE OF MY LIFE: CITY BOY AT A FARM AUCTION

My cousin and I grew up together, but our lives took different directions. I'm a computer person and an educator. He was a farmer until his death a few years ago. I'm a computer hobbyist and have a lot of computers and computer parts lying around. His hobbies involved bigger things: Tractors, cars, steam engines. Unfortunately that interest isn't shared by any of the surviving cousins or other relatives, so eventually my aunt took the farm auction route. I hadn't been to a farm auction since I was a kid, but I had to play a major role in this one, and it took me almost a week to recover from it.

The auction was in early December. I took Tuesday off from work and went up there Monday evening so I could help with the last minute prep.

This was Tuesday: Got up around 5:30 am on Tuesday morning and started bundling up. Lined jeans, snowsuit, thermal undershirt, heavy jacket, lighter bright orange 'don't shoot--I'm not Bambi' jacket, orange cap that drops my apparent IQ 25 points. And heavy boots that no longer fit, no matter how hard I tried to get my feet into them. I scrambled and came up with a pair of basketball high-tops. I figured I might get by with them, and two pairs of socks, one

of them super-heavy thermal things. Wrong. City boy mistake. When your feet get cold your whole body is cold.

Neighbor and I went out and opened the gates for the auctioneer and his team at 6:30 am, then went down to try to get a big farm machine called a Haybine started. The Haybine was the crown jewel of the auction, expected to bring at least ten thousand, and probably a lot more. Someone snuck in the night before and cut I spent several hours babysitting the Haybine, with my feet gradually getting colder through the tennies before they finally auctioned the thing. It went for a good price.

This was a huge sale. My cousin (aunt's now deceased son) collected big stuff. There were 21 tractors, and 18 cars and trucks in the auction. There were hundreds of other big pieces of farm machinery. We had worried that there wouldn't be enough people to buy all of this stuff. That turned out not to be a problem. The auctioneer gave out around 800 bidding tickets. They usually figure about three to four people per ticket, so there were probably between 2000 and 3000 people at this auction at its peak. It attracted farmers from at least four states.

The crowd was interesting to watch. There were young and old, big and small, but everyone there was Caucasian. No African Americans. No Asians. No Indians. No Arabs. There wasn't anything keeping people of any of those ethnic groups away except lack of interest, but they weren't there. There were a number of Amish at the sale, along with people from the local Mennonite group. Some of these guys looked like they were at an age where they should have been having one of these sales instead of going to one. Some were young and tough looking. I saw several guys who looked like they could have picked up the front end of a tractor and plowed the rest of the field that way if they had needed to--enormous, muscular guys.

There was also a wide range of temperaments and attitudes, from friendly, open and helpful to surly. On the helpful side, a couple of my aunt's neighbors have been extremely helpful. I don't know how they were able to do as much as they did while keeping their own farm going.

some wires, hoping that we wouldn't be able to start it and they could buy it for a third of what it was worth. They would then replace a ten dollar wire and resell the thing for what it was actually worth. Fortunately, my aunt's neighbor was a good enough mechanic to spot and fix the problem. Since I know little about farm machinery I got posted to keep an eye on the Haybine to make sure nobody tried that trick again.

The auctioneer had quite an operation going. He had a trailer where you could buy food, water, and hot chocolate. The cold air made people hungry and he charged enough to make a good profit without making people feel ripped off. I had something like four of his three dollar sloppy joes during the day.

The auction started at ten o'clock. The auctioneer drove his truck along rows of machinery, with a crowd of several hundred to a thousand following. The guy had enormous stamina. He had someone sub in a couple of times for half an hour or so, but other than that he just kept going. There had been an ice storm a couple of days before, but people ignored the packed snow and ice to keep following him.

The sale was supposed to end at 5 pm, but when that time came there was still more to sell, so they broke out the flashlights and kept going. The neighbor and I stayed until the very end. The crowd gradually dwindled as snow began to fall and the wind picked up, but there were still several dozen people following the truck and bidding was still enthusiastic. By this time I had been on my feet and out in the cold nearly continuously for over twelve hours. I was moving slow. A lot of the bidders were still going strong. These old boys are in shape.

Finally the auctioneer got through the last of the stuff a little after 6:30 pm. The neighbor and I walked back to the house through an

increasingly heavy snowstorm. We got to the house, had a cup of hot soup, and I was asleep in under five minutes.

ELECTRIC WORLD – AN ALTERNATE HISTORY SCENARIO

I'm an avid amateur historian and I love the world building aspect of alternate history stories. This is the result of a brainstorming session that was supposed to be the background to a story. I decided against writing the story, but the background is still kind of fun.

I got to thinking about technology and how it evolves. We live in a world where electricity powers most of our stationary activities, but most of our transportation is based on petroleum and internal combustion engines.

The market for kerosene grew through most of the rest of the 1800s. Electricity began challenging kerosene for lighting applications as practical incandescent light bulbs were developed in the late 1870s. Electricity took a detour down the dead-end of direct current (DC) power in the 1880s, before Alternating Current (AC) power caught on, and allowed widespread distribution of electrical power and electric lights.

Kerosene and other petroleum-based lighting was gradually pushed out of the cities, though it stayed in use in some rural areas into the 1950s.

Use of petroleum for lighting meant that refineries and much of the rest of the necessary infrastructure was available for petroleum-driven cars. Once the internal combustion engine was refined enough to provide a source of power, and advances in suspensions (mainly derived from bicycles and carriages) were in place, petroleum-fueled internal combustion engines won out over steam-driven and electric–powered competitors and became the primary means of transportation in the US, and to a lesser extent in Europe.

What might have happened: Let's say the technology behind the light bulb advances a little faster than it did historically. Joseph Question: How could we have end up with a society where electricity dominated transportation and the internal combustion engine was just a technological curiosity?

What actually happened: The oil industry got its start mainly as a source of kerosene, primarily for lighting. Kerosene was initially refined form coal starting in 1846. Starting in 1852, kerosene was refined from petroleum. The US oil industry was still in it's infancy at the beginning of the Civil War. In 1859 the US produced 2000 barrels of oil. By 1869, it was producing over 4 million barrels.

Wilson Swan, an English physicist and chemist was working on incandescent bulbs as early as 1850, and had working (but not practical) bulbs by 1860. One of the major problems he faced was inability to create a good enough vacuum inside his bulbs. Let's say that techniques for creating a vacuum advance fast enough that the first practical bulbs are created around 1854, twenty-five years earlier than was the case historically.

The bulb itself is a major accomplishment, but it is of very little use without practical means of generating electricity. Historically, that didn't happen until arguably around 1866. I suspect that the existence of practical light bulbs would spur more rapid advances in electrical generation. Let's say that adequate means of electrical generation are available by 1859, and a primitive but practical form of electrical lighting begins to spread.

Electric lighting cuts into the growth of kerosene production, but doesn't initially stop it. Initial electric production is direct current, which makes distribution over long distances difficult. Electrical generators are scattered around major cities, with each station serving customers within about a mile of the station.

Historically, AC power generation lagged DC power by 15 to 20

years. Let's say it follows that pattern in this time-line. That would mean practical AC power by the mid to late 1870s. As AC power spreads, petroleum-based lighting rapidly loses market share, though it persists in rural areas.

With the arrival of AC power, electric-based transportation begins to spread. Trolley systems become commonplace in large cities. They spread out from there, connecting towns to each other and to cities. Cities redesign themselves around the trolley lines. Stores and homes are located with reference to the trolley lines. Towns and cities enact ordinances against use of horses within city limits. A few wealthy people own expensive electric or steam cars, especially if they live in rural areas away from the trolley lines. Bicycles become a major secondary form of transportation within urban areas, and to a secondary extent in rural areas, but they progress more slowly than in our history.

As the infrastructure of electricity spreads, applications for it become feasible—radio, phonographs, and eventually television in the late 1920s. The incentive to get electricity spreads with the new applications, and people find ways of getting some electricity even in rural areas. They buy wind turbines and banks of batteries in areas where it isn't feasible to run transmission lines.

Steam cars have a niche in this society, especially in rural areas. Steam tractors have a somewhat larger niche. Electric engines simply don't have the power to serve as tractors, and batteries aren't up to the task of plowing. Steam engines aren't totally satisfactory, and they remain expensive due to the fact that they don't have the scale of mass production that internal combustion engines had in our history due to their use in cars. Draft horses and mules remain a major factor in the rural US far longer than they did historically

The technology for internal combustion engines finally comes together about twenty years after it did historically. In the 1920s a few companies produce horseless carriages using them, but the infrastructure for electric transportation is deeply embedded in the fabric of society. The petroleum industry is a mid-sized, not especially politically powerful entity. It is in no position to take on the big electric companies or the big trolley companies.

The internal combustion engine does find some niches as time goes on. Internal combustion engines extend the range of dirigibles, and allow the first heavier than air craft to fly by the early 1930s. Heavier than air craft are confronted by entrenched competitors in the dirigible industry and to some extent by high-speed cross-country passenger trains. They do establish a niche in very high speed travel by the 1940s.

So where do we go from there? We have pretty much all of the stereotypical alternate history elements—steam cars, dirigibles, and (especially for David Johnson) trolleys. So now we need to think through the implications of all of this.

Military/strategic: The divergence happens before the US Civil War, but probably would not prevent it. It also would probably not change the complexion of that war a great deal. It might give the north a slight additional advantage by allowing factories in the north to be operated more efficiently at night. I suppose that I could have fun with a desperate south making electric-powered submarines to try to break the union blockade, or spies using newly developed phonographs in some way. I could see this time-line's version of the Gettysburg address being recorded on a primitive phonograph. That would be kind of cool.

As time goes on, the military/political implications get bigger. Is there a Franco-Prussian war? Probably. The two powers were going to clash at some point. Would there be a rush for Africa? Again, probably, though European technology would have taken on different forms and might not be quite as effective at shrinking the world and conquering it as it was historically.

Would there be a couple of World Wars? Probably. No guarantees that they would be between the same countries or that they would take the same shape. No guarantees on the timing either. A 1914 war in this timeline would probably not have tanks or airplanes. It

probably wouldn't have Paris taxicabs rushing soldiers to the front.

The US would probably not be the same type of industrial powerhouse in this history as it was in ours. The electric industries would not generate the scale of mass production that the industries built around the internal combustion engine generated historically.

Other implications: Delayed space program in all likelihood. Earlier television, with all of the ramifications of that. Earlier development of mass culture, with musicians and styles from the late 1800s surviving and commingling to create music styles we never saw historically. Probably a more social conservative culture for many years, as the lack of automobiles kept kids under the watchful eyes of adults longer. Television and radio shows that never existed in our history. I wonder what would show up on the radio given the morals of the time they showed up. A lot of Horatio Alger type stuff? A lot of Wild West type things?

How would earlier TV affect reading habits? Would teenagers still flock to Hardy Boys and Nancy Drew or Jerry Todd and Poppy Ott in the 1920s and 1930s? Given the time between the divergence and the 1920s, it is unlikely that specific authors would still be doing the same series but I don't know how that would have change the market. No Stratemeyer Syndicate? How would that have changed young adult literature? Would the pulps have had a chance to develop? Kind of sad to think about a world with no Doc Savage or Tarzan. It might not have a Foundation Trilogy or a Flandry of Terra either.

How would the existence of television affect the course of the inevitable depressions of the late 1800s and early 1900s? Would the psychological impact of TV make getting out of those depressions more difficult?

What about medical advances? Would they be faster or slower? What about computers? More or less advanced than historically? Solar power: earlier or later? More or less successful?

Would petroleum/internal combustion technology eventually win anyway? If it didn't, how would that affect the players in what historically became the power centers of the oil industry? Saudi Arabia still a desert full of warring tribesmen? No Texas oil booms? The Ottoman Empire still theoretically ruling the Middle East? British and French Empires still around in the timeline's equivalent of 2008?

What about the settlement of the west? Slower? Faster? Would the classic Wild West survive longer or become civilized more quickly? I'm guessing it would survive longer, which could be kind of fun, though probably not to the people living there.

So what do you think? Is there anything new or noteworthy about this approach? Any story potential? Any ideas on what 2008 would look like given this divergence?

PURSUING THE DREAM: THOUGHTS ON FOURTEEN YEARS OF WRITING

I've wanted to be a writer since I was around 12 years old. I started a lot of stories through the years, but only got serious about writing in the summer of 1994. I was thirty-something at the time. Now I'm a tad bit older. Yes, I know I'm a mere babe in the woods compared to most FAPA members, but in all likelihood I'm over halfway through my life and not too many years away from retirement. As the fourteenth anniversary of my serious writing time approaches, I have a few thoughts on those 14 years.

So far I've submitted various short stories and novellas to science fiction pro-zines just over a hundred times, and have just over a hundred rejection slips to prove it. I haven't gone the slushpile route as much with my novels, but I have done queries to quite a few

agents and publishers, and I plan to continue doing that until I get published.

A lot has changed in my life over those last fourteen years. My stepdaughter has married and now has a kid of her own. My little 3-year-old is now driving, and will be in college in under a year and a half. The big old house we once shared with my wife's parents has gradually emptied out, with my wife's parents passing away and the kids growing up. It's far too big for us now, and will be even more oversized when my daughter moves on with her life.

Physically I'm still reasonably healthy, though nowhere near the level of capability I was at ten years ago. I look back at some of the things I did back then and am just amazed. I used to ride my bike 4 to 5 miles to the YMCA, lift weights, go up and play basketball for an hour or two, then ride my bike back home. I would die of multiple causes—heart attack, stroke, heat stroke, etc--if I tried some of those things now.

I've become a better writer over the fourteen years. Most of the fiction I wrote ten years ago looks like crap to me now—crap with potential, but crap nevertheless. One huge difference is in my attitude toward writing long stories like novels. I've finished three so far, and I know that while the effort is by no means trivial I can finish the bulk of the rough draft of a novel in about a month.

Getting a novel or any other type of writing published professionally by old-style publishers or profession magazines still eludes me. I have gotten paid for columns in the website StrategyPage.com, and my print on demand book American Indian Victories has made some money, apparently a rarity in this market. Based on royalties it has probably sold around 375 copies as of December 2007. Not bad for a dry-as-bones totally unadvertised book that doesn't fit into any recognizable category, but a long ways from being published by a real publisher. I recently won $500 for placing in the top five in the TruTV Search for the Next Great Crime Writer on the social network Gather.com. I can't really be classified as an amateur anymore. Yet I'm a long ways from being able to make a living as a writer or from being able to accurately describe myself as a professional writer.

That last contest illustrates both the successes and failures of my writing career so far. Getting into the final five out of over 260 entries was an honor. I appreciate all of the people on Gather who enjoyed the first two chapters of Char and rated it highly. At the same time I have to look at the results and wonder. I got my best novel (Char) into a situation where I was competing against only 4 other people. I had cut through all of the noise that normally keeps a writer from being noticed. I had my best shot yet, and I didn't win. The top five placing was great and the $500 was great too, but Char is the best story I'm capable of writing after writing seriously for nearly 14 years. And it isn't good enough to win in a contest of new novelists. That's discouraging.

It seems like every seemingly insurmountable obstacle I get to the top of in this writing game is just a foothill hiding an even more formidable obstacle. Finishing a novel seemed impossible when I started. Getting to the top five in one of these Gather contests seemed impossible after my novel disappeared without a trace in the original First Chapters contest. I did both of those things, and I'm still a long ways from professional publication.

Several of my Gather friends have gotten to the next stage. They've found a professional agent. They still aren't published though. Even when they are published they won't have "made it". A published writer still has a long ways to go before they can become a full-time writer. Some of the old-timers say that it usually takes ten years from the time someone gets a novel published to the time they are able to write full-time. Many mid-list writers get so discouraged after a few sales that they go back under a different pen name and start over because they've gotten stereotyped as a writer whose books will sell approximately x number of copies, and they never get the marketing push or distribution to move beyond that.

Becoming a writer full-time is tough, and it probably should be. After all, if I'm writing full-time that means that somebody else is doing the work to provide me with food, clothes, a car, and all of the other accoutrements of modern society. Does my writing contribute enough to society to justify me pursuing it full-time while others do all the stuff that supports me? So far the answer seems to be "no". Maybe it always will be If so, well so be it. I've learned. I've brought characters and plots to life. I've enjoyed writing. I'll continue to do so.

Writing is a tough business to break into, and it's going to get tougher as time goes on. It's a matter of supply and demand. The demand for printed material is going down. That's partly due to competition from the many other sources of entertainment and knowledge that are now available. Books compete with TV, DVDs, videogames and the Internet.

The book industry isn't doing so well at that competition. Demand is also going down because the publishing industry has become increasingly "Hollywoodized". Publishers too often look for the easily predictable hit, based on what has sold in the past few months or years. Too often they try to manufacture talent, taking mediocre writers with compelling looks, personality, or life story and making them stars by sheer marketing.

Based on the output from a lot of publishers lately, I suspect that people who actually read and like books have less and less influence as years go by. Marketing types who see themselves as selling interchangeable generic "widgets" push in and "professionalize" the creative spark out of the industry. To which I say how can you expect to grow a market if you don't understand it?

There is also a more subtle problem. The book industry is geographically concentrated primarily in New York. As the right and left coasts of the US grow away from each other, and especially away from the vast center of the country, the publishing industry seems to be increasingly losing touch with much of its potential audience. The bright, well-educated New Yorkers in the publishing industry seem fascinated by stories about New York, especially about bright, well-educated New Yorkers. They seem to find it difficult to understand why the rest of the country doesn't share that fascination. They also seem to find it difficult to understand why people in what New Yorkers like to call "flyover country" don't respond positively to books placed in a stereotype South or Midwest where the locals seem to be a mix of trailer trash, characters from *Deliverance*, and characters from *Mayberry*. If you don't understand your market you are not likely to succeed in it, and major publishers seem to be moving away from understanding their market.

So, for a variety of reasons demand for books is going down. At the same time, supply of potential books to publish is going up. Twenty-five to thirty years ago it was much more difficult and expensive to write a book. No computers. No laser printers. You typed the book on a typewriter, or wrote it longhand and hired someone to type it for you. Revisions meant retyping the revised pages. Research meant physically going to a library, rather than just going to Google. Only the most determined people ever finished a novel.

With the advent of cheap computers and cheap laser printers, two things happened. First, existing writers became much more productive. That meant that there was less need for new writers and less room for them to enter the game. Second, a lot more new writers actually finished manuscripts and sent them in to publishers. The sheer number of manuscripts overwhelmed publishers of all kinds. Just to give you some idea of the problem, as of about five years ago the professional science fiction magazines were receiving a thousand manuscripts in an average month from unpublished writers. In an average year they might publish three of those stories. That flood almost certainly hasn't slowed down, and it has probably gotten worse.

Wading through all of those manuscripts is time-consuming and expensive. As the volume of submitted manuscripts increased,

publishers off-loaded more and more of their 'crap-filter' function to agents, usually refusing to even look at unagented manuscripts. That shifted the torrent of manuscripts to agents, but it didn't solve the problem of oversupply. Agents have become increasingly selective, and many of them simply no longer look at manuscripts from unpublished writers.

The fact that it is so hard to break into the writing game compounds itself. Writers with the potential to create new demand don't make it through the crap filters. That reduces demand, which reduces the resources available to find new writers capable of getting readers excited and bringing in new readers.

I believe it is still possible for a new writer to break into the game and do well. Some have. I still hope to. At the same time, the odds are stacked against writers. Think about the odds against getting published in one of the professional science fiction magazines. Your manuscript can be in the top one percent of the manuscripts they get in a year and you are still competing against 120 other people for one of those 3 slots. If your manuscript is absolutely the best they get out of a thousand received in a month you still only a twenty-five percent chance of getting one of those slots.

The bottom line is that to break into the market by sheer talent you have to be not just a good writer but a spectacularly good writer. That isn't enough though. You also have to be incredibly, irrationally persistent. That isn't enough either. You still have to be lucky. You've got to touch a chord in an editor or agent to have a shot. The more I think about it the more I realize that. It isn't enough to be in the top one or two percent of the writers out there. You've still got to get lucky or be in the top 0.2%. Actually, I think luck and persistence are the main factors, because when you get to the top 1% or so it is really just a matter of editor tastes and editorial needs."

Personal tastes are an awful lot of it. I saw that as I was reading the entries for the First Chapters contests. Some of the chapters had good writing mechanics and other people thought they were great, but for some reason they just didn't do anything for me. Not the sort of thing I like. That was actually one of the good things I took away form the original First Chapters competition: a better understanding of the thought processes that go into how a slush pile reader chooses what gets a second look and what doesn't. I can't imagine how people manage to read through the barrage of manuscripts day after day and stay sane

So, good writing, persistence, and luck. If you have all of those things, congratulations. You've gotten to the top of another foothill. Now you can see the next level, the real mountain.

Given the time and frustration involved in traditional publishing, more and more aspiring authors go the Print On Demand or self-publishing routes. A recent New York Times article looked at just two of the big POD companies and discovered that between the two of them they had around 56,000 books in print. I would guess that the total number of POD books is into the several hundreds of thousands. The New York Times article gives a figure of 400,000 books of all kinds published or distributed last year.

I have mixed emotions about taking the POD or self-publish routes. I did self-publish ***American Indian Victories***, and I'm glad I did. On the other hand, most people who go that route will be sorry they did. Unless you do your homework self-publishing can be an expensive exercise in futility. I also worry about the impact of those hundreds of thousands of self-published books on the marketplace.

Until recently there was a sharp division in the marketplace. On the one hand there were the professionally published books. One way or the other the author had to have convinced a third party to pony up several thousand dollars to get it in print. That usually, though not always, ensured at least some degree of quality control.

On the other hand there were vanity published books. These were almost always awful—the product of a desperate would-be author getting taken advantage of by a greedy pseudo-publisher. Readers

didn't buy those books because they knew they would be awful. We assumed (usually correctly) that if a book was any good it would have been published by a conventional publisher.

That old division is breaking down. Publishers can no longer find the good stuff from unpublished authors because of the flood of material coming in. Most of them have stopped trying. That means that there are talented authors who will never get their books out to the public by conventional means. At the same time, POD technology has lowered the cost of self-publishing. If you shop around carefully and read the fine print carefully it is possible for an author to break even by selling a couple hundred books and make as much as an average new author advance if they sell around a thousand—extremely hard to do, especially for fiction, but not impossible.

So you end up with a flood of self-published books, most of them not really ready for publication, but with some real gems among them. As a reader, do you just stick with the authors and publishers that you know? Well, you get a reasonably safe reading experience that way. You know the range is going to be mediocre to pretty good. Do you try to mine the flood for fresh voices? The range will be much wider—from really gut-wrenchingly pointlessly awful, through trite and self-indulgent to a few genuine gems. That was the pattern in the First Chapters contests and I'm sure it's the pattern among POD books.

As a book reader I love having the choices, but I hate having to wade through junk to find the good stuff. As a want-to-be author I like having the option of going the POD route, but I fear what it may do to the industry.

I want to be published professionally, but I continue to write because I enjoy writing. I know that if I'm published professionally that is a major step, but it is only the start of another decade-long struggle.

A STYGIAN TALE: NIGHT OF THE BLACK SWANS

Now this takes some explaining. A group of First Chapter contest veterans on Gather.com had an informal competition to create the most grotesquely overwritten yet strangely appealing short story we could. Among the rules: It had to contain the word "Stygian". This is my entry. I got the overwritten and strange parts down. Appealing? I'll let you be the judges of that.

Deep in the bowels of a major publisher a light burned, creating a tiny, trivial, insignificant swath of illumination in the stygian darkness that held sway in the rest of the massive edifice. In that insignificant swath of light sat an insignificant entity, Myrtle Smith, first reader. Myrtle engulfed, rather than sat in her tattered chair. Her jowls shook as she peered through inch-thick glasses and chortled. Her chortle was a thing tinged with both triumph and madness.

Around Myrtle Smith, first reader, in that insignificant swath of light, black swans soared--three of them this day--manuscripts that would make the publishing company millions, if anyone but Myrtle Smith, first reader ever saw them. She read, and chortled late into the night, then Myrtle replaced each of the three black swans in their envelopes, along with form rejection notices. She e-mailed her fellow first readers at the other publishers, the secret cabal that covertly rules the publishing world, and warned them to be on the lookout for tonight's black swans.

You see, after years of laboring at the slushpile, Myrtle Smith, and all of her first reader colleagues have gone quite mad-mad in the sense of crazy and mad also in the sense of angry. They pass along the mediocre and the adequate to the bloodsucking, soul-destroying leeches that employ them. The transcendent, soaring manuscripts,

however, they savor only among themselves, like art collectors hoarding masterpieces.

Dawn is sending tentative fingers into the stygian night when Myrtle Smith, first reader extinguishes her tiny island of illumination and waddles out of the building on her unfashionable, much scuffed penny-loafers. It has been a long night, but a productive one.

AH CHALLENGE THE ERA OF SOLAR ENERGY 1986-?

This was inspired by some notes I came across that I made in 1980. At that point I was young, naïve, and thoroughly convinced that solar power was the wave of the near future. Here are the notes:

Solar Cell Future:

- Solarex – new plant: 2.5 megawatt production, 5 megawatt capacity plant – semi-crystalline silicon-estimated selling cost $5 to 7 per peak watt – sometime in 1980
- Heliotronic (subsidiary of Wacker-Chemotronic GnbH – supplying samples of 10 cm by 10 cm polysilicon-efficiency over 10%-hopes to cut price to 25 cents/Watt within 5 to 8 years by mass production
- Institute of Energy Conversion (independent development group at University of Delaware) has cadmium sulfide cell at 9.5% efficiency, says they could be selling by 35 cents per watt by 1982. Trying to line up five independent companies to build plants under license.

Financial World, December 1-15,1980: "Experts, though, see the solar energy industry growing from $50 million a year today to as much as $30 billion in just 10 years—with the home heating and hot water segment, which is farthest along in development, growing faster in the years immediately ahead.

By the year 2000, however, photovoltaics will have overtaken solar thermal as the fastest-growing segment. By then, the Department of Energy figures that all forms of solar energy will supply about 20% of the nation's total needs. By the DOE's ways of reckoning, that includes not only photovoltaics and solar thermal, but also such solar-related sources as hydroelectric, biomass and wind energy. But photovoltaics and solar thermal, but also such solar-related sources as hydroelectric, biomass and wind energy. But photovoltaics and solar thermal, in the year 2000, will account for 35% of solar's total."

In 1980 it looked as though solar and renewable energy was on the edge of taking off. The price of oil just kept going up. Natural gas for home heating was going up more slowly, but everyone figured that was because of government price controls. When those came off, home heating costs would skyrocket, and solar thermal energy would take off. Solar cells weren't quite there yet, but there were a lot of promising technologies in the hopper and DOE was predicting a twelve-fold drop in solar cell prices—from around $6 per watt in 1980 to around 50 cents in 1986. Dollars in 1980 were worth around 2.63 times as much as 2008 dollars, so in current dollars that would

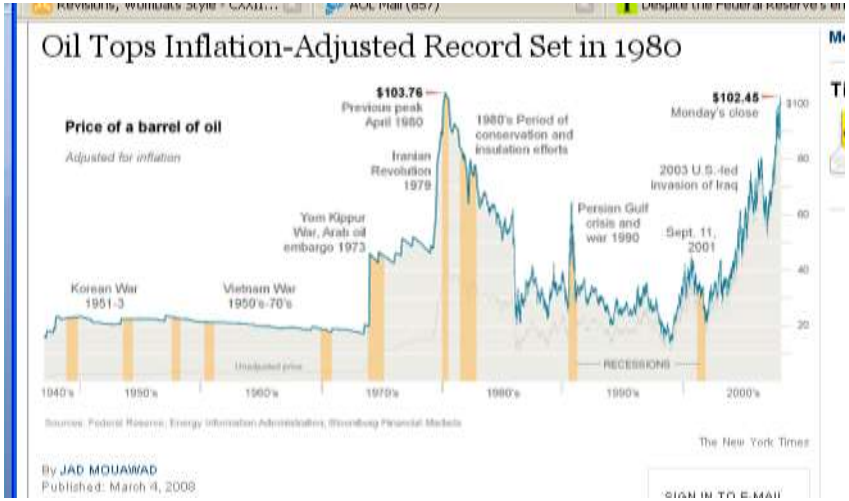
have meant solar cells for around $1.31. As my notes suggest, several individual companies and institutions were making even more optimistic predictions. Well, the solar revolution didn't happen, for a variety of reasons.

What happened to the solar revolution?

Well, part of the problem was expectations. The solar cell industry grew, but rate of growth was nowhere near enough to turn solar cells into the major source of electricity the hype said it would become.

At the same time, even in the dark times of the early 1980s, growth was impressive. Worldwide, solar production went from 4 megawatts in 1981 to 25 megawatts in 1984. Growing to more than 5 times the initial production rate in three years is not at all bad. It just isn't 'immediate breakthrough. The industry performed well and grew, just not as fast as expected. In the US, the industry lost ground slightly between 1984 and 1986, but more than made up the lost ground in 1987, and has only had one year of declining production since.

The chart below, taken from the March 4 issue of the New York Times, shows one of the major reasons why solar cells didn't meet the most inflated expectations:



As you can see, the inflation adjusted price of oil fell off a cliff, and remained at a fairly low level until very recently. Natural Gas costs actually fell quite a bit too when price controls were lifted, surprisingly enough. Solar cells were competing against gas or diesel fired generators for a lot of their business, and lower oil costs hit them hard. The solar thermal industry got hit harder, and essentially went away in most areas.

The Reagan administrations didn't help matters by reducing solar research and commercialization efforts. The big federal solar buys went away, leaving the solar cell companies on their own. Surprisingly, a lot of companies made it, but they didn't have a lot of money for research or for expansion. The first Bush administration did increase solar cell research funds, but nowhere near enough to restore the Reagan cuts.

None of that would have mattered except for three other problems. First, the technology was oversold. For example, if cadmium sulfide solar cells had really been ready for production in 1982 at 35 cents a watt, they would have found a market even without government help. Unfortunately, they weren't really ready. They worked in the lab, but had stability problems that kept them from mass production. The organization that was planning to license the technology is still around, but they are working on silicon, cadmium telluride, and CIGS cells now.

Amorphous silicon was another highly touted low-cost solution. Unlike Cadmium Sulfide, it did make it to market, and has a reasonable share of the market for low-cost, low-powered solar applications like the solar cells on calculators or inexpensive solar battery charges. Unfortunately, amorphous silicon loses efficiency when it is used outdoors. That efficiency loss can be substantial—in some cases up to 50% though that is apparently rare. Also, while initial lab efficiencies are high enough to make use on rooftops

acceptable, getting to those efficiencies in a production environment has been very difficult.

Other promising technologies have been passed from company to company, always close to production and a price breakthrough, but never quite making it. For example, in 1992 Popular Science reported on an apparent breakthrough by Texas Instruments called Spherical Solar panels.

"The long-held dream of making inexpensive electricity from the sun should become real in 1992. Southern California Edison, the utility that serves most of Southern California, has teamed up with Texas Instruments to make a revolutionary type of solar panel on a trial basis. If tests show the panels can be made cheaply enough to compete with conventional generators, a commercial factory will be built in 1994." <snip>

"By using common materials and inexpensive manufacturing methods, the new solar panels are expected to cost as little as a fifth of those now on the market. The technological breakthrough came when Texas Instruments developed an innovative way to make photovoltaic cells from a widely available but impure form of silicon that costs only $1 per pound, rather than the $35 per pound crystalline silicon normally required."

Sounds great. It didn't go into mass production in 1994, though. As a matter of fact I'm not sure it ever went into substantial production. Texas Instruments sold the technology to another company, which sold it to another one. There was a flurry of excitement in 2002 or 2003, when it looked like the technology was finally going to go into production. Last I heard, a company called Photowatt was licensing the technology to a couple of Japanese firms. That was last year.

Many of the current hot ideas in solar, like Cadmium Telluride and CIS thin-film cells have been working in lab settings for decades. The problem is getting them to the point where they can be mass produced. That's still a problem for a lot of the thin film solar cell companies.

Second, oil companies invested in several of the US solar companies, and those companies generally didn't do too well. You can debate whether that was a matter of anti-competitive behavior, or a matter of bad management on the part of the oil companies, but the reality is that alternate energy companies they bought up tended to lose market share and innovate more slowly than others in the field. Early US solar cell leader Solarex was bought out by Amoco, traded around, and I believe it ended up as BP Solar. It's still around and still a mid-sized player, but it has fallen from tthe top tier of solar cell companies in the last few years,.

In spite of that mediocre track record, oil companies were a welcome source of money for solar R&D and production expansion in the early to mid 1980s. When oil prices fell to their low in the mid-1980s, most of the big US oil companies pulled out of the market, leaving the industry much poorer, though probably more agile and efficient.

Finally, it became the conventional wisdom among business folk that the Middle East oil producers could produce oil profitably at well under $10 per barrel, and probably under $5. That meant that unless your technology was capable of going head-to-head with those kinds of prices it didn't make sense to invest in alternate energy. Mideast oil producers could and would bankrupt you if they saw you as a threat. One of the reasons for the slow reactions to our current oil price run-up is that people remembered investing a lot of money and time to deal with the one in the early 80's only to see energy prices go down and stay down for over a decade.

In spite of all of that, solar cell production in the US grew all but 4 of the 30 years between 1976 and 2006.

U.S. Solar Cell Production, 1976-2006

Year	Annual Production	Change	% Change by President Term		Amt Change By President Term
	Megawatts				
1976	0.3				
1977	0.4	1.31			
1978	0.8	2.00			
1979	1.2	1.48			
1980	2.5	2.02	7.81	Carter	2.2
1981	3.5	1.40			
1982	5.2	1.49			
1983	8.2	1.58			
1984	8.0	0.98	3.20	Reagan 1	5.5
1985	7.7	0.96			
1986	7.1	0.92			
1987	8.7	1.23			
1988	11.1	1.28	1.39	Reagan 2	3.1
1989	14.1	1.27			
1990	14.8	1.05			
1991	17.1	1.16			
1992	18.1	1.06	1.63	Bush 1	7.0
1993	22.4	1.24			
1994	25.6	1.14			
1995	34.8	1.36			
1996	38.9	1.12	2.15	Clinton 1	20.8
1997	51.0	1.31			
1998	53.7	1.05			
1999	60.8	1.13			
2000	75.0	1.23	1.93	Clinton 2	36.1
2001	100.3	1.34			
2002	120.6	1.20			
2003	103.0	0.85			
2004	139.0	1.35	1.85	BushJr 1	64.0
2005	154.0	1.11			
2006	201.6	1.31	1.45	BushJr 2	81.0

Source: Compiled by Earth Policy Institute from Worldwatch Institute, *Signposts 2004*, CD-ROM (Washington, DC: 2005); Hillary Flynn, Content Manager at Prometheus Institute for Sustainable Development, Cambridge, MA, email to Joseph Florence, Earth Policy Institute, 21 March 2006; Prometheus Institute, "23rd Annual Data Collection - Final," *PVNews*, vol. 26, no. 4 (April 2007), pp. 8-9.

Note: Only 2 years for 2nd Bush Jr admin.

The columns with grey headings are my calculations, not the original data. As you can see, production increased during every presidential administration. Production declined slightly in the last year of the first Reagan administration and the first two years of the second Reagan administration, but more than offset that decline in the fourth year of that administration. .The biggest single year-to-year decline happened in the first Bush Jr. administration, when the second largest US solar cell maker at the time (AstroPower) went bankrupt. Based on limited information, that appears to have been mainly a matter of bad management on the part of AstroPower. They went public, built a fancy headquarters, and otherwise overextended themselves, then compounded the problem by including production ordered but not shipped in their sales figures. The word got out. The stock tanked. They ran out of money.

Now here is a challenge: Let's assume no huge political shifts. Reagan beats Carter and Mondale. Bush is elected in 1988. The Soviet Union folds on schedule. Given that situation, how could you end up with solar cells taking off in a big way and ending up with the kind of market share that people were talking about back in 1980? I think solar heating was probably a lost cause, at least during this time period, so for this challenge let's just concentrate on solar cells and getting them to maybe 5 percent of US energy production by

year 2000. That gives us eight years of the Clinton administration, along with the 12 Reagan/Bush 1 years.

I want to emphasize that the challenge assumes no significant political changes. The presidents remain Reagan/Bush/Clinton. Those presidents don't suddenly change their basic natures.

Any takers on the 'how" question? I have some ideas, and I'll give them to you next issue if I still think they would have worked.

Now let's assume that solar cells have taken off in a major way by 2000. How does that affect the rest of the world? What if anything changes about the structure of society? What impact does the existence of a large, thriving solar cell industry have on our current energy problems

WORK IN PROCESS: DOG YEARS

I love you too much. That's why it ended in fire and death. That's why it always ends badly. I have to love you. You built it into my genes,

Yes, I know about genes. Surprised? Of course you are. Or you would be if you were really hearing this, if I was really talking to you, if I could talk. I can't, of course. Brain isn't built for it. Muscles in the throat don't work right.

All I want, all I've ever wanted, is to curl up beside you, to play with you in the sun, to show you how much I love you, and have you return that love. I want to protect you and be protected by you. Playing in the sun forever. ***Sorry. Decided to blank out the rest for the on-line edition.***

OF CATS AND HARD DRIVES

For the last ten years or so I've been a member of an APA called Point of Divergence.. Point of Divergence is an Alternate History APA Early last month I was getting ready for the 50th issue of the APA. I wanted to do something special to mark the 50th anniversary, so I decided to shoot for a 50 page zine--much larger than the normal ones I do for the APA. I worked hard and had about 40 of the 50 pages done. Then fate intervened. Actually, one of our cats intervened. As I worked, one of our three cats stepped on the switch to the outlet strip the computer is hooked up to. He didn't throw the switch into the off position. He just moved it enough to make the power go off for a split second, then come back on. Unfortunately, that split second must have come at a bad time for the hard drive.

At first the problem didn't seem too bad. I lost half an hour to an hour's work because for some reason autobackup didn't pick up. I said "Oh well" and just kept going. Then the real disaster started. The hard drive started going bad, but not in an obvious way. The computer slowed to an agonizing crawl, and then slowed down even more, to the point where nothing was happening at all. The hard drive worked just enough to tantalize me for several hours, getting into Windows a couple of times before freezing.

Finally it stopped booting. I have a dual boot Windows/Linux system and it stopped with an error message just before I was supposed to choose Linux or Windows. Then came the real disaster. I decided to reinstall Linux, thinking that the cat problem had corrupted the drive locally in the Linux/Windows choice program.

Well, I went through the Linux install and tried to reboot. Nothing. Not only that, but I found out later that instead of reinstalling on my internal drive it repartitioned my external backup drive, wiping out my backup, and turning the loss of maybe a couple of hours worth of work into the loss of everything I did for eight days—everything I had for the zine.

So, back to the drawing board. First I had to get the computer working. I tried a spare disk I had laying around. Couldn't get it to work at all in several hours of trying. Finally I ran out and bought a new drive. Had trouble even there. The software on the CD that came with the drive wouldn't recognize it. Fortunately I had an earlier revision of the software from a drive I bought from the same company earlier. It worked. I spent several hours getting the drive formatted, Windows installed, drivers hunted up (this is a system I built myself, so I had to hunt down all of the driver disks), and enough software installed to get the computer minimally functional. Loads of fun. Actually, very time-consuming. I then spent several hours trying to recover the lost information on the backup hard drive. No luck at all on that front with the standard tools. Finally I gave up and redid the zine almost from scratch.

After I finished the zine I did find a way to get back most of the lost data. It involved buying a computer forensics program and doing quite a few other things that require quite a bit of computer knowledge. Not for the faint of heart. It probably wasn't worth the time and money I spent to get the stuff back. I'll probably be able to use the program when my students lose data though, so it is all good. By the way, based on this program I would say that it is very difficult to actually delete info from a computer drive to the point that someone with the right software and knowledge couldn't get it back. I got back

data where the file was deleted and the disk formatted and set up for a different operating system. Might want to keep that in mind if you are getting rid of a computer and have something confidential on the hard drive.

In any case, the cats don't understand why I don't let them anywhere near the computer anymore. You may be wondering why the one cat is still alive. I'm a very patient person, though this little incident really tried that patience.

ALTERNATE HISTORY: THE CONFEDERATE HIGHWHEELER DRAGOONS

The south's early lead in HIghWheeler or bicycle technology was doubly ironic, first because the first recognizable bicycle was actually built in Philadelphia in 1854, and second because its inventor, Irving Blanchard, was an ardent Abolitionist.

Blanchard's invention, which he called the "Fast Foot", enjoyed a brief period of popularity in Philadelphia and other northern cities. It also spread to England and France. The period of popularity was brief, and the Fast Foot's nickname 'booneshaker' gives a pretty good indication of why its popularity faded. The Fast Foot was made entirely of wood, including its tires. That made for a very rough ride on the cobblestone or dirt roads of the mid-1850s.

The bicycle fad faded quickly from the northern cities. Blanchard had sunk a great deal of money into building his machines. His company went bankrupt in 1856.

While some southern historians claim that South Carolina inventor Anthony Archer invented his series of bicycles independently, it is almost certain that he was aware of Blanchard's work prior to building his first machine in 1856. Archer started with machines much like the Fast Foot, but he quickly realized that metal construction of the frame was key to a successful machine.

Other "Bicycle" Uses in the War of Secession

The south used bicycle mechanisms extensively in railroad transportation carts in lieu of scarce locomotives. The Confederate Navy also used variations of that mechanism in their moderately successful harbor defense submersibles. Though the south lost far more submersible crews than the north lost in warships, Confederate submersibles were a major deterrent to Union naval operations near the southern coast.

Unfortunately, the metal working of the day was not up to the demands of building the designs Archer had in mind. However, Anthony Archer was able to interest his uncle, Robert Archer in the problem. Robert Archer played a major role in the Tredegar Iron Works in Richmond Virginia, and he was able to produce the necessary parts for the first metal bicycle in 1859.

Metal bicycles were somewhat lighter, sturdier and more manageable than wooden ones, and Archer's Sumter Bicycle Works was modestly successful, primarily around its headquarters in Charlestown South Carolina. Archer's bicycles still had a very rough ride though, and with their peddles attached directly to the front wheels they were limited in their speed.

Bicycle racing was becoming popular in areas around Charlestown, and other southern cities, especially Richmond. That put a premium on speed. Without a workable chain system, the easiest way to make a bicycle faster was to make the front wheel bigger. Through 1860, Archer and several upstart competitors in the bicycle industry competed to put bigger and bigger front wheels on their bikes, as rear wheels shrank. The big wheels made for a somewhat better ride, and it also increased speed. Public enthusiasm for bicycle racing spread, as did trails designed specially for the new vehicles.

The racing fad spread to France and England, but not to the northern cities of the US with their previous bad experience with the "boneshakers". In the south, bicycles quickly developed to the classic high-wheeler configuration, with front wheels as large as the owners leg length could handle.

As the secession crisis became more bitter, the south had a large body of athletic young men used to riding high-wheelers. The north did not. High wheelers were not the ideal military transportation. Riders were vulnerable to rifle fire and unable to fire back without stopping and dismounting. However, lightly armed troops on high-wheelers could move faster than horsed cavalry over long distances if good roads or trails were available. That meant that in the early days of the war of secession the south could move messages and small bodies of lightly armed but highly motivated troops much more quickly than the north.

That ability to move lightly armed troops quickly served the south well in the confused early struggle in border states such as Missouri and Kentucky and border areas such as northwestern Virginia. Confederate Highwheeler Dragoons played a prominent role in both areas. As the war went on though, the importance of the dragoons decreased, and they were for the most part relegated to scouting and raiding.

The north was slow to produce their own bicycle troop, partly because of the lack of trained riders and an infrastructure to produce the machines. However, by 1863, the union had formed several high-wheeler units of its own. In late 1863 union bicycle manufacturers introduced the first chain driven bicycles. That allowed them to equal the speed of the high-wheelers without the high learning curve and danger to the riders. By mid-1864 the north's bicycle dragoons were far more numerous than their confederate counterparts and they played a major role in Grant's march to the sea.

In spite of their early triumphs, the Confederate Highwheeler Dragoons, like the rest of the Confederacy, were overwhelmed by the superior manpower and production capability of the north.

So what is alternate history about all of that? Well, the bicycle just missed being invented in time for the Civil War. It was actually invented in France in the late 1860s. What was the point of all of this? I just thought that the idea of Confederate troops of high-wheelers just somehow fit, so I came up with a scenario where that could happen.

MAILING COMMENTS

Well, one problem with doing a skimpy no comments issue and then skipping the next three distributions is that you end up with a huge backlog of comments to deal with. I started this process late (evening of May 4), so I'm just going to start with the May 2007 zines and get as far as I can. That means I'll be discussing zines you wrote over a year ago. I'll try to include enough context for this to make sense. As usual comments are in alphabetical order by zine author's name.

Jim Caughran: I like your quote on typos. I'm pretty sure I'll provide a few in this zine to distract you. Your comments to me: yeah, Ontario is really becoming a hot pot for solar cells, with several huge solar farms coming on line. Apparently they are offering to buy electricity generated by solar cells in Ontario at 40 cents per kilowatt hour, which is almost twice as much as it would take to break even given current solar cell prices. It amounts to a license for people to print money, and a lot of companies are rushing to do just that.

Without subsidies like that, solar cells range from almost competitive with traditional power sources in a few very sunny locations with high electricity costs to maybe three or four times as expensive in areas with low electricity costs and not much sun. Given all of the emphasis on the cost of the solar cells themselves, ironically almost half of the cost of installed solar cell systems comes from installation and balance of system costs. That hasn't gotten much attention until lately, but as solar cell costs go down it will become more obvious that something has to be done about the rest of the cost of producing a working system.

On the efficiency of solar cells: You question whether solar cell efficiencies of 36% and 50% are correct. Yes and no. Solar cells currently available for terrestrial applications are nowhere near that efficient. Efficiencies in the mid-30's are not uncommon for high-value space applications. In the lab, people have hit efficiencies in the 40%+ range. I believe that the theoretical limit is around 70% efficiency. That went up considerably about 6 years ago when scientists discovered that a material called Indium Nitride could theoretically make much more efficient solar cells possible.

Solar cell efficiencies for the most part cluster around three percentages. Standard silicon solar cells usually range from around 15% efficient to around 21% efficient. That's what you'll get from most of the panels that are commercially available now. Thin film efficiencies are in the 8% to 10% efficiency range for stuff that is actually being manufactured, though some of them get close to 20% in the lab. The idea with thin films is that if you can make the cells cheap enough the lower efficiency won't matter. That's true up to a point, but if the efficiency drops much below 10% the panel isn't usable for large scale applications because other costs go up too much.

Those are the two options we currently have for normal terrestrial applications. There are much more efficient solar cells in production now, but they are produced for satellites. Given the cost of getting a pound of satellite to orbit, very expensive, very high efficiency solar cells make economic sense for that market, and several companies produce solar cells in the 30-35% efficiency range for that market by using exotic materials and stacking different kinds of solar cells that absorb different parts of the solar spectrum on top of each other.

The highest efficiency reached in the lab for solar cells is currently just under 43%. They reached that by setting up a solar cell with five different materials, each of which absorbed a different part of the solar spectrum. Then they concentrated the solar energy and split the spectrum so that each part of it went to the part of the solar cell most capable of absorbing it. Sounds complicated, and I'm not

sure it is worth the bother, but the people behind that cell intend to add a sixth material and they believe that if they can make a cells using that material they can reach 50% efficiency.

Several companies are working on concentrator cells, where you basically focus sunlight from a larger area on a relatively small solar cell. That seems to make a lot of sense because concentrator lenses are presumably cheaper than solar cells. The problem has always been that silicon solar cells don't do well when they heat up beyond a certain point. A company called Sungri recently announced that they will be marketing concentrator cells based on three different solar cell materials with 37% efficiency. They're claiming to have solved the cooling problem and they claim that they'll be able to sell their cells cheaply enough to produce electricity at 5-7 cents per kilowatt hour, with production starting in 12 to 18 months. I don't know. I've heard enough solar cell claims that haven't come true that I'm skeptical.

By the way, there seems to be a kind of solar.com bubble forming. Venture capitalists are throwing hundreds of millions of dollars at solar cell companies. A few of those bets will probably pay off big—Microsoft and Apple-sized big. I suspect that a lot of the companies will go belly up in the next ten to fifteen years though. There are hundreds of solar cell companies coming out of the woodwork. A lot of them have promising ideas that have yet to be proven outside of the lab. The transition between lab and manufacturing has proven very difficult for solar companies. Quite a few companies have run out of money before they were able to complete it. The rule of thumb has been 10 years from something that works in the lab to something that you can manufacture at a competitive price. Of course sometimes it takes longer. Sometimes it never happens. If you throw enough money at the process you can sometimes speed it up. Sometimes you're just throwing your money away.

Jim Caughran: (August 2007 Distro): Your comments to me "Sounds like the internet novel competition was designed to make quality irrelevant." Well, to some extent. Good stuff tended to rise slightly over time and bad stuff tended to fall. In the first contest, the huge number of anonymous low ratings totally overwhelmed that tendency. The sponsors have had two contests since then, and in both cases they simply ignored any rating other than a ten. That helped a lot, and good stuff did tend to rise toward the top. Unfortunately, people with large groups of friends or co-workers and mediocre entries rose even faster, and in both of the subsequent contests quite a few of the semi-finalists were obviously unpublishable.

Eric Leif Davin (August 2007 Distro): As an alternate history buff I enjoyed "Avenging Angel". Not sure if I thanked you for sending me a copy, but I did appreciate it. Interesting story about finding your work in the anthology.

Gordon Eklund (August 2007 Distro): Your comments to Jack Speer: I may also be mildly addicted to caffeine. From my point of view there are two mild downsides to that. First, caffeine general comes with calories attached, which I don't need. Second, if I get too much caffeine I end up with slightly irregular heartbeats. I haven't seen that documented as being caused by caffeine, but the correlation is pretty strong for me, and a couple of doctors I've talked to seemed to think that caffeine would cause the irregular beats in large enough quantities. The large enough quantities I'm talking about are two of those sixteen ounce energy drinks per day. I love those things, and I can drink them for a while, but then I start getting the irregular heart beats and have to stop drinking them for several weeks before the irregularities go away.

Steven Green: I don't recall running into the kind of television call-in games you describe over here in the states, but I don't watch enough TV to say that they aren't around. I saw a listing of the 20 top rated shows on US television recently and if I recall correctly 12 of them were "reality" shows. I'm surprised that we haven't seen more shows being imported from India. "Bollywood", the Indian version of Hollywood, is apparently putting out a lot of

shows. I don't know about the quality. Can't be much worse than the average US show.

One thing I've noticed about US television though: If you just flip the dial at random you'll give up before you find anything worth watching—probably before you find anything that you can stand to watch. At the same time, there are still good shows out there. *Monk* can be quite good at times. The new *Dr. Who* has had some excellent episodes. *House* is not bad.

I don't think the problem is that there are fewer good shows. I think the problem is that there are so many channels now that the good shows are just much harder to find. We have 500 channels on our cable. Of those, probably 20 or 30 have decent shows on once in a while. For the most part I don't find those decent shows. Too much clutter to wade through. I often find good shows on DVD long after they have been cancelled. I saw one episode of *Wonderfalls* before it was cancelled. Fox actually cancelled that one after showing three of the dozen or so episodes they produced. I got the show on DVD and found it enjoyable for the most part. I saw maybe one episode of *Firefly* before it was cancelled. I love that show on DVD. I didn't find *Brimstone* at all until years after it was cancelled. It still isn't out on DVD, but I saw a few episodes on YouTube. In spite of the poor quality of the video in the YouTube versions the show hooked me, and I would love to find a good quality source for all 13 episodes.

Speaking of YouTube, it is becoming another source of cheap programming for the television networks. That's not all bad, because it gives strange quirky stuff a wider audience.

The issue with TV is finding the tiny percentage of shows worth watching before the get cancelled. Books are going the same way. Amazon lists over 3 million books, with hundreds of thousands more pouring out every year. They don't seem to stay in print long anymore either. For example, I looked on Amazon for Harry Turtledove's *Ruled Britannia* and it appears to be out of print already. I know there are books out there that I would love to read, but finding them in that mass is difficult. As a would-be author I have the mirror image of that problem. I'm pretty sure my stuff would have an audience if it could find me or I could find it.

For books, I recently found something that may help me find the gems among the junk. It's a website called Goodreads.com. Basically you list the books you've read and compare them to books other members have read. If you find someone with similar tastes, you connect with them and when they add something to their collection you see it. In theory your connections help you find the good stuff. Now that has some privacy implications I'm not too thrilled with, so I've been selective in the books I add to my collection. So far it seems to be working out

Fred Lerner: I envy you your access to Dartmouth College. I live in a university town with Northern Illinois University about four blocks away. I'm an infoholic. When I get interested in something I just devour information. Having a university library that close is a major plus, but less so than it used to be. I used to be able to walk down there and just browse a wide variety of scientific journals. Now most of the journals are gone. Actually, the library had a choice of keeping the paper version or subscribing to an electronic version. They didn't have enough money to do both. As a state taxpayer I have the right to browse the library stacks. As a non-student I don't have access to the full text of the journals, though I can look at abstracts. I can order individual articles but the cost of that is very steep: $25 to $30 per article. Basically a large amount of research paid for by the public is no longer available to the public at large. I'm not sure how that happened, but I'm not happy about it.

Interesting thoughts about the use of graphics and art in presentations. I've seen studies that seem to show that many standard "show it on the screen and then say the same thing" PowerPoint presentations actually impede learning. I rarely use PowerPoint in my classes, though I do think a PowerPoint

presentation can enhance a lecture if it is carefully thought through. Which is your point on the three lectures I guess.

I'm sorry that your discovery of the Meyers book turned out to be a cataloguing mistake.

Eric Lindsay (August 2007 Distro): Your comments to Jack Speer. I had never heard the term "ginger group", though they are certainly common in the US too. Your comments to Robert Lichtman: Interesting comments on CFL. Incandescent bulbs are energy hogs, but they do have an advantage in that almost all of their failure modes result in the bulb not burning and that's it. As you note, CFLs can create more interesting problems when they fail. I have mostly CFLs in our house, but I'm not entirely sure I should have gone that way in some cases. It looks as though LED lighting may be poised to compete with CFLs in a few years, though it is far too expensive and experimental at the moment.

Your comments to Janice Morningstar: Interesting about the bush rats starting to act like town rats. I assume that they are separate species over there. In the US, our equivalents to bush rats are actually a separate subfamily from the town rats and mice—very different animals. Out in the country some of the deer mice will get into houses. They don't have the wariness of normal house mice though, and you can sometimes catch them by hand (wearing gloves of course). Deer mice are actually kind of pretty, and I kept a couple as pets when I was a kid. Not a good idea. They apparently carry hantavirus. Your comments to me: Looking at who edited a story is a good idea. I'll have to start doing that.

Janice Morningstar: On the bat problem: I think I mentioned that tennis rackets work pretty well. As far as killing them goes, one of the neighbors discovered that scattering steep-sided pans with a couple of inches of water around the house is very effective. They try to drink and end up drowning. She killed thirty of them that way. I don't really want to kill them, but you can't really share a house with them. Among other things, their guano carries a disease that can infect your eyes and eventually cause you to go blind.

Yes, by our standards nature is incredibly cruel. That's inescapable if you do the math. Here's an example: My aunt had eight cats on her farm. She didn't drive and her husband was dying of prostate cancer so they didn't spay any of them. Within a year there were twenty-five cats. Another year would have seen that total go up to around a hundred. Why aren't we tripping over the wild equivalent of those cats whenever we go out in the woods? Because the vast majority of them die before they get old enough to breed.

That doesn't justify killing or hurting animals, and I really hated killing those bats.

Janice Morningstar(August 2007Distro): Your comments to me: Lack of fear in gerbils? I don't know what the reason for that is. Part of it may be selective breeding. I had tame white mice at one time, and one of them got loose and bred with a wild mouse. The babies were born after I recaptured her and she quickly became tame again, but the babies were untamable. Yes, Sun Bear really are bears, though they are rather odd ones. They live entirely in the tropics, spend much of their time in trees, don't hibernate, and have those oversized brains. They're getting rare, and I suspect that they may be extinct before anyone gets a chance to figure out what they use that extra brainpower for.

I agree that only one intelligent species per planet is the most likely outcome. I suppose that if geographic barriers were great enough there could be two. The most likely candidate for that on earth would have been for the South American monkeys to have produced an intelligent species at the same time humans were developing in Africa. The problem with that scenario is that it is unlikely that the two species would develop technology at close enough to the same pace so that both of them could survive when they did meet. If they were susceptible enough to one another's

diseases I suppose they might both survive long enough for the technology level to equalize.

Robert Michael Sabella: Your comments to Caughran: I wasn't aware that Heinlein killed off Podkayne in the original ending. I read that book when I was 11 years old. I'm pretty sure of that because I remember identifying strongly with her brother, who was exactly my age, and like me had a sixteen year-old sister. At eleven I would have probably freaked out and never read anything by Heinlein again if he had killed off Poddy in the book version.

Your comments to me: I'm glad you enjoyed chapter one of *Char*. I probably won't be publishing the rest of it here for copyright reasons, but if you are interested e-mail me and I can send it to you. My e-mail is DaleCoz@aol.com.

On Novak and the crickets: I offered to pay for the damages, but they didn't take me up on it. I did buy several things I wouldn't have ordinarily bought just to kind of make up for the damage. I was embarrassed enough that I never went back to that store.

Robert Michael Sabella (August 2007 Distro): I've always thought that *Star Wars* was mainly popular because of the combination of an okay story with special affects that couldn't have been done as well earlier. I enjoyed your humor sections as usual. Your comments to me: I'm glad you enjoyed parts 1 and 2 of *Char*. Belatedly, yes I would love to exchange stories for critiques if you are still interested. My e-mail address once again is DaleCoz@aol.com.

Bob Silverberg: In the 'Majuju' 2007 issue you pointed out that the membership seemed to be melting away before your eyes. Hopefully that has turned around a bit since then. I noticed at least one member newer than me in the last distribution. As to age: I don't mean this in a bad way, but my first reaction was something along the lines of "He's got to be older than that. I read his stuff back in middle school." Of course I'm 53 now, so when I was 12 you were probably in your early thirties and had been writing professionally for ten years.

As to your writing: As an aspiring writer I hope you're wrong abut where the market is going, but I find myself agreeing with most of what you said. After writing for almost as long as I've lived you have nothing left to prove. In your shoes I would probably do the same thing you're doing.

Of course I'm a long ways from being in your shoes. I have more stories to tell than I could possibly write in the rest of a normal lifetime. I want to get them out there being read. That's not a matter of financial necessity. It's matter of wanting to tell the stories and have people enjoy them. If the science fiction market keeps heading the direction you talk about those stories will never get read, even if more of them get written.

I have a sixteen year old daughter, and every once in a while she reminds me of the fleeting nature of fame in the world of 2008. She rarely reads fiction of any kind, much less science fiction. That appalls me, but is not unusual in this society. What really appalls me is that even the parts of our popular culture outside of books is lost to her. For example, she has never watched an Alfred Hitchcock movie and doesn't want to. They're too slow and there aren't enough explosions I guess. Marx brothers? Who are they? In some cases the losses are probably a good thing. I hate to think about the ideas some of her friends would get from ***A Clockwork Orange***.

Fame and fans become ever more fleeting. The Internet demonstrates that. A blog can become a hit, with tens or hundreds of thousands of fans, but if the blogger can't keep up, can't produce something interesting every day or at least every couple of days interest quickly wanes. Can you imagine the pressure of producing interesting material every day? I can't. I've done a couple of blogs, but they rarely last more than a couple of months before I run out of things to say. It's hard to imagine being 'famous' and then forgotten all in the space of less than a year, but it happens.

Jack Speer: (August 2007 Distro): Interesting about *Kyle XY*. I had heard good things about the first season, but have only watched parts of a couple of episodes. On Dr Who Daleks in Manhattan: Yeah, the bit about the African American guy as a leader in the 1930s caused me suspension of belief issues too. Your comments to me: I'm glad you liked the ***Dinosaurs and Fur Bikinis*** title. I had fun with that one. On alternate history islands: Your may be right about there not being any carriers in the Japanese task force that went to the Aleutians. I don't have my books on the Battle of Midway with me at the moment. I'm reasonably sure that the Japanese sent at least two aircraft carriers somewhere other than to Midway as part of an overly elaborate deception plan, but I'm not sure they were in the Aleutians. North American primates: They were related to lemurs and tarsiers. To the best of my knowledge none of the ancestors of monkeys made it to North America. The North American primates gradually fade out of the fossils record, with most of them gone by the end of the Eocene. One tarsier species apparently made it to the Miocene.

Mussolini and bases in the Balearics: the naval war in the Mediterranean was actually quite a bit more close-run than most people think. The Italians had an edge in number of surface vessels most of the time. Coordination between the navy and the airforce was non-existent though and the Italian navy repeatedly refused to manufacture and install a reasonably advanced Italian designed radar system. Also, quality control of ammo for Italian naval guns was sloppy, which caused the guns to be inaccurate. Most importantly, after the Germans invaded the Soviet Union, Italy was desperately short on oil. Battleships and cruisers require enormous amounts of oil, so for the most part Italian major surface units had to sit the war out after about late summer of 1941. On the other hand, the British were fighting several simultaneous naval wars, especially after the Japanese entered the war. That meant that the Italians could be somewhat competitive with what the British had left over from their other commitments. Also, the Italians had excellent frogmen, who actually managed to sink a couple of major British naval combatants, and the Germans lent Italy a very powerful air fleet, which played a major role in making it hard for the British to resupply Malta.

Operation Torch helped the Soviets at Stalingrad in three ways. First, and probably most important, the German response to it involved a major airlift of troops and supplies to Tunisia. That airlift meant that the vast majority of German transport planes were not initially available to resupply Stalingrad because they were in Italy or North Africa. The Germans eventually moved most of those planes back to help with the Stalingrad resupply effort, but by that time the Germans had lost weeks of potential resupply effort at a time when Soviet air defenses around Stalingrad were still relatively weak. Add in planes lost during the airlift to North Africa, and planes badly in need of repair after the wear and tear of that airlift, and you can see that the German effort to resupply the Stalingrad pocket was considerably weaker than it would have been in the absence of Torch. The impact of that initial weakness in the airlift compounded itself. The Germans in the pocket were weaker than they would otherwise have been, which meant that the Soviets could move more troops away from the pocket to oppose any relief effort and to do the next part of their offensive.

Second, the response to Operation Torch took German fighter and bomber aircraft away from Stalingrad in considerable numbers. The Soviets would have had a harder time with the initial encirclement if the Germans had been able to use those planes at Stalingrad. If the Soviets had been able to do the encirclement, those planes would have helped with the rescue effort and would have helped keep Soviet fighters away from the German transports in the airlift.

Third, Operation Torch stripped away German ground forces reserves. It wasn't just the troops they sent to Tunisia. They also sent something like (from slightly suspect memory) ten divisions to occupy Vichy France as a result of Operation Torch. Add those divisions to the German order of battle at some point during the Stalingrad crisis and they would make a substantial difference, especially with someone like Manstein in charge.

Would Germany win the war if they didn't lose at Stalingrad? No. It might have made the war somewhat longer and left the Soviet Union less entrenched in Eastern and Central Europe, but Germany would have still lost.

Dale Speirs: I loved the article on 8-tracks. I never had one myself, but my wife did. When she got divorced from her first husband he got the 8-tracks and she got the player.

I like obsolete technology. I like dinking around with old PCs and trying to make them fast. It's amazing how fast a ten or twelve year old computer can be when it is running a small, fast version of Linux like Puppy Linux. Puppy Linux looks like Windows 95 and the applications are not that powerful, but it can run entirely in main memory on an 128 meg PC and have half the memory left over for programs.

I think I may have mentioned that one of my cousins went around buying up Beta VCRs and tapes at garage sales when it was obvious that Beta had lost the format wars. He ended up with a huge collection of tapes and enough players that he could have a working one long after both Beta and VHS were obsolete. Not a bad strategy if you have plenty of room, which he did.

I also enjoyed your article on zines. Other than POD and now FAPA I haven't really been involved in zines, but I find them fascinating. My tastes are far enough from mainstream that I'm often not satisfied by what the various mega-corporations want me to read. The Internet gives me some of the info-fix that I want, but I like actual physical paper, at least when I first read the zine.

Your second zine for the May 2007 distribution: I enjoyed the Sherlock Holmes article. I'm not a huge Sherlock Holmes fan, though I've read probably half of the stories and enjoyed most of them. The amount of influence Holmes has had on mysteries is amazing. That influence is not just in the pastiches and the close imitators like Solar Pons. It's also felt through a very large percentage of mysteries where the heroes aren't overtly patterned after him. The Holmes formula works. You take a brilliant amateur detective, give him a fault or two to make him human, make him somewhat close-mouthed to keep the reader somewhat in the dark. Give him a companion of average intelligence so he'll have to explain things the audience may not know. Bingo. You've got a very workable framework for a detective story. It's been done so many times in the years since Holmes that it's hard for new readers to recognize Doyle's Holmes as being something out of the ordinary. I set aside the second installment of the Sherlock Holmes essay and your Origin Of Life essay to read and comment on next distro because I'm running out of time and want to get to as many people as possible.

Dale Speirs (August 2007 Distro): I have the same dilemma about storage and the next generation. On the one hand, yes most of the paper I have collected up will be pitched when I die. On the other hand, I haven't found any digital storage mechanism that lasts as long as paper. Don't count on CD-Rs and DVD-Rs lasting decades. Hard Drives certainly don't. Also, digital media are easier than paper to just forget about. It's all just generic discs, whereas paper can be eye-catching. Interesting review of *Gold Diggers of 1929.* I guess I'm a typical American in that I rarely think much about the influence of world events on Canada, but I should be more aware of events and history up there. That's one problem with being a relatively stable non-aggressive democracy. Nobody outside of your country cares much about what happens there. Now if you want to get noticed, build up your army and navy, get involved in a bunch of thousand year old quarrels throughout the world, get both sides mad at you, and Canada too can be in other countrys' history books.

As usual, your reviews of the journal articles were fascinating. I had heard rumors of a German base in Antarctica but wasn't sure if they were reality or not. Good to see that cleared up. The article on Etruscan origins was also useful. I think that DNA is going to clear up a lot of historical mysteries.

Your comments to me: I was just reading something about the Great Banks of Newfoundland being above water during the ice ages. I hadn't heard about archaeological material being found there. That's kind of an interesting situation. I believe that the Grand Banks island was partly but not entirely ice covered. I wonder what kind of ecology developed there during the time it was above water.

Bo Stenfors (November 2007 Distro): I miss the old 1930s through early 1960s science fiction universe too, though I haven't given up entirely on life elsewhere in the solar system. True, Mars probably doesn't have multi-cellular life, and true, Venus almost certainly doesn't. At the same time, we're finding that life can survive in a much wider range of conditions than anyone expected in that earlier science fiction era. I wouldn't be surprised if some of the moons of the gas giants end up having life on them.

Also, science fiction can get around that. Until recently I was writing a story set on near future earth where the whole planet finds itself in a different solar system, one with terraformed Mars and Venus inhabited by humans, though not necessarily our kind of humans. I have the story about two-thirds written, but I've put it on hold for now because it is WAY too close to Steve Stirling's *Sky People* and its sequel. I even called my space-faring people "The Sky People". Like I say, far too close.

It's weird. I started my story in early 2003, long before his came out, and there is no way he could have known about it or that I could have known about his, yet there are enough similarities that I doubt if I could get my stories published by a reputable publisher as it is written right now, simply because the stories are too close. To be honest I think mine is better, but then I'm biased. I'm planning to rework my story and take it in a different direction to increase the distance between them, and then try to get it published.

Dan Stephan (November 2007 Distro): Hmmm. When I saw your name I thought I was going to stop being the new guy in FAPA. Since you've been a member before I guess that's debatable. In any case I'm glad you joined/rejoined and finally got an issue together..

Milt Stevens: Your comments to Feller: Interesting analysis of the problems with *Lost*. I watched a couple of episodes, but never really got into it. Your comments to Dale Speirs: I like your reaction to the city government trying to deemphasize Christmas. Your comments to me: After rushing around to put together a zine for the first couple of distributions of 2007 I just got so overwhelmed that I didn't try to put together anything for three issues, which is why I'm under the gun for MINAC this time around. I like your nickname for the cage-match style fighting (thugsport). I suppose that would make a particularly violent fight a thugfest. Sorry. Couldn't resist that. I can't imagine that kind of fighting lasting too long. Those guys are going to come out of those matches with brain damage and kidney damage, and it won't take many fights to do it.

Oddly enough, a subgenre of hard-boiled detective stories has taken to describing itself as "thug-lit". I read a couple of chapters of a story from a would-be thug-lit author in the TruTV Search For the Next Great Crime Writer Contest. Parts of it weren't bad. Other parts struck me as absurd hyper-macho day-dream.

Michael W. Waite (November 2007 Distro):I absolutely love the layout of your zine. Very nice..

Roger Wells (August 2007 Distro): I loved your entry in the Lionel Fanthorpe Write-Alike Contest. Good stuff. Of course I enjoy deliberately overwritten prose. See *Night of the Black Swans* earlier in this zine for my take on overwriting.

Well, I got through most of the May and August 2007 Distros, and picked out a few zines from November 2007. I tried to get to at least one zine from as many people as possible. Sorry I didn't get to everybody but 14 pages of mailing comments is a reasonable effort as far as I'm concerned.