

A revisionist perspective on the Avro Arrow

Twenty-seven years ago, on this day, the new Progressive Conservative government of John Diefenbaker made its first tough decision. Soaring costs had made the Avro Arrow too costly for Canada. A party that had condemned the previous Liberal government for extravagance had to show an example. The glamorous fighter airplane, taking shape in the hangars of A. V. Roe at Malton, was a good place to start.

The evidence is that if the Liberals had won the 1957 election, they would have come to the same conclusion. Even the original pricetag for a Canadian-designed supersonic fighter, \$2 million each, had seemed staggering. (Canada's current fighter, the CF-18 Hornet, costs \$62 million!) By 1957, constant changes in airframe, weapons and control systems and in the engine had boosted the Arrow's price to \$8 million each. If design costs were factored in, the real price was closer to \$12 million a plane. No foreign country wanted the Canadian plane, and a worried Ottawa had cut its own order by two-thirds.

The first Diefenbaker decision was suspended for a few months to allow a last, frantic round of marketing and testing. Nothing changed. On Feb. 20, "Black Friday," the Arrow project ended. In a few minutes, Avro's Crawford Gordon had fired 14,000 workers, among them the cream of Canada's aeronautical engineers. The government sent wrecking crews to demolish all three Arrow prototypes and more than 30 partially completed models. Except for a few blueprints and parts smuggled out by bitter employees, the Arrow was gone.

What remained was a glittering memory. Among air-minded Canadians, the Arrow is the great might-have-been. Its technologi-



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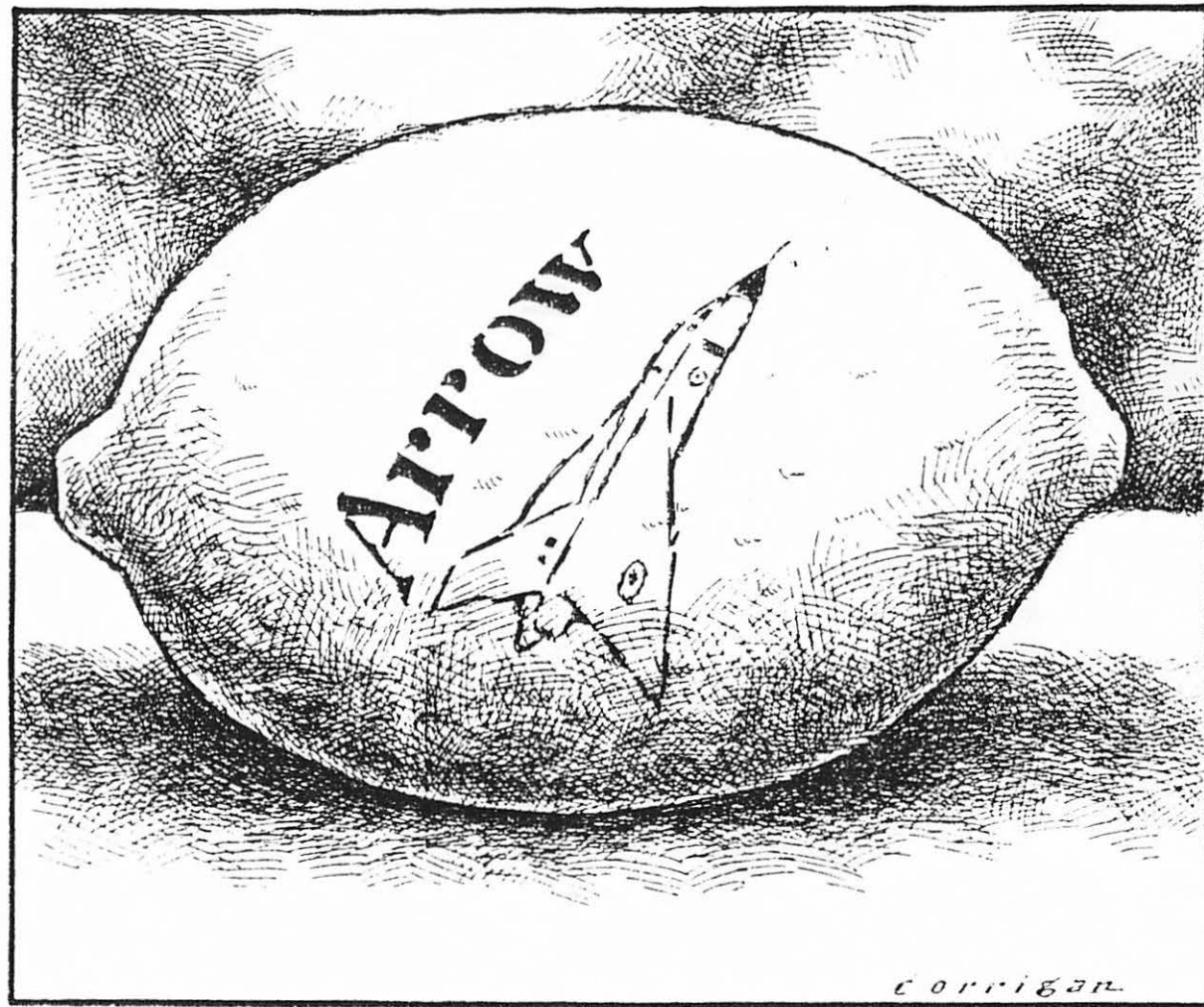
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cal perfection fell victim to mean-minded politicians. Books, newsreel footage and plastic models have preserved the Arrow as proof that Canada was once a contender in the top aeronautical leagues. With its Mach-2 speed — twice the speed of sound — the Arrow would still be a first-line fighter in the 1980s. Instead, Canadian flyers had to be content with the CF-101 Voodoo, a fighter relegated by the Americans to the Sunday warriors of their Air National Guard.

A lot of people never forgave John Diefenbaker for the Arrow decision. It was no comfort at all that some of the brilliant engineers released on Black Friday later helped the United States send men to the moon.

What no one has ever been able to admit was that the Avro Arrow was a fatally flawed weapon, on a par with those earlier monuments to our military-industrial blundering, the Ross rifle or the MacAdam shovel.

Part of the Arrow's secret for reaching Mach-2 was the discreet location of its weapon system. Other fighter aircraft, then and since, carried rockets and other weapons suspended from their stubby wings. The Arrow saved itself from the resulting problems of weight and drag by stowing its air-to-air missiles neatly in its belly. When the big fighter intercepted a suitable "bandit," its



pilot would lower the rocket pack and blast away.

The problem of such a design would be instantly obvious to anyone who has ever stuck a hand out of a car window while travelling the highway at, say, 100 kilometres an hour. Think of the strain of lowering a bulky piece of hardware into a 2500 kilometres-an-hour slipstream. Anywhere this side of the stratosphere, the result would be metal-rendering.

For all its sleek technological

excellence, the Arrow was a peace-lover's ideal weapon: it would self-destruct on use. Indeed, an attempt to deploy the weapon system explains the otherwise mysterious mid-flight crisis during one of the Arrow's later tests.

Some fine aircraft have outlived initial design flaws. Imperfect weapons can have special uses. Canada's notorious Ross rifle was still used by snipers during the Korean War. A thorough

re-design of the Arrow's wings might have made the plane into a fighter again, at some cost in speed and range. Instead, for reasons that now seem more persuasive, the government chose to cut its losses. Politicians, our professional scapegoats, took the blame for aborting a design whose imperfections should have been obvious to a first-year engineering student.

Only in Canada, you say? No such luck.