

## SHUTTING DOWN THE AVRO MYTH

Thirty years after the Diefenbaker government scrapped the Arrow, its legend still flies. But the truth is not so pretty

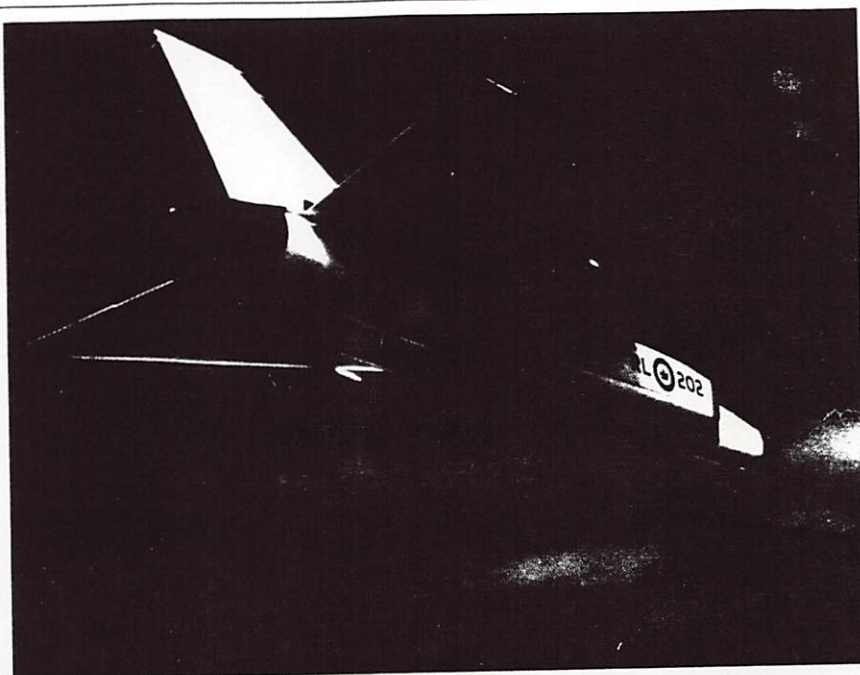
BY MICHAEL BLISS



Thirty years ago, on Feb. 20, 1959, Prime Minister John Diefenbaker announced that his government was terminating development of an all-Canadian supersonic jet interceptor, the CF-105, or Avro Arrow. The contracting company, A.V. Roe Canada, instantly terminated the jobs of 14,528 workers at its plants in the Toronto suburbs. The 10 existing Arrows were sold for scrap. The RCAF bought its next generation of fighter planes in the United States.

The Arrow still flies in Canadian mythology. Former Avro test pilots and engineers spread the word that it was just about the greatest aircraft ever made and that its death at the hands of an ignorant prairie prime minister was a national disaster. Some claim that when Dief shot down the Arrow, he destroyed Canada's greatest engineering and design team, gave away our world leadership in aerospace technology and doomed us to be insignificant players in the new world of high tech. The title of Greig Stewart's new history of A.V. Roe Canada and the Arrow tells it all: *Shutting Down the National Dream*. If only our politicians had kept the faith . . . think where we might be today. . . .

Historians have known differently for years. So does Greig Stewart, who seems to have labored for years (his interviews are 10 years old) to bring forth a rather anecdotal and confused history of Avro and its aircraft. At the beginning of *Shutting Down the National Dream*, Stewart adheres to the conventional Arrowdolatry of most of the



The Avro Arrow's design was superb but its production problems were never solved

old Avro hands he talked to. But at the heart of this book the reader finds a portrayal of A.V. Roe Canada as a horribly managed hothouse outfit that fattened on Canadian taxpayers' money without giving much in return.

It was born in 1945's victory-based euphoria, when enterprising Englishmen saw the chance to come out and help the rich colonials make planes for the postwar air age. The old-country carpetbaggers who launched A.V. Roe Canada as a subsidiary of Hawker-Siddeley Aircraft were willing to try their hands at anything the Canadian government was willing to pay for. Why not be first in the world with a commercial jetliner, for starters? As Roy Dobson, the

founder of A.V. Roe Canada, told one of the test pilots, "Canadians were keen, eager to get on with it, and the most ignorant lot you'll find anywhere."

One of the keenest Canadians was C.D. Howe, "Minister of Everything" in the King-St. Laurent governments. Howe believed that with the right amount of government help Canadian industry could lead the world in high-tech manufacturing. But he quickly began to lose patience with Avro's helter-skelter management, its design problems and its quest for ever-sweeter cost-plus deals. Avro did get one prototype of its C-102 Jetliner airborne in 1949, years ahead of American manufacturers. Avro tried hard to sell the plane.



Airline companies were jostling fiercely for competitive advantage in the skies, but not one of them – not a single one – judged the Jetliner to be commercially viable. Even the Canadian government's own airline, Trans-Canada (later Air Canada), despite tremendous pressure from Avro and Howe, rejected the plane. The Avro Jetliner was a flying white elephant, winging high and fast on the steroids of government money.

Howe finally ordered Avro to abort the failed Jetliner because it was so far behind on its other major commitment, a jet fighter for the Royal Canadian Air Force. Production of the CF-100, Stewart writes, was plagued by "management problems, aircraft redesign problems, engine production problems, resources committed to the unsellable Jetliner, and the simple fact that A.V. Roe's expertise was primarily design and development and not production." As the company frantically reorganized at the top, redesigned defective planes and begged for more money, Howe became increasingly pessimistic about Avro's prospects. The CF-100, known as the Canuck or "Clunk," was finally mass-produced for the RCAF. It was late, expensive and not very popular and it had a poor safety record. The only other air force to buy it was Belgium's – with U.S. and Canadian money.

C.D. Howe knew too much about Avro to be very hopeful about the CF-100's planned successor, the Arrow. After 1951 the company was run by one of Howe's wartime whiz kids, Crawford Gordon, but Gordon was descending rapidly into uncontrollable alcoholism and irrationality (while trying to sell the Jetliner to Howard Hughes, he deliberately urinated all around Hughes's executive washroom, everywhere but in the toilet; to Diefenbaker, Gordon was, according to a witness, "rude, incoherent, like a person demented"). Through the 1950s Avro mushroomed wildly into a single-company Canadian military-industrial complex, fueled by taxpayers' money and the media's naive optimism. As early as 1952 Howe told the House of Commons that the government's Arrow commitment "gives me shudders." Howe's doubts were overridden by other ministers' nationalism and by the empire-building of the RCAF, some of whose senior officers retired to lucrative jobs at Avro.

By 1957 the government had had enough. Avro had no non-Canadian customers for the Arrow. It seemed complete-

ly unable to design and make planes that could be sold to anyone at competitive prices. With a defence budget becoming increasingly unbalanced in favor of the RCAF, Canada simply could not afford to carry on with a Canadian plane that would be at least six times as expensive as the American alternative. The Liberals would have scrapped the Arrow had they won the 1957 election. "There is no doubt in my mind that the CF-105 should be terminated. Costs are completely out of hand," C.D. Howe wrote Lester Pearson, advising him to criticize Diefenbaker for not having cut his losses sooner.

Avro launched a few Arrows into the skies early in 1958, but the frames were never matched with the Canadian-made engines or the complex control systems planned for them. Hardly anyone in politics, the armed forces or the media was surprised by the government's final termination in 1959. Except for Avro's publicity hacks and the employees who worked honestly and hard to make the plane fly, the Arrow had few friends.

Without realizing it, Stewart reinforces

the Diefenbaker government's view that the mass layoffs were a final act of irresponsibility and blackmail by a company that had ignored ample warning of the coming termination. After trying to intimidate the government with its layoffs, Avro quietly rehired more than a third of its workforce for winding-down operations. Quite a few members of Avro's "Canadian" engineering team went home to Great Britain.

Avro had made no progress in commercial aircraft production and had nothing on its plate to replace the Arrow. Throughout the 1950s its staff had toyed with fantastic designs for Avromobiles – vertical takeoff (VTO) craft that would hover and zoom like flying saucers. There could be Avro-cars, Avrotrucks, Avrowagons and Avropelicans (a bomb-carrying antisubmarine aircraft). In 1959, Avro executives tried to interest the government in funding a Mach 3 VTO strike attack bomber based on this principle. In case Canada wanted to join the space race, they also had a plan to launch a satellite from an Arrow. It was near lunacy. Only dreamers and fools would have given Avro more money. The





aerodynamics of the VTO craft proved impractical at altitudes above four feet.

*Shutting Down the National Dream* ends abruptly with the fall of the Arrow. This is unfortunate, because the plane became more influential in myth and memory than it had been in reality. The Diefenbaker government had not told the public about Avro's incompetence and the high cost of its airplanes. Instead it justified its decision with the argument that manned interceptor aircraft in general, and the Arrow in particular, were obsolete in the age of the guided missile. The foolishness of this judgment helped feed the monstrous Avro myth, which was also stoked by former Avro employees and starry-eyed aircraft buffs, creating the legend of amazing aircraft destroyed by bumbling politicians, who were secretly manipulated by the evil Americans. And there was the parallel legend of the valiant Avroworkers who lost their jobs and their futures when the government of Canada showed so little faith.

Because politicians and the media believed this nonsense, Canadian governments became terrified of being on the

wrong side of high technology. The lesson of the Arrow, said the engineers and all those cocky science types (and the promoters around them), was that global technological leadership was just a matter of faith, hope and more subsidies. And we don't dare throw talented people – no matter how mobile they are in reality – out of work.

In the next 30 years Canada thus became a world leader in Canadian-designed nuclear reactors that no one wants to buy, rusting heavy-water plants in Nova Scotia, distinctively Canadian computers (the Hyperion) and videotex systems (Telidon) for which there are no users, Bricklin automobiles in New Brunswick and hydroponic cucumbers in Newfoundland. In energy, Dome Petroleum took off to become the Avro of the 1970s. In the skies, Canadair's Challenger eventually cost us more than 10 times the losses on the Arrow.

Fortunately, the people who had been closest to the Arrow did learn important lessons about high-technology nationalism. In the late 1950s our defence planners sobered up and realized that Canada could not go it alone in military procurement. A

small country had to specialize and integrate its manufacturing capacity with that of its allies. Under the Defence Production Sharing Agreements with the United States, Canadian defence industries have done reasonably well in a continental market. Our armed forces have been re-equipped at reasonable cost. Other countries, including Britain and France, have since paid a high price to learn what the Arrow taught Canada about the limits of national dreaming.

It's time to bury the tarnished, unhistorical, untrue myth of the Avro men and their flying machines. Diefenbaker's pricking of Avro's fantasies was one of his government's most responsible acts. If A.V. Roe Canada had been allowed to stumble on to the present we might now be spending billions on its brand-new, nuclear-powered, world-class, all-Canadian AvroSubs. Guaranteed to dive at least four feet. ♦

*Shutting Down the National Dream: A.V. Roe and the Tragedy of the Avro Arrow*, by Greig Stewart. McGraw Hill Ryerson, 304 pages, \$25.95.

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