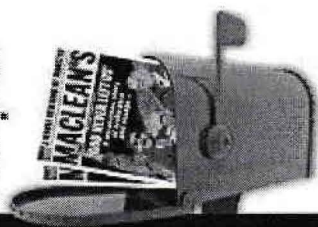


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## Nortel and the Avro Arrow myth

by [Andrew Coyne](#) on Thursday, August 13, 2009 6:03pm - [106 Comments](#)



I'll have lots to say about this Nortel nonsense in a bit, but for now let me just deal with the inevitable Avro Arrow analogy. Appearing before the Commons industry committee the other day, Research in Motion co-CEO Mike Lazaridis trotted out the well-worn Arrow story to pressure lawmakers into blocking Nortel's deal to sell its wireless operations to the Swedish telecom giant Ericsson.

He told MPs that allowing Nortel's next-generation wireless patents to go to a foreign-based company would be similar to Canada's notorious decision to cancel development of the Avro Arrow aircraft in 1959....

Lazaridis noted that he has a model of the Canadian-designed Avro Arrow on his desk and that 2009 marks the 50th anniversary of its cancellation. "Fifty years later we consider the disposition of another beachhead built by Canadian ingenuity," he remarked. "Let us learn from our history and not make the same mistake again."

There are any number of things wrong with RIM's case, but the first and worst is the notion that killing the Arrow was some sort of terrible mistake. Indeed, if the best RIM can do is cite the Arrow, darling of every nationalist drama queen and high-tech trainspotter who never bothered to actually inform themselves of the reasons for its

demise, that tells you just how weak their case is — though it was enough to send the *Toronto Star* into one of its patented teenage swoons.

For those in need of a refresher course, let me point you to Michael Bliss's classic history of Canadian business, *Northern Enterprise*, pgs. 474-477. I'm going to quote it at some length, because, well, it's just so damning...

Born in war, with an original aim of making warplanes for the Pacific theatre, the A. V. Roe company of Canada made a bold but unsuccessful grab for peacetime leadership in aircraft design by producing one of the world first jet-propelled passenger planes, the C-102 Jetliner. The project was funded by [C. D.] Howe's Department of Reconstruction and Supply. [However] no commercial airlines, including TCA [Trans Canada Airlines], which refused to bend to the minister's pressure on this one, found the C-102 suitable to their needs. It was an impractical, premature leap onto a technological frontier, and was headed for the scrapheap anyway when the Korean War provided an excuse for concentration on military aircraft.

Avro had good luck with a conventional jet fighter, the CF-100 Canuck, which it designed and built for the RCAF, manufacturing almost seven hundred of them... The Canuck success led defence planners to commission Avro to design a successor, the project that became the CF-105, or Avro Arrow... Originally the Arrow was to use imported engines, fire-control systems and ground control systems. Gradually the military and the nationalists and the high-tech enthusiasts decided to have all these components manufactured in the country that could make anything, Canada....

By the time the Arrows flew [in 1958], it was clear that the project was a horrible mistake. Avro Canada was not an experienced aircraft manufacturer; the CF-100 was its only success and it had been plagued with design problems and delays... The firm's frenetic expansion, highly self-conscious publicizing of its commitment to high technology (its ultimate space-age product was the Avrocar, a doughnut-shaped vertical take-off and landing craft that resembled nothing so much as a flying saucer...) and very heavy reliance on government contracts, camouflaged serious managerial weakness. The evidence suggests that A. V. Roe was a classic promotional company ... built on wild optimism, taxpayers' money, media gullibility and Canadians' naive patriotism...

Costs of the Arrow went straight up in a decade of comparatively little inflation. By 1957 aircraft originally estimated at \$1 million each would cost at least \$8 million, probably much more. Arrow would cost six times as much as U.S.-designed interceptors. No one other than the RCAF wanted to buy the Arrow... The Arrow was consuming a huge proportion of Canada's defence budget, and beginning to starve the other services for equipment. Even the Department of National Defence turned against it. Howe and the Liberal government decided to cancel the Arrow — after the 1957 election.

As it turned out, they never got the chance. It fell to the Diefenbaker Conservatives to kill the project in 1959. Controversial as that decision may have become in later years, at the time, as Bliss notes, it was not: "hardly anyone believed the program, which Canada simply could not afford, should be continued.... The Liberals' only criticism of the Conservative decision was that they had not taken it sooner."

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Sort by: [Date](#) [Rating](#) [Last Activity](#)+6 [Vote up](#) [Vote down](#)avr 78p · [77 weeks ago](#)

I blame that appalling CBC mockumentary for giving the Avro Arrow myth new life.

[Report](#)[Reply](#)+3 [Vote up](#) [Vote down](#)L. Miller · [77 weeks ago](#)

Here's a really well done master's thesis about the Avro procurement project and why it was cancelled:

<http://scaa.usask.ca/gallery/arrow/thesis/index.h...>

I particularly like the wording from the Abstract:

"The popular literature on the project has advanced a techno-nationalistic, conspiratorial viewpoint that the project should have been completed regardless of the financial burden or operational requirement. The Arrow programme's termination is invariably interpreted as an unjustifiable action by an inept Conservative government that was ignorant of defence policy and acting at the behest of the United States. The academic community, believing the lessons of the project to be largely self-evident, has not countered this belief with any studies of significant length or breadth of research."

It is necessarily is more detailed than Bliss, but the two conclusions are similar.

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And yet many of the engineers who helped build the Avro Arrow moved on to the U.S. to work on the NASA Apollo program following the Arrow's cancellation. The issue really is Canada's pathetic research and innovation record over the last few decades. Granted, the Arrow program was a classic example of how not to do it but it also exposes the gutless nature of our public and private sectors when it comes to investing in research and development. RIM is a happy exception to this rule.

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Can we let the Toronto Star's patent on teenage swoons fall into foreign hands?

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Mike T. · *77 weeks ago*

The patriotic pleas of Ball-silly and Lizarbrain have struck a chord with me. it is important that cutting edge technology be kept in Canada to give us the edge we need in the 21st century and beyond.

Our course of action should be clear: nationalize Research In Motion post-haste.

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Anon · *77 weeks ago*

Coyne is suffering from hyper-rationality. Take a few more weeks off. Really, no one will notice.

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Anon · *77 weeks ago*

In Coyne's world, only Americans are allowed to be nationalistic. Among his own countrymen, he finds it unseemly and embarrassingly parochial, for which we deserve nothing but sniffs and sneers.

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Dot · *77 weeks ago*

Looking forward to your "lots to say about this Nortel nonsense in a bit".

Btw, I'm sure if I had extrapolated the Gov'ts investment in Avro Arrow to today's dollars, or at a rate of return of 7.5% for tech investments, it'd be like some silly amount of Canada's national debt.... :)

Great engineering feat. Too bad we can't celebrate the victories, but rather focus on the negatives. Still, this doesn't explain the destruction of the planes and blueprints. Why wipe out an important part of a nation's history, if ultimately falling short of its potential?

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Dave · *77 weeks ago*

Good heavens Andrew, please name me a military project throughout history that DID come remotely close to budget. Of COURSE it went over budget- they always do! Heh heh, the nationalist in me says, "Well at least it was OUR over budget fighter plane helping to build OUR OWN military aerospace industry"

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Jenn · [77 weeks ago](#)

I wonder how much money the stupid U.S. threw away on that dumb "go to the moon" thing. Heh, they're probably still paying for it, and all they have to show for it are some rocks and dust.

<http://www.thespaceplace.com/nasa/spinoffs.html>

Maybe the company wasn't the best or most efficient, but I laugh at Michael Bliss's comment, "Avro Canada was not an experienced aircraft manufacturer;" No, and we're not likely to ever have experienced new technology manufacturers if they have to start off right out of the gate with experience. That's the thing about new technologies. They're NEW.

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Gaunilon 111p · [77 weeks ago](#)

(1) I think Lazaridis got the idea for this argument from [a Macleans commenter two weeks ago](#).

(2) Although the Avro Arrow had serious cost problems, that wasn't the reason given for scrapping it. The reason given was that Canada would never again need fighters because we were going to use the Bomarc missile instead. This cost roughly \$1.4 billion (for the two bases in Canada) and was scrapped a few years later because it was ineffective. Note that \$1.4 billion would have paid for roughly 140 Arrows, roughly equal to the number of CF-18 fighters that were eventually purchased from the US for a total cost of more than \$2 billion (if memory serves).

So let's add this up: Canada scrapped a plan to buy 140 Arrows for approximately \$1.4 billion, instead spending \$1.4 billion on Bomarc missiles that didn't work, and then more than \$2 billion on CF-18's. Total cost: at least \$3.4 billion vs. \$1.4 billion. We got inferior aircraft that arrived later, and we gave the business to another country. They got the jobs, the profit, and the R&D. Classic.

On top of this, the cadre of top engineers at Avro went to NASA and never came back. Canadian aerospace, once best in the world, never recovered and is practically non-existent (or at least extremely tiny) today. Brilliant.

The blow to Canadian forces morale was not inconsiderable either. Superb.

Now, one can argue that the Nortel situation is not going to be a repeat of the Arrow. Perhaps. One can also argue that RIM is using Canadian patriotism for their own ends. Quite likely. One can also argue that Lazaridis is a none-too-original opportunist for using the Arrow argument straight off Macleans' comment pages. Almost certainly.

But one cannot argue, with any show of understanding, that the Arrow cancellation with the associated total destruction of all the research, plans, and firings of teams of experts, was not a total blunder. Bean-counters often do not see the full ramifications of these things, and one book does not make Coyne knowledgeable on the subject.

If the Nortel situation bears any resemblance to the Arrow charlie-fox then it must be avoided. This has to be the worst Coyne article I've ever read.

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[Gaunilon](#) · *77 weeks ago*

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[MaggiesFarmboy](#) 75p · *77 weeks ago*

Um, all of this is very interesting, but it ignores the fact that Nortel is a giant when it comes to tech funding (with no replacement waiting in the wings), and that Lazaridis is right when he suggests that the Canadian funded technology will now be used to compete against Canadian based companies.

The Avro Arrow analogy may not be apt, for the reasons described by Coyne, but surely he now understands that Government intervention is necessary to protect key industries. Or has he not noticed what every other country, including the U.S., has been doing lately?

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[madeyoulook](#) 116p · *77 weeks ago*

The Avro Arrow debate will be interesting to follow, but can we all agree that RIM is thoroughly disingenuous for even bringing it up?

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[will](#) · *77 weeks ago*

It is worth pointing out that most countries have had the same "Avro Arrow moment" when nationalist politicians insisted on indigenous fighters. For instance, Japan created the F-2 program of creating an indigenous clone of the Lockheed F-16. The result was that they ended up paying over a hundred million dollars for a plane that was inferior to the aircraft purchased by the UAE (F16s) for half the price. France's aviation industry is just a list of jingoistic failures. Their latest Dassault has failed to secure any customers outside of France, mainly because they built something that cost more and performed worse than American equivalents or even Euro equivalents.



The reality is it makes more sense for most countries to engage in licensing and subcontracting as opposed to prime contracting. Israel has been a good example of the success this approach can have, as has the U.K. which is now home to one of the main defense contractors on a lot of US defense projects (BAE). Even Canada, lament of the Arrow crowd aside, has a surprisingly strong defense industry. We are the world's 13th largest arms exporter (believe it or not, we are only 10-20m behind China), mainly from selling components to US projects. The value of our contributions to the US led JSF program will total between 4-6 billion dollars and we haven't even signed any orders for the plane yet. Outside of the USA and Russia, the countries with the most successful defense industries are those that have specialized into niche production and left final prime contracting work to the Americans.

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*drgmobile 2p · 77 weeks ago*

Well I don't know much about the Arrow, but the Avro Jetliner did have potential. Howard Hughes was interested in it for TWA, which would have showcased the aircraft to the world. The Jetliner's problem was that A.V. Roe wasn't serious enough about it and wanted to concentrate on the CF-100s.

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*Dman · 77 weeks ago*

Most of the negative comments on here comparing the Arrow to other ventures are incorrect. It's not like Canada spent millions on an aircraft that was inferior to those out there. On the contrary, it was vastly superior.

There is a difference in spending money, and spending your money, and getting your money's WORTH. Sure the original project went over budget, as virtually ALL military projects do. But in the end, I think it is safe to say that the money would be earned back many times over.

I for one am tired of Canadian companies being eaten up and sold off to foreign owners. Keep the jobs, and business inside of Canada.

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*Richard · 77 weeks ago*

Classic cheap Canadians. The Americans aren't afraid of cost-overruns. I guess that's why they lead the world militarily and we play catch-up.

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JamesHalifax · [77 weeks ago](#)

Dammit Andrew, there you go again. Ruining Canadians' own high opinion of themselves with fact.

Geez...what are you...a Conservative?

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will · [77 weeks ago](#)

I generally consider myself a pacifist and left-wing, but the one thing I can't get is the moment you walk into a campus NDP meeting, or just about anything else that isn't the Canadian Taxpayers Federation, everyone will line up to sing about how the Arrow was the greatest thing ever. These are people who typically have nothing but harsh words for the military (or at least military projects which divert tax money from things like national daycare), defense contractors like Lockheed Martin (UTSU passes a resolution every year to get UofT to stop holding stock in LockMart) and engaging in US led conflicts (like the Cold War, the single impetus for the Arrow).

To hear it from most Canadians though, the Arrow was actually national PharmaCare as opposed to an overpriced/under-performing killing machine, Avro was some kind of corporate champion of Canada as opposed to an incompetent spinoff of a multinational defense conglomerate and the idea that shoveling (what would today be) billions into a privately held company for a weapons system under purely nationalist (if not jingoist) aims is seen as in line with liberal/social norms. I don't get it.

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Bert · [77 weeks ago](#)

Only one question should be asked of the Arrow program. Why was it destroyed and not sold off. There is something smelly in the whole affair. Sorry Coyne but as usual you only scratch the surface of the questions and facts.

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Demosthenes · [77 weeks ago](#)

I love this guy Coyne. He's hilarious. No high speed rail, no high tech industries, no aerospace...not for him!

Oh no. He'll make sure that Canada remains a nation of loggers and miners if he has to push the axes and shovels into people's hands *himself*.

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DerekPearce 90p · *77 weeks ago*

Not defending what happened-- I wish they'd spent the damn money and kept the Arrow as much as the next guy -- but to counter those who smell conspiracy when talking about the blueprints and prototypes being destroyed: wouldn't that have been standard for scrapped military projects across all NATO and the Warsaw Pact nations? Not wanting tech info falling into enemy hands and all that? Seems like the simplest and most likely explanation to me. What happens to prototypes and blueprints to current-day weapons research that is cancelled?

And to add to Will's observation above about the incongruity of military-despising lefties who simultaneously long for the Arrow, correct me if I'm wrong, but wasn't it supposed to be armed with nukes? Talk about cognitive dissonance...

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no sound bite 2p · *77 weeks ago*

Everyone should keep in mind that if the Arrow program continued and our military had these jet then our roll in the cold war would be much different. Canada would be seen as more of a threat to the Soviets, possibly making the situation more hostile then if we just continued with our "middle power" approach. The Arrow program would also leave less money for social services and infrastructure projects which most Canadians probably would not like.



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