

On the Technoscape

by Gord Sellar, published in *Matrix 60* (Winter 2002.)

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If you seek out the Emergency Protocols for Farms documentation of the Saskatchewan Government's Department of Northern Services, circa 1983, you'll find some bizarre contingencies accounted for. Some beauties include things like Russian invasion of the Northern prairie, spread of plague, and even the possibility of rogue bands of wandering aboriginals driving around, cutting the udders off cows and slitting the poor animals' tendons during, say, a mass socioeconomic collapse.

I know this because my father, an old ex-colonial from East Africa, wrote the document. He told me about this just the other night. This is the man I asked what the sixties were like when I was a kid, expecting stories of peace and love and hippies and rock'n'roll.

"Oh it, was hell, lad, it was a living hell, all of the decolonization wars going on. The continent fell apart. A bloody shambles." He told me stories about bartending weekends in a pub where mercenaries from all over Europe and Africa cashed in on clandestine, government-sanctioned smuggling; about weekly shipments of chickens hijacked by rebels at the border; about coups, and bloodshed, and horror. No wonder he found Rambo was insultingly fake.

But this cow-attack thing was just, well, a bit much. I didn't know where to start, really. *Roving bands of cattle-mutilating aboriginals?* Hoping to avert another round of, "No, Dad, Europe didn't colonize Africa for the Africans' own good", I simply expressed shock at the cattle-mutilation clause. I must admit, the fact that the countries he was born in and educated in (Nyasaland and Rhodesia) no longer exist, that gave me pause for a few seconds. Think about that for a second.

"Well, lad," he replied to my objection, simply and quietly with his Rhodesian accent, "that sort of thing happened a fair bit in up Kenya when I was there, and you can never be sure it won't happen here, too."

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Maybe it's just too many science-fiction novels, or too many American thrillers, but it seems to me important to remember that things *can* absolutely collapse. It's not that I think they will anytime soon, but I think it's important to take it into account.

No, wait. What's important is to take into account that things someday *will* collapse. I mean, every major civilization in history — every one of them — has fallen apart. I've seen charts that correlate this to sustainable energy consumption; I've read arguments relating it to sex lives of the peasantry. At this point I'd be willing to consider either option.

There's a running joke on this mailing list I subscribe to, where we argue about who's going to get offworld first, how, and when, and whose empire will cover the face of Mars first. I used to joke about it being me. Now, I vacillate between betting on a partnership between Microsoft and RAND and Monsanto, or supposing that we'll never actually get to Mars.

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You never can be sure what's going to happen here, I agree. But we ought to count our blessings, too. We're damn lucky that the people who attacked the USA in September weren't the sort to be reading Tom Clancy. We could have seen any number of equally shocking, and far more devastating attacks. Imagine if four nuclear power plants near major metropoli had been targeted, for example: a series of Chernobyls along the East Coast, say. Reports say it could have been pulled off, if someone had tried it. Someone's gotta do something about that, I say to nobody in

particular. Then I go back to reading my newspaper backwards, which is the only way to find the important news first.

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It seems ironic to me that one of the things people keep discussing in terms of what's going on in America, in Afghanistan, worldwide, is strategy. People keep talking about how difficult it would have been to plan the operation that resulted in the destruction of the World Trade Center. People keep talking about how effective, or non-effective, the current American campaign in Afghanistan is, or will be.

But when it comes right down to it, nobody thinks of random bands of abos mutilating cows – and it's that stuff – the stuff that comes out of left field – that always gets you. Obviously, nobody thought about how effective a bomb a plane loaded with fuel might be, or they'd have had a whole different strategic infrastructure throughout aviation within the North American continent. Right?

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I had a dream the other night about this.

I was sitting in an airplane, about five years from now. There were no armed guards. There was a rather pretty Cantonese stewardess who kept helping the people in the seat in front of me; unfortunately, I got the portly Italian steward with flecks of mustard in his mustache instead. He kept offering me Diet Bubbletea. I was ready to tell him off and ask for a Bubbletea Deluxe with extra lipids, even though I knew I shouldn't.

There was no door to the cockpit. There was a visiscreen on the wall where this door would have been, and it was blank from the moment I had gotten onto the plane. Before takeoff, the commsys protocols were explained to us: the visiscreen would not come on during the flight except by the pilot's request. The plane was a Bombardier Securflite series 7-A, equipped with autonomous onboard navigation systems and pseudointelligent monitoring systems. At the first sign of reckless misadventure, a steward's button would cause mild Sevex nerve gas to be released into the cabin to render us all unconscious. At any point in which flight paths deviated beyond maximum tolerances from the programmed flight path without acceptable pilot signaling, the same gas would be released and the PGP-encrypted autopilot systems would take over and fly us in using GPS quadrangulation. We would be arriving in New York in two hours, and were instructed to enjoy the flight.

I remember looking at the cute little flight hostess and wishing they'd just schlep us all onto the planes naked, like that stupid futurist guy predicted years back. I wished this until the moment portly came back with my Bubbletea Deluxe.

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The problem is, we're not used to "hackers" in the larger sense. We're used to people fiddling with computers, but when you turn to other forms of hardware and their applications, we're naïve, ignorant, simplistic. We have no conception of how our technologies could work against us.

Consider sewage. We take our sewage systems for granted. Their breaking down isn't even a consideration — most of us have never seen that happen on a large scale. Yet they're crucial: we rely on them for sanitation, and when they break down, you get epidemics and all kinds of other fun. Search any web index with the keywords "Tegucigalpa, Honduras," "fecal," and "explosion," if you don't believe me. No kidding. Exercise for the reader: how can functional sewage systems be hacked, and to what end? Use your imagination. Do you think you could find a way to make household toilets kill people? I can't think of a good one, but I bet somebody out there can.

And will.

What about telecommunications systems? If you put your mind to it, how hard would be it be spam-cripple most major web servers in North America? Or, heck, how difficult would it be to

knock out the power grid in this or that major city? *Je me souviens*, I hear some of you saying, shivering.

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The next page in my backwards newspaper bears mention of “President Musharraf”. I mark another tick in my notebook. I’m beginning to wonder when he became President. I didn’t know that coups were now acceptable forms of election.

Pakistan and India are getting antsy. Yeah, I feel grateful that the Taliban refuses to watch spy movies and read Tom Clancy. It’s a lucky thing. But besides feeling grateful, in a kind of nervous and hopeful way, that nukes weren’t used, what is there to do? Is there anything we *can* do besides watching the rest of the world with this mounting, stifled, unspeakable, confusing guilt and worry and anger?

Not in the short term, at least I don’t think so. We will go to protests. We will write tentative, careful articles. We will give and listen to speeches. And the bombs will keep rolling out of the sky into Afghanistan. Whatever happens in India and Pakistan and China and Uzbekistan and Kazakhstan and everywhere will keep happening. And of course, whatever fingers our own governments have in those pies will go unmentioned to us in our media.

But in the longer term, I think we can do some very specific things. And most of them have to do with technologies. One problem is that, as I have stated, we relate to our technologies far too innocently.

Q: What kind of nut uses a passenger airplane as a massive bomb? How does a mind like that work?

A: I don’t know, but I think that’s what we’d better figure out, ASAP.

We need not to make the same mistake. We need to figure out how the mind of the hacker works. The guy who says, cool, let’s fly that plane into, yeah, the World Trade Center. If he won’t read Clancy, it means he refuses to learn from us. But we can learn from him, just the same.

Anyway, you usually learn the most from people who hate you.

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I keep getting told I’m some kind of technocrat. It’s not that. I just believe that sometimes a stopgap solution is necessary to see us through the present. One thing we need to do is find a way to make our technologies harder to hack. Hell, tighter security and better technological barriers to this kind of hacking might have kept those planes from being hijacked, and prevented the possibility of any justification at all for lobbing bombs anywhere. That is, win-win, short-term wise.

Of course, there’s also the long term. If we’re redesigning our technologies, we might as well go back a little further than that. Maybe not starting principles, but... it’s not as if we needn’t face some hard truths. Truths like what we’re planning to fuel our civilization off from now on. We daren’t discuss the status of the oil industry in central Asia, though. Don’t say “pipeline”, it’s a very dirty word and it might get you into trouble.

Actually, pipeline *is* a dirty word. The power our civilization is running off *is* filthy, dirty, disgusting. It’s as bad as the Victorians and their coal-black London snot, and black moths on the trees. Supposedly this energy is cheap. “Cheap” is... subjective. It’s been demonstrated that in most human societies, procurement of cheap energy has almost historically been achieved only by killing off large numbers of whichever someone else has this cheap energy source. Oil’s only “cheap” if you factor out the costs of recurrent military operations and total human losses; and also, the crud in the air, in your lungs, the ambient poison we’re pumping out there every day, war or no, improved or not.

The thing is, there are lots of solutions. You'd be amazed what we can pull off. Wait till we start making quantum wellstone objects out of artificial, programmable atoms. But we'd better put safeties into that stuff. It could make the WTC look like a picnic.

There's another, equally crucial role for this redesigning of technology in our daily lives. If we can design our technoscape to protect us from terrorists seeking to intimidate *our* governments, we can also design it *to protect us from our own governments...* and, once we have sorted, we can also share them with other people; we can put our money where our mouths are. It's not as if we'll have much interest in funding ragtag terrorist squads out there anymore, anyway.

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I sometimes remind myself sometimes to try to breathe deeply, and relax. Not everything has changed. Many things are still the same, even now. Many of the same things still need to be said.

But now there are more things to say, too. Still more to hear.

THE END