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Website: www.DaleCozort.com

Blog: <http://dalecoz.livejournal.com/>

Facebook: www.facebook.com/#!/dalecoz

So What Have I Been Up To?

As usual, this is written and edited by Dale Cozort. It's intend for the May 2008 distro of FAPA (the Fantasy Amateur Press Association). All original writing in this zine is copyrighted of course.

This is going to be a somewhat scattered issue. I wrote 73,000+ words for a novel tentatively called All Timelines Lead to Rome for National Novel Writing Month this past November. I can't seem to finish the darn thing though. Only about 1500 words since the end of November. When I finish it I'm going to need to do a LOT of revision. I have a bad habit of overusing dialog in the first draft of a story.

Big news: My novel *Bear Country* is apparently going to be published as *Exchange* by a small press company called Bytec under their "The Armchair Adventurer" imprint. Hopefully I won't kill the company off. Not sure about the timing yet. So, tentative Yippee!

Personal note: As I write this, my daughter is counting down the days of the school year. She's a senior, so she'll be out of high school at the end of May, 18 in July, and registered for college before that. She already has her CNA and works a couple nights a week at a nursing home. Those nights are a bit of a foretaste of things to come as she moves on into adulthood. Kind of bittersweet. That's what we've been working toward these last 17 years. But this big old house seems much bigger and emptier when she's not here.

Fiction

ALL TIMELINES LEAD TO ROME (EXCERPT) – BY: DALE R. COZORT

"It's a volume in Livey's 'A History of Rome', one of the many missing ones." Scott White looked at the picture of the scroll on the screen and shrugged.

"You couldn't prove it by me. I'm a New World type of a guy. I think it's the Indian blood." He looked at his boss, Chad Summers. "You're sure it's from TLZ?"

“Almost sure. If it’s genuine, then yes, it’s other time-line stuff. It’s in too good a shape to be over a thousand years old. It would almost have to be that old if it was from our time-line, and probably more like fifteen hundred years old.”

“So is it genuine?”

Chad shrugged. “If the Boston Police Department didn’t think so they wouldn’t have sent it to the Bureau. Of course they aren’t experts on classical Rome, or on forgeries of Roman era documents, so there are no guarantees.”

“Where did they get the picture?”

“From a body. A Jane Doe. It was on a chip from a cell phone camera. Boston BP is sending their investigating officer. I’ll let her tell you the circumstances when she gets here.”

“And that’s when?”

“She should already be here.”

Scott got up and walked to the window of the conference room. He looked out over the parking lot. The Chicago area office of the Bureau of Timeline Integrity occupied the third story of a generic-looking office building in a complex of similar buildings on the outskirts of the suburb of OakBrook. It was 10 am on Monday, and from the window Scott could see traffic snarled on I-53. “If she’s out there it’s going to be a while. Why are they routing this case here instead of the New York office?”

“They want something to happen. If they sent it to New York somebody would just drip coffee and donut crumbs on it and stick it in a file drawer.”

Chad’s cell phone rang. “Darla Smith from Boston PD? Yeah, send her up. We’re in the conference room.”

The only thing that said Boston Police Detective about Darla Smith was her jacket. It had “Police” in capital letter across the back. Other than that she looked like a twenty-something business woman, tall and slender in blue dress pants and blue and white shirt. She managed to look businesslike in spite of hair dyed a dark purple. There was a hint of the East Asian in her face.

Darla looked at the picture on the conference room screen. “I see you got the money shot there. I quietly showed it around and from what little we can check out it looks like it could be genuine.”

Chad shrugged. “The picture doesn’t give us a lot to go on, but what we can see looks like it might be. If it was Aztec or Inca I would figure it probably is real. With Roman stuff the burden of proof gets a little higher. If I were a betting man I would bet on this being a setup for another Freeh scam.”

“Freeh scam?”

“Yeah. Named after Katie Freeh,” Chad said. “She claimed to have a portal, sold a bunch of two hundred acre lots in Timeline Z based on some phony stuff that was supposedly from over there, then disappeared with the money.”

“Yeah. I heard something about that. We get half a dozen Timeline Z scams like that a year. Why does it being Roman make it a scam?”

“It makes it a scam or a national emergency. Scott here can get into the details with you. Darla Smith, meet Robert S. White. He likes to be called Scott and he takes it personally if you call him Bob. He’s an analyst here at the Bureau, and he’ll

be the BTI liaison on the task force if we decide to form one.”

“Why don’t you like Bob? Oh. Got you.”

Scott grinned. “It doesn’t bother me now. First fifteen years it toughened me up a bit. The last fourteen and a half it hasn’t mattered much.”

Darla pulled a package out of her briefcase. “So BTI. Bureau of Timeline Integrity. I hear you get the people the FBI and the CIA don’t want and the DEA and BTF can’t use.”

Chad’s face went expressionless. “That’s what the FBI and the CIA might want to think. We own turf they wish they had. If it has anything to do with TLZ it comes to us. Say, I have people to see, tax dollars to spend. I’ll touch base with you after lunch.”

After he left Darla looked at Scott. “TLZ?”

“Timeline Z,” Scott said.

“What happened to “A” through “Y”?”

“As far as we know they don’t exist. Timeline Z is the only alternate time-line we can reach. It may be the only one out there.”

“So why is it Timeline Z instead of Timeline A or Timeline B?”

“It probably started out meaning something else, like the Twilight Zone, but it kind of morphed into meaning Timeline Z when we had to get serious about it. How much do you know about TLZ?”

“It’s an alternate reality where Europeans never reached the New World, and apparently where there is still a Roman empire of some sort, though I’m kind of vague on how that works or how close it could be to the actual Roman Empire we had. It’s been what? Over fifteen hundred years?”

“Close enough. And from what I hear the TLZ version of the Roman Empire is an awful lot like the Roman Empire in the first couple of centuries AD. Which is one of the mysteries of TLZ.”

“Why did your boss seem to think that a book from Rome is less likely than an Aztec one?”

Scott pointed to a map on the wall. “See the yellow and red rectangles? Those are the portals we know of. Seven in the Western US. Twelve in Australia. One in Siberia. One in Iceland. So only one anywhere close to Europe. It’s policed heavily and well. I’m not saying you couldn’t smuggle stuff through there, but it wouldn’t be easy.”

“Could there be portals you don’t know about?”

Scott nodded. “Sure, but almost certainly not in Europe, and probably not anywhere useful.”

“Why not?”

“Power. Some places it’s relatively easy to break through the wall between the realities. Some places it would take all the power from a couple of nuclear power plants to punch a whole the size of your thumb. The weakest place in Europe proper is in Finland, but it would still take too much power to be practical.”

“I thought the French had a portal.”

“Sort of. It’s in the French Alps and they use half the power of a nuclear power

plant to keep open a portal smaller than the size of my fist. It's for national pride, not anything very useful."

"Why would this being from Rome be a national emergency?"

"Diseases. If they're going to Rome they could be in contact with diseases we've killed off, like smallpox, or new diseases that developed over there but not over here. If smallpox got loose over here it could kill millions of people." Scott turned to the picture on the screen. "Your turn. Where did this come from?"

"How much did your boss tell you?"

"He said you found it on the chip from a cell phone camera. You found the chip on a Jane Doe."

"A headless, handless, naked Jane Doe. She was obviously murdered. The body was mutilated to prevent identification."

"Where was the cell phone?"

"We never found it. What we found was a removable chip hidden in—we'll let's just say an orifice."

"I never heard anything about the body. You would think something like that would have hit the news."

Darla shrugged. "It did locally. Finding the body did anyway. We haven't released anything about finding the chip. Unfortunately finding John or Jane Doe bodies isn't that uncommon in most of our big cities. The chip gives us a shot at finding out who this one was, and maybe who killed her."

"What else is on there?"

"About a thousand slides of twenty-something people. I've glanced at them, but I need to go back through in detail."

"Nothing that identifies her?"

"Not so far."

"What killed her?"

"Other than having her head cut off?"

"I figured that might have happened after she died to keep her from identified."

"I know. I was just being smart ass. I don't have the autopsy report yet. It may be a while."

"On a murder case?"

"You obviously haven't worked with big city law enforcement much." Darla took a digital camera out of her briefcase. "Here's what we've got."

SHORT TAKES: RANDOM STUFF I'VE FOUND INTERESTING LATELY

Writer Tools: Here are some pieces of software I've been trying out to increase my productivity as a writer. Those of you who did NanoWriMo may already be familiar with them.

YWriter: A free text-editor/novel writing toolkit. It helps a writer organize and rearrange scenes, do character worksheets etc. It is sometimes compared to the Mac-only Scrivener. It is a tool written by a novelists for novelists. I've played with it quite a bit. Not the most intuitive interface in the world, but so far it seems useful. I'm thinking about trying to plot a novel from scratch using it. I'll tell you more when and if that happens.

<http://www.spacejock.com/yWriter.html>

Write Or Die: This is a tool to overcome procrastination and to some extent writer's block. You go to the website, enter a number of words you want to write and an amount of time you want to spend. The time spent can be anything from 10 minutes to 2 hours, though the website administrator recommends 48 minutes as kind of a magic amount of time for most people. The key concept is that you write steadily for whatever amount of time you've entered. If you stop, the website 'punishes' you by flashing the background colors of the screens, and if you pause too long by playing obnoxious sounds and music. The flashing and the music stops as soon as you start writing again.

So how well does it work? It's potentially very good for people who simply can't write anything of any length because their inner editor is too powerful. I know of a couple of people who have excellent novels bottled up inside of them, but their inner editors won't let those novels out because the writing doesn't come out perfectly the first time. This could potentially help them relax and write a first draft, then work on perfecting it later. I find that the stuff I write using this is not significantly lower in quality than what I write more traditional ways, but I almost double my daily productivity in terms of word count.

One potential drawback: My characters tend to take over a bit more when I use this, and I sometimes find myself with wonderful scenes that don't fit with where I thought the novel was going. In my NanoWrimo novel my villainess showed a side of herself that makes it difficult for me to consign her to the fate I had intended for her. So do I alter the plot to accommodate the scene, or do I file the scene away under "cool stuff I may use somewhere else?" Either way I'm better off for having written the scene.

So is this a panacea for people with great ideas who can never seem to get more than a few pages along in a novel? I suspect that the people who need to cage their inner editor the most will never use it because they'll be too afraid of losing control. If you're determined to overcome the whole paralysis because the writing doesn't come out perfectly thing though, this will help a lot.

When the inner editor says "this is junk", just say "Yeah. It's the first draft. It's supposed to be junk. I'll fix it later" That helps me shut up the overactive inner

editor.

<http://lab.drwicked.com/writeordie.html>

Print on Demand Glossy Magazines: Now here is something that might be useful in certain circumstances: A print-on-demand service for magazines. It costs 20 cents per page. You submit a pdf and they send you a zine with a glossy cover. Don't know about the interior pages. I could see a lot of uses for that: A rather expensive birthday party or wedding or even funeral thing with the lives of the people involved immortalized in a nice-looking magazine. There might even be some book marketing applications. You can do a lot of this cheaper in large quantities, but being able to do this in small quantities (even one) is a major plus.

<http://magcloud.com/>

Writing: Seat of Pants versus plotting: I spent a couple of hours tonight trying to plot out the rest of my Nanowrite novel. To do that I had to reread some sections. Two reactions: (1) What I've written so far is in many ways the best writing I've ever done by quite a margin. I thought it would cool and I would find a lot of flaws in it, but after several months it still looks good. (2) I hope my subconscious has the rest of this all figured out because it went a long ways from where I intended for it to go when I started and I really have no idea where to go to end it anymore. The subconscious seemed to really know where it was going toward the end of November though. I would sit down at Write Or Die with no clue what I was going to write and end up with a scene that fit the rest of the story. Maybe I should just forget plotting and let the story go where it wants to go. That's scary stuff though.

Visual Novels: I sometimes just click on anything that interests me, letting the links take me to obscure parts of the Internet because they look cool. Probably not the most productive use of time.

In any case, in my wandering earlier today I found a collection of something called "Visual Novels". It looks like a community of people are taking a free Adventure game engine called Ren'Py and using it to tell stories, sometimes totally without game play. These stories mix text, background music, background pictures, and video clips in various ways.

I looked at a couple of these "Novels" and they seem a little crude, but also kind of cool. Apparently this sort of thing has become popular in Japan, but has not caught on over here.

Here is a collection of Visual Novels created by one of these game engines. Fair warning: To play them you do have to download an executable file onto your computer. Not always wise when you don't know where it came from.

http://www.renpy.org/wiki/renpy/Ren%27Py_Games

A little bit more on alternate energy: I'm a big fan of alternate energy-follow developments in electric cars, solar cells, etc almost obsessively. There is a lot of potential there, but changing the economy over is not going to be as smooth as I think a lot of people expect. For one thing, some of the more promising forms of alt energy face a lot of NIMBY.

We're facing that locally. A huge wind farm has been planned for our county and some surrounding ones--500 Megawatts, which is about equivalent to one half of a nuclear power plant. Surrounding communities are sharply divided about the wind farms, and our county board didn't approve it on the first go-round. The big issues are noise, traffic and property values. I strongly support the wind farm, but it may be a hard-fought battle.

There are other issues, such as energy storage, and in some cases the fact that alternate energy sources are dependent on materials that would become scarce if the alternate energy sources came into widespread use. Bottom line: A lot of the pieces are still coming together to make a fossil fuel free economy viable. We can probably do it, but it's not going to be easy or costless.

On the energy storage scene, Sodium Sulphur batteries are apparently catching on for utility level storage. These things are very efficient for large scale energy storage, but they don't work for cars or smaller applications because they contain corrosive material and only work at temperatures of several hundred degrees.

A couple of other notes: (1) This economy has been tough on alternate energy startups. A very promising solar cell startup company called Optisolar just laid off most of its remaining workforce and is looking for a buyer. Very frustrating because they had more than enough orders to be viable, but they needed money to produce the cells and no one would lend them any. First Solar bought out their order backlog, so the project will apparently still happen, but that's one less technological avenue being explored. (2) As solar cell companies try to expand, they seem to be facing one bottleneck after another. First there was a shortage of polysilicon, the material at the core of most current solar cells. That drove solar cell prices up a bit after a long decline. That appears to be resolved. Now it looks like there may be a problem with the next step back in the supply chain (metallurgical silicon).

These are problems of success. The solar cell industry has been doubling every two years for over a decade and parts of it haven't been able to keep up. The thing is, these bottlenecks are happening at a time when the total world-wide annual solar cell production would replace maybe one or two coal-fired power plants. Scaling up enough to replace a significant amount of coal is going to be a bumpy ride and it probably won't happen in the time-frame a lot of hope it will.

There are bottlenecks all through the chain that leads to alternate energy. Chevron (oil company) controls key patents for NIMH batteries (one of the more promising batteries for electric cars). until 2014, but even then we'll have to scale up manufacturing, and apparently NIMH batteries depend on a 'rare earth' material that

would be in scare supply if we scaled up to do a significant number of NIMH battery powered electric cars. Not only that, but China has quietly cornered the market for the material in question. Another promising electric car battery material: Lithium. Scaling up production enough to supply a significant electric car market may not be easy. The largest known deposit of Lithium is in Bolivia, and the Bolivians are already gearing up to spend all of the money they think they'll have when we become dependent on them for the material to make batteries for our electric cars.

On the bright side, the wind industry is going great guns. The solar industry was expanding until the credit crunch, and there are several promising US manufacturers. I think the Obama Administration means well on solar, but they'll have to move fast and smart or we'll lose several good companies. Evergreen Solar has great tech and a nice order book, but the credit crunch may get them.

The industry has a lot more capacity than the market can currently use. The upside of that is that you'll probably start to see some major solar panel bargains later this spring if you know where to look. I'm looking to pick up a small (45 peak watt) emergency panel system in a few weeks. I'm not sure what I'll use it for--maybe camping, but the price is definitely right.

Matching supply and demand is one of the big problems for wind and solar once they get past a certain fairly low percentage of the electricity supply. Another problem is getting the power from the areas where it is being generated to the areas where it's needed. It's going to take a major investment in the grid to make that work.

I don't know of any major toxicities or shortages that would affect silicon solar cells. That doesn't mean there aren't any. I'm just not aware of them if they exist. There was a polysilicon shortage for a couple of years, but that was because the solar cell industry expanded faster than anticipated and it took a couple of years for polysilicon capacity to catch up.

Now it looks like they're going to overshoot on polysilicon capacity (and solar cell production capacity), which will probably push solar cell prices down in the short term and lead to a shakeout in the industry unless the stimulus package stuff leads to much higher sales.

I'm not trying to be a downer here. As I said, I think we need to be moving away from fossil fuels. We need to do it intelligently though, and the result will have its own set of problems.

Cobasys and the NIMH Battery fiasco: Energy storage is a biggie for alternate energy. It doesn't help that one of the promising types of batteries (NIMH) is essentially unavailable for transport and large-scale storage applications until the major patents run out in 2014. Sad story there. A company called Energy Conversion Devices (ECD) made some breakthroughs in battery tech around the time GM was messing with their electric car (the EV1). GM partnered with ECD, and NIMH batteries actually went into a few EV1s. GM eventually gave up on electric cars and sold their stake in NIMH battery tech. After a couple of twists and turns, the tech ended up as a joint venture between ECD and Chevron (the oil company). That joint

venture is called Cobasys, and it has an exclusive license to the NIMH technology for transportation and large stationary applications. Some Japanese battery companies do have the right to produce NIMH batteries for transportation up to a certain number of amp-hours as the result of a settlement of a patent infringement lawsuit. That's why the Prius can have an NIMH battery, but not a big enough one to make a good plug-in hybrid. (The settlement apparently eases the amp/hour restrictions at some point. Not sure when or how much)

Cobasys refuses to sub-license the technology. They do build NIMH batteries themselves, but only in very large orders from the likes of GM. GM designed Cobasys batteries into one of their mild hybrids but apparently had to recall most of them. Mercedes designed Cobasys batteries into one of their hybrids, but that didn't work out and the companies ended up in court.

At the moment, ECD and Chevron are trying to sell Cobasys, which is losing \$70-90 million per year. They are also suing each other over who gets to pay for the Cobasys losses. Apparently General Motors is fronting Cobasys the money to stay afloat because they need the batteries to keep their mild hybrid in production. (Your taxpayer dollars at work)

What a fiasco. Meanwhile, with the lawsuit sputtering on, ECD is hinting broadly that while they did grant Cobasys an exclusive license for transportation and large stationary uses, they also granted some other small companies licenses to build NIMH batteries with no restrictions on size or use BEFORE they granted Cobasys the exclusive license. One Chinese auto manufacturer may be trying to snap up one of those early licensees and end up with the ability to build large size NIMH batteries.

There is some question as to whether this is still important because Lithium Ion batteries are in many ways superior to NIMH ones. The big question is whether or not they are safe enough for auto applications due to the fire hazard. (Remember the laptop batteries that caught on fire?)

There is also a wild card in all of this. As I mentioned last distro, Firefly, a spin-off of Caterpillar, claims that they can produce Lead Acid batteries with the same kind of durability and energy density as NIMH and Lithium Ion batteries at about one-fifth of the cost. Their first generation battery is apparently in small-scale production. The energy density isn't anything to write home about for the first generation, but they claim it can be cycled 2.5 to 5 times as often as normal deep cycle lead acid batteries. That's important because most lead acid batteries don't last very long if you drain them completely or even down to 50%. That's why golf-cart batteries usually don't last more than a couple of years.

Global Warming: Global warming is a third rail topic for most people. Not much you can say about it without getting one side or the other mad at you. Most of the people who post about it on-line seem to have taken whichever position they are taking more on general political position (liberal versus conservative) than on any real understanding of the issues. The issues are unfortunately terribly complex, and the careful scientists involved tend to be less quotable than the ones who talk in sound

bites.

While I care about it passionately because I'm going to live the rest of my life in the future, I don't have a horse in the global warming debate. I'm politically a pragmatist. Free-market/command economy: I don't have a strong position. I want what works. I'm a big fan of alternate energy and want to see it become more widespread for pragmatic reasons as the technology becomes cost-effective. That seems to be happening much faster than I had dared to hope. Again I'm pragmatic on that. If the tech is ready or can be made ready, great. If it isn't there yet, it isn't.

Like many things about me my ecological views are complex. I was in the ecology club in high school, spent a couple of my college years voluntarily not using a car unless it was absolutely necessary--riding buses, riding a bike, or walking everywhere. Since I commuted and the college was ten miles or so away that took some doing, especially since our mass transportation was awful. Nearest bus stop was a 45 minute walk from the college, so a friend of mine and I walked it both ways almost every day. I had a car. I just felt that I shouldn't use it. Ahhh, the idealism (and good knees) of youth.

At the same time I think that stopping development of new nuclear power plants in the US was a major mistake, one that really screwed up this country. But then I'm a major fan of solar power. I don't fit well in an ideological pigeonhole.

I've read dozens of online global warming debates, but I've never found one where either side seemed to really grasp that "global warming" is actually several very different issues, with several different levels of consensus in the scientific community. It's impossible to meaningfully debate the issues without separating them out.

The issues:

- 1) Is the climate warming globally?
- 2) If so, is that warming outside the natural variation one would expect in an interglacial like the one we're in?
- 3) If yes, is human activity causing global warming?
- 4) If it is, which human activities are causing that warming and in what proportions? Human activities causing increased methane? Human activities causing increased particulates? Human activities causing increased carbon dioxide? Changes in land use (deforestation, desertification, etc)? Increased production of trace gases of other kinds?
- 5) If the culprit is increased levels of carbon dioxide, which human activities are the primary causes and in what proportions? US car and truck use? US power plants? Land use in the US and other countries (Deforestation, burning of peat bogs, etc)? Fossil fuel use in other countries?
- 6) If it possible to use climate models to predict future climate change? Do those models successfully predict the past? Have they successfully predicted a substantial period without after the fact tweaking? Do they agree substantially on the direction and magnitude of future changes? Are their assumptions and programming accessible and reproducible? Can they accurately predict non-

linear climate responses to increased human activities? Can they accurately predict future human economic and technological changes? Can they predict the underlying climate (ie what would happen in the absence of human activity)?

- 7) If we are causing climate change, is it on-balance bad for humans and/or for the planet? Will it cause increased hurricanes/severe weather? Will it cause sea level changes? Will it cause species extinctions? Would it be universally disastrous? If not, who would benefit and in what ways?
- 8) What if anything can we do to stop or decrease global warming?
- 9) Of the things we can do, which ones would be cost effective?

The amount of scientific consensus on these issues range from almost total, with a few outlying gadflies to no consensus at all or a consensus that there isn't enough data to answer the question. The scientific background reports of the IPCC reflect that range from near total consensus to none at all. Popular press reporting on the IPCC report tends to under emphasize the uncertainties and areas where there is no consensus. When I read some of the background papers I was shocked at how different the science in the actual report was from the way it was reported.

There is no scientific consensus in the case of questions 8 and 9 because they are political issues, not scientific ones.

Here is one example of the complexities: For at least the last million years earth has been in an ice age. Most of the time ice has covered much of Europe and North America down to northern Illinois. Every once in a while the ice retreats for a few thousand or a few tens of thousands of years. Those warm periods are called interglacials. Scientific consensus is that the ice advances and the interglacials are ultimately caused by cycles in the Earth's orbit and rotation. We are currently in an interglacial--a short interval between ice ages.

There are two issues here (1) How long before the next ice age? There is no consensus there. The cycles involved are complex and the answer could be that an ice age is coming soon--soon being a few hundred or thousand years, or it could be delayed for another 30 thousand to 50 thousand years. (2) What would this current interglacial look like in the absence of human interference? How hot and how cold should a normal interglacial get? That's a tough question.

We have satellite temperatures for 20 or 30 years and spotty radiosonde measurements going back 50 or 60 years. We have ground temperature readings going back quite a bit longer, but they're spotty. Large parts of the world, especially in Africa and near the poles weren't fully explored until around 100 years ago. And the first explorers weren't usually there to get the temperature. So we only have decent planet-wide data for the last 100 years. But our interglacial is over ten thousand years old. The actual measured temperatures don't tell us what's normal. They just tell us what the things have been like since we started measuring. It's worse than that though. The data we're getting have become more iffy with the fall of the Soviet Union and the descent of large parts of Africa into civil war.

For years before good measurements we have to use records for limited areas

and fill in the rest using "climate proxies". That means we look at tree rings, ratios of various isotopes and the like. Different proxies give different pictures of what temperatures were like, so they have to be reconciled. The further back you go, the less accurate the proxies are. Proxy data also is mostly from areas where it is easy for Europeans or Americans to get to--so Europe and North America are over-represented.

Based on the proxies, temperature does bounce around during interglacials. There was a warm period around 1200-1400 years ago when it got as warm as it has been in the last fifty years minus the last decade in North America. The last decade is warmer than it has been for at least a couple thousand years. Are those temperatures outside the range of a normal interglacial? Are they hotter than anything we've experienced this interglacial? No scientific consensus there.

All of this can cut two ways on global warming: If we're in what would have naturally been a cold stretch then we're underestimating the human impact. If we're in what would have been a hot stretch we're overestimating human impact.

Bottom line: This stuff is tricky. Tough science. Not reducible to sound bites without major distortion.

Global Warming and Aerosols: Here's an interesting new study on Global Warming. It doesn't fit neatly into the skeptics versus believers debate, but it is significant.

From ScienceDigest: "Though greenhouse gases are invariably at the center of discussions about global climate change, new NASA research suggests that much of the atmospheric warming observed in the Arctic since 1976 may be due to changes in tiny airborne particles called aerosols. Emitted by natural and human sources, aerosols can directly influence climate by reflecting or absorbing the sun's radiation. The small particles also affect climate indirectly by seeding clouds and changing cloud properties, such as reflectivity." (snip)

"The researchers found that the mid and high latitudes are especially responsive to changes in the level of aerosols. Indeed, the model suggests aerosols likely account for 45 percent or more of the warming that has occurred in the Arctic during the last three decades. The results were published in the April issue of Nature Geoscience."

Basically the study claims that the temperature changes happened because we reduced the amount of pollution from sulfates which had a net cooling affect and increased the amount of black carbon, which has a net warming affect. Aerosols have long been one of the major uncertainties in climate modeling. The more impact they have had, the less impact carbon dioxide in the atmosphere has had, and presumably will have in the future. That's good news because aerosols don't stay in the atmosphere long--a matter of days or weeks, rather than the centuries for carbon dioxide.

If this pans out it doesn't mean we can ignore carbon dioxide's role, but it does mean that a significant part of global warming is a lot more manageable than we thought, which is obviously a good thing.

The fact that aerosols affect temperature isn't new. The scientific community has long known that. Uncertainties as to the impact of aerosols are a big reason why there are ranges in the estimates of future temperature increases. What is new is that the uncertainties seem to be getting resolved, and the way they're getting resolved points to aerosols having an affect at the top end of the predicted range.

Black carbon has different sources than CO₂, though there is overlap. A lot of black carbon (25-35%) comes from burning wood, cow dung and other biomass for cooking, mainly in poorer parts of China and India. Some of it is also from people in poorer areas of the world using candles and kerosene for lighting. Another big batch comes from using diesel fuel. Hopefully some of that, though not the diesel, will go away as those areas modernize.

Getting rid of black carbon isn't trivial. It is doable and it requires a different set of solutions than getting rid of CO₂.

<http://www.sciencedaily.com/releases/2009/04/090408164413.htm>

Any Dollhouse or Castle fans: Is anyone else in the APA watching *Castle* or *Dollhouse*? Dollhouse is created by Josh Wheedon (Buffy, Angel, Firefly). In Castle, the captain from Firefly (Nathan Fillan?) plays a celebrity writer of crime novels who get involved in real-life detective stories. Yeah, the sort of like Murder She Wrote in concept, but pretty well done.

DaVinci Code: This is kind of shooting fish in a barrel, but for what it is worth, the whole 'direct descendant of Jesus' thing ruined the movie for me. If you do a family tree stretching over a hundred plus generations it's either going to be one tangled up incestuous mess or the percentage of genes contributed by Jesus/Mary is going to be so tiny as to be irrelevant. And unless there is some kind of supernatural way of making sure the dad is really the dad there is no way you could even have a chance of tracking that tiny percentage. Think of it this way: the percentage of genetics contributed by Jesus/Mary would be cut in half every generation that their descendant married someone unrelated. So in 10 of those 100 generations you're already down to one part J&M genes and 1023 parts unrelated genes. And you've still got 90 generations to go. Go another ten generations and you're up to 1 part Jesus and Mary genes versus 1,048,575 parts unrelated. Of course by that time there would probably be quite a few distant cousins marrying distant cousins, which would concentrate the Jesus and Mary genes to a very moderate extent. Given another 80 generations for the genes to dilute further and you can see why the idea of someone being some kind of special "direct descendant" of Jesus is nonsense.

Even if it wasn't, the purported father is not the actual father on average 4 percent of the time in most societies, so if descent was through the father the possibility of the person being more related than Joe Smith is minimal over that many generations.

Some people don't grasp the logical flaw. If you don't, maybe it would be easier

to think of it this way: You have or had two parents. You had four grandparents (2 on each side). You had eight great grandparents (because each of your grandparents had two parents). That's 3 generations and already your genes are only one-eighth from any one of your great grandparents. Go back another generation and you have sixteen direct ancestors because each of your great grandparents had two parents. Every generation you go back you have double the number of ancestors and each of those ancestors contributed half as much to your ancestry as the generation after them did.

So if Jesus had a child and they had a child and so on, by the time he was a great grandfather his great grandchildren would get one-eighth of their genes from him. Every generation when they didn't marry a distant cousin the percentage of genes that they got from him would be cut in half. From one-eighth to one-sixteenth to one-thirty-second and so on over around a hundred generations. It doesn't matter if the

Alternate History Scenario Seeds

YEARS WITHOUT SUMMERS - BY DALE COZORT

In 1816, New England, much of Europe, and possibly much of the rest of the world, experienced what became known as “Eighteen Hundred and Froze to Death” or “The Year Without a Summer”. There were warm stretches during the summer of 1816. However, none of them were long enough for crops to mature. There were killing frosts or ice storms spaced through the summer, including late May, June 6th through the 11th (repeated snow, frosts and freezing temperatures in large parts of New England), to a lesser extent in early July (frost only in higher elevations), and three times in August. A series of large closely spaced volcanoes in Asia and the Caribbean probably caused this, with the Tambora volcano of 1815 doing most of the damage. Whatever the cause, that kind of weather can happen. So let's move it around.

How about 1676? We could move the Tambora eruption back, or we could move the Huaynaputina (southern Peru) volcano of 1600 forward and make it bigger. It might not have to be much bigger. The historic volcano triggered climate changes throughout the northern hemisphere and may have caused a famine that killed two million people in Russia.

In any case, in 1676 New England gets a year without a summer. It is in the middle of King Phillip's War, the last big New England Indian war. I'm guessing that King Phillip's War would either drag on into 1677, or fizzle out as both sides battled starvation in the winter and spring of 1676-1677.

Either way, what would the implications have been if New England had been denied a decisive victory in the summer of 1676? The colonies wouldn't have been pushed back into the sea, but since the historic King Phillip's war caused a 20 year depression, adding another year plus a famine may have slowed New England's growth.

We could move that winter to the first or second year of Plymouth Colony.

people in a generation have one kid or fifty. Each of those kids will have two parents, which means that they'll be half as genetically related to a given ancestor as the last generation.

Cities make you crazy: I knew it! A recent study shows that living in a city "impairs our basic mental processes. After spending a few minutes on a crowded city street, the brain is less able to hold things in memory, and suffers from reduced self-control."

http://www.boston.com/bostonglobe/ideas/articles/2009/01/04/how_the_city_hurts_your_brain/.

That would screw things up royally—probably kill the colony. What would that do to the shape of New England? The Puritans might still settle there later—probably would, but the whole pattern of settlements and Indian alliances would probably change. Not sure how. Having something like that happen in the first year or two of the Puritan settlement might have more impact, but the Puritans were well supplied and well financed. They would probably survive.

What if we moved it back a few decades to the American Revolution? Early in the revolution or in the lead up to the revolution it could delay the revolution for a year or two as New England found itself dependent on the free flow of food from outside the area for a year or two. It could also be painful and maybe even fatal to the revolution in New England if it hit late in the revolution, when colonial finances were already starting to fall apart and the victory over Cornwallis hadn't happened yet.

What if we moved it to the US Civil War years? The Union would have less leverage over Britain because it wouldn't be considered a cheap reliable source of food to the same extent. It would have some impact on the ability of the North to feed armies, but I doubt it would be decisive unless it was in the summer of 1864. Delay the fall of Atlanta until after the 1864 elections and put enough impoverished farmers into the Democratic column and you might end up with a Democrat victory in the 1864 elections. Does that lead to a negotiated peace? I don't know. The war had a lot of momentum by that time. Would a compromise peace even be possible by that point?

We could also move the year without a summer forward, although I think that if we're going to have anything like modern history we should make it a different volcano like Krakatoa and a different year without a summer because if we just moved the one in 1816 forward much of history wouldn't happen because of various

butterfly affects.

Of course moving Krakatoa forward from the late summer of 1883 into the middle of some of the events of the twentieth century would have an impact in that the historic Krakatoa wouldn't have happened. Historically Krakatoa lowered global temperatures by over a degree Celsius for the first year and left weather patterns disturbed for five years. Eliminating that would have led to a significantly different world by say 1913. The iceberg that sunk the Titanic wouldn't have been at precisely the place it was historically after over twenty years of slightly different weather. How many other ripple affects would there be? We could avoid all of that by just hand waving. "Really big volcanoes happen. What if one happened at this date?"

Here are some date possibilities:

Late summer of 1913. The year without a summer would be 1914, with the most acute food shortages coming in early 1915. The Great Powers would have a dilemma. It looks like a major crop failure is coming. Do you go to war, dragging peasants away from their fields and making matters worse? Are you sure you'll win before you run out of food? Wouldn't it be better to wait a year?

If the European Great Powers postpone World War I until the food shortages ease, possibly in 1915 or more probably 1916, what difference does it make?

Russia would be stronger because of its rapid industrialization, but the Czarist regime would be more moribund.

Austria-Hungary would have changed somewhat. I'm not sure if the changes would be good or bad for the regime. Among other changes, they were to establish universal male suffrage in Galicia, which was majority Polish but with a large Ukrainian minority, a majority in the eastern half of the province. Poles had dominated the province politically and economically, but universal suffrage would have altered that.

Airplanes would have had another couple of years to develop, and the

technology was developing fast. Cars and trucks would be more common and more reliable. I'm guessing we would see more armored cars early in the war, and tanks and airplanes would be developed at an earlier stage in the war, though probably chronological after they were developed historically.

Radio would play a bigger role earlier in the war than it did historically. The extra development time might also change the course of postwar development.

The war would probably go on for at least two to three years because the sides were evenly enough matched that a quick, clear victory would be unlikely, especially given the geography of the western front. There was too much firepower in a confined space for much maneuvering, and the defense had a major advantage in strategic mobility.

Actually a summerless year during any of the World War I years or the immediate aftermath would have a major impact on history. So would a similar year in 1930, when the Great Depression was starting.

The summer of 1939 or 1940 or even 1941? Any one of those could get interesting. Let's try 1940. The blitz is rolling and all of a sudden we're in the middle of winter in May, with the Luftwaffe less effective due to cloud cover and the panzers less mobile due to mud. Then we get another snowstorm in early June, this one lasting 5 days. Would it be enough to stop the Germans? What impact would crop failures have on the rest of the war—both in Germany and the Soviet Union?

Move the summerless year forward to 1941. What if the Germans were forced to postpone Barbarossa until 1942? What would they do in the meantime? What would the Soviets do? How much stronger would the Soviets get?

How would the Germans do up against the number of KV1s and T34s the Soviets would have by summer of 1942? On the other hand, what would a year of failed crops do to the Soviets with their chronic food shortages? How would another famine affect the ability and willingness of Soviet peasants to fight for the Soviet regime?

The Germans weren't flush with food at any point during the war, so the poor crops would cut both ways, though they would hurt the Soviets more.