

April 30, 1959

We have collected some information for you on a subject which has been much discussed across Canada recently. Unfortunately, for the past six months or more, it has been difficult to sort out actual facts or expert opinion on this subject, at least in the popular press, or from public statements. There has been a great effort made to suppress them, or submerge them in a mass of uninformed or deliberately misleading statements.

There is, however, so much information available from various sources, that it has been impossible to include all of it, because of the time and space it would require. We do believe that the facts which we have included in this letter and the opinions of many people who know this subject well, along with some obvious conclusions, may help you to a better understanding of what is involved. It may also help you to analyze and assess the ambiguous and conflicting statements which have been made, and are still being made even now, in the news, and by our Government. As we have tried to point out, this particular affair is only a particularly disastrous result of a policy which ultimately affects the whole future of Canada.

We have not approached anyone for help in this study and have had to rely on our own available facilities for collecting information. It has taken longer to prepare than we had hoped. There is still much to be told which cannot be included at present. But with new evidence accumulating almost daily, we do hope you will find it useful as a background of information.

Yours sincerely,

BEHIND THE SCENES THESE MEN

In the world of legal sleight-of-hand, it is an old trick to accuse the other side of using certain methods. Then while the jury watches the other side carefully for any sign of such tactics, you yourself can proceed to use them with impunity.

Since September, a howling lobby has swept the country from coast to coast. It has included, with few exceptions, every newspaper and magazine in the country, and TV and radio programmes. The type of attack and the reasons behind it are unprecedented in this country. Few people have stopped to ask what was behind it, or to question its contradictions and inaccuracies.

Before it had said a word in public, Mr. Diefenbaker labelled Avro a 'lobby', and diverted the public from watching the real lobby swing into action. Because of this mass of propaganda, TV programmes, newspaper and magazine editorials, many people have assumed that the decision on the Avro Arrow must have been a correct one. They have ignored the factual articles tucked into the news columns which disproved the attacks, the mis-statements and false conclusions in the editorial columns. They have listened to Mr. Diefenbaker moaning piteously on TV that 'no one will ever know the pressure which has been brought to bear on us', but they are not told of the un-answered questions in Parliament, asking him what 'these pressures' were, what his policies were, why he has lied, twisted and distorted the facts, and suppressed the most important information, some of which is now being revealed.

They do not know that one newspaper cancelled the daily column of an outstanding writer who tried to tell the facts behind this campaign, and did not carry it again until all reference to the Arrow was dropped. They do not know that every newspaper in the Toronto area, except one, refused to publish letters contradicting only the most obvious lies given out by the Government and press.

They did not read articles by such writers as Harold Greer in the Toronto Globe & Mail, but they did read and believe front page editorials in the Toronto Telegram by John Bassett, entitled 'The Truth About the Arrow'. (Mr. Bassett claimed that his articles were the result of 'much careful research' from authoritative sources, yet they contained the most ridiculous errors in the simplest facts.)

They do not know that the newspapers fully quoted every emotional speech of Mr. Diefenbaker against the Company and the Arrow, every statement of Mr. Pearkes regarding defence requirements, no matter how contrary to all known facts, but scarcely mentioned the facts, evidence and information given, and embarrassing questions asked by other members in Parliament. None of the questions were answered.

They do not know that Canadian military experts were warned to keep quiet, that the Government refused to listen to its advisers, its well-informed experts, and even labelled them a 'pressure group'; that instead of consulting his Canadian advisers on the best defence policy for Canada, Mr. Pearkes has consulted only with Mr. McElroy at the Pentagon in Washington.

They do not know that Mr. O'Hurley, our Minister of Defence Production, hasn't a clue as to what goes on in his own Department, that six of the most advanced interceptors in the world are cut to pieces with torches on written orders.

from his Department, and ten days later, Mr. O'Hurley has not been informed of it (he said). He excuses his lack of knowledge of anything connected with defence production on the grounds that it is 'a long distance from my former occupation of forestry and wild life conservationist'. (He was timber grader and local organizer for the Duplessis' Government in Quebec.) Everytime Mr. O'Hurley speaks, he is corrected by Mr. Pearkes. He hasn't stopped talking, but judging by some of his statements, he should.

They do not know that Mr. Pearkes, Minister of Defence for Canada, responsible for our military policy and requirements, apparently does not know a bomber from an airliner. (When he was touring the plant at Avro last fall, he was shown the big B-47 bomber which Avro was using as a flying 'test-bed' for the new Iroquois engine. The B-47 is the best-known bomber on the continent, the plane which is used by the Strategic Air Command, for whose defence Mr. Pearkes is installing Bomarc bases. Mr. Pearkes turned and asked seriously 'Where do they put the passengers?') These are the men who are supposed to be responsible for the defence of Canada, for the fate of interceptors like the Arrow, and the fate of 14,000 employees at Avro, and all the other Canadian industries involved.

As soon as Mr. Diefenbaker said Avro was a lobby, everyone began repeating 'Avro is a lobby', without the slightest shred of evidence to prove it, and quite oblivious of the howling lobby raging around them, which they were daily quoting. In spite of the unmitigated abuse of the press, and the completely false statements of the Government, Avro has answered publicly only twice, and by 'request'. After Maclean's initial attack of October 25, 1958, none of which was true, and the following series of articles by Blair Fraser, Mr. Gordon accepted their invitation to answer. It was a brief, unemotional statement of some of the facts, and of why he believed in the need for the Arrow. After Mr. Bassett's series of editorials in the Toronto Telegram, Mr. Smye was offered space to correct some of their false statements, with brief statements of the actual facts. Mr. Bassett followed that with further charges, repeating some of the false statements already made, and including one error too stupid for a school-boy to make. But he used these statements to prove to the uninformed public that we should never have built the Arrow.

Mr. Gordon's answer in Maclean's was enough to send Pierre Berton into a frenzy about 'pressure campaigns master-minded by the firm of Cockfield-Brown'. If this is the best Cockfield-Brown can do (wait for Macleans to offer Mr. Gordon some space in which to answer), it is no wonder the Conservatives have turned to the advertising firm of McKim, to handle their Public Relations. They do a much more fancy and free-wheeling job of propaganda.

In order to avoid even the appearance of pressuring the Government into any course of action, Avro even suppressed publication of a detailed and comprehensive study they had made of the use of interceptors in the Arctic, and of living and operating conditions to be met and solved there. This study is now being made by NORAD, for the use of the American F108 in the Canadian Arctic, some five or six years from now, if it is ready by then.

Everyone now has an 'opinion' on the Arrow, and defence, but few have much information. Few people know the main sources of this campaign, nor of the powerful forces behind it. It is still difficult to see how so much of our 'free' Canadian press was persuaded to go along with it. It is, however, very clear that our Government joined it for several reasons.

Mr. Diefenbaker had a serious political problem. In a short time, he had gone through the Liberal surplus, and gone deeply into debt. A large addition to this debt was the huge gift paid off to the investment houses, insurance companies and banks, through the conversion loan - a totally unnecessary burden loaded onto the taxpayer. (It has been suggested in the press that this was a return for campaign funds donated for two expensive campaigns; that we have had to pay for being persuaded to vote Conservative. McKim's fees are probably high.) Mr. Diefenbaker could not face the electors with this debt load without making some magnificent gesture at saving money for them. He could not cut welfare costs since they affected everyone. Subsidies to provinces, grain-growers, dairy-farmers, and transportation, were also touchy, and would not have been so spectacular. The hundreds of millions being spent on Navy destroyer escorts, and Argus planes for the Navy, is seldom mentioned, even though the cost of the ships has gone up far beyond the original estimates, due to changes and improvements (the same situation for which the Arrow was so bitterly attacked.)

But there was the CF105, the one part of our defence costs which we were spending in Canada, which had received the most publicity and acclaim from abroad, which everyone could see. One could roll out nice, round figures of hundreds of millions saved. You didn't have to mention that this had been and would be spread over several years; you didn't have to mention how much of this money came directly back to the Government in taxes from the industry itself, so that the rest of Canada had to pay less than 40% (the Financial Post said 35%) of the cost of planes purchased in Canada, instead of the 100% for foreign purchases; you didn't have to mention how much industry, earning power, industrial growth of every kind - even a growing export business, - would be lost; you didn't have to mention what it would do to the flow of 'skilled immigrants' Canada has been told she needed 'so badly', now being attracted to Canada for the first time, because of this new climate of industrial research, growth and development, sparked by one such industry. You didn't have to mention what it would cost us to suddenly terminate the contract, or to buy equivalents outside the country, if we could; or that it wouldn't really save us anything at all.

This was a subject few people in Canada knew anything about. They would believe anything. Mr. Diefenbaker is a smart politician. He knows that the public pays little attention to expert opinion, military or economic; that they are not much interested in anything which does not concern them or their particular area, directly. They are not interested in facts, and 'can't understand this talk of planes and missiles' anyway. They are more influenced by oratory or emotional appeal. And if you tell them you are 'saving money' they will join the band-wagon, and never ask what they are losing. From a political point of view, the Arrow was the perfect sacrifice.

Judging by the conversations and statements of other members of all parties at Ottawa, they were very badly informed themselves on these matters. If we are to judge the Government itself by its public statements, its contradictions, its refusal to answer any questions in the House, one could assume that they were even more badly informed, or that they cared nothing for verity.

Our Government and our press have claimed that this was a 'purely military decision', decided on the basis of our defence needs, our defence policy, and our overall economy; that it was good for the country as a whole; that it would be cheaper and better to buy American defence equipment. Our Government has gone further. They have said: that they were not responsible for the dislocation of the

industry; that they suddenly terminated the contract because the Company was a 'lobby'; that the Company closed to 'embarrass the Government'; that they knew money was available to continue (for what?); that they should have had alternatives to take up the slack; that the Government had done its best to consult with the Company in a responsible manner; that the Government had arranged with the U.S. Government to integrate and 'share' our mutual defence production; that this would be cheaper, would keep our factories busy, and retain our technical and design teams; that they were paying half the cost of retaining a thousand of these people for six months; that they were setting up a research board, and so on.

The available evidence makes nonsense out of every one of these claims. It points to quite different and less honourable reasons for this campaign. It indicates that the forces behind it are not operating for the benefit of Canada, - far from it; that Avro and the Arrow represented a type of development in Canada which threatened these interests, and which must therefore be destroyed. The arguments used were unimportant as long as they accomplished the purpose. It presents an indictment of our Government and of our press. It implies that the rest of us are not very intelligent, and are very easily fooled.

No 'military decision' was ever made in a stranger manner! When the U.S. Government, and others, have to make decisions on military procurement, a sub-committee is appointed whose business it is to hold hearings, find out all the facts available, and assess them. Every expert is called and asked to present all the facts within his field, and he is closely questioned on every aspect of his evidence. This is now being done in the U.S. General Partridge, the American Chief of NORAD, the North American Defence Alliance, of which Canada is a part, has just concluded several days of testimony before the U.S. Senate sub-committee. As much of this information as possible is now being released to the American public, so that they will be well-informed. General Partridge said: "At the present time the Soviets can attack us only with bombers. Our intelligence estimates are that they will improve the quality of their bombers and in a few years will have a supersonic bomber force. This means that we must not only maintain the defences against bombers which we have, but must also improve them so we can counteract a supersonic attacking force." He also said: "U.S. interceptors under U.S. command are now supersonic, but the RCAF interceptor, the CF100, is 'of older design'." He stated also, "Bomarc are useless, except as 'point defence', and to protect SAC bases", and "Warning Radar (Dew Line and Pine Tree Line) are useless to identify an attack, or the type of attack". He said that they therefore need 'the most advanced interceptor available for the foreseeable future' for NORAD; (the requirements he listed were similar to those of the Arrow); that they will not have one available for several years, until the F108 is available; that the only one now available until then is, not the F106, never compared with the Arrow by anyone except our Canadian lobby, but the F101, whose speed and performance is far below that of either the Arrow or the F108.

An issue of 'Aviation Studies' published by S.B.A.C. in England, said last fall, that "Canada owes it to the free world to put into production the Arrow aircraft, the most advanced interceptor in the Western world".

It is interesting to note that these informed opinions, along with many others, are the exact opposite of statements made by our Government in order to accomplish their purpose of killing the Arrow. They confirm what Air Marshall Slemon, our Canadian Second-in-Command at NORAD, stated last fall, in reply to questions.

He stated that:

- (a) manned interceptors would be required for defence for the foreseeable future;
- (b) no interceptor to equal the Avro Arrow would be available anywhere for several years.

These were straight statements of fact, not of policy, nor of advice as to what the Government should do about it, but for this he was severely reprimanded. Why? Because it contradicted the mis-information the Government was using to mislead the public. Every statement, and much more, has since been confirmed by other authorities. But our Government has refused to listen to or consult with its informed advisers, much less to let the public know of their views. It has been publicly suggested that the Government recommended Air Marshall Slemon to the post of Second-in-Command to North American Air Defence Headquarters in Colorado, so that an army man, Gen. Fowlkes, could have a free hand in Ottawa, as Chief-of-Staff. One of the most expert and fully-informed Group-Captains in the Air Force has been banished from Ottawa to a distant post, because he privately gave the Government some hard facts which they did not wish to hear. For months, no one in the armed services has dared to say a word in public anywhere, on any subject. They have been warned to keep quiet, or else.

On a TV program, 'Close-up', to discuss for public information our defence needs, with particular reference to the Arrow, the panel consisted of two retired Army Generals, and one lone man from the Air Force who had to contend with a speech impediment. One of the Generals was, of course, General Simmonds, well-known as the longest and loudest-talking Army General in the country, his hatred of the Air Force and anything connected with it is well known. The results of this 'panel' discussion were predictable in advance. This is the kind of 'loaded' and 'slanted' opinion which has been given to the public to influence their opinions on this important matter - instead of the facts they should have been given, if they were to be forced to decide.

Instead of getting all known information from his military advisers, and all available informed authorities, from the point of view of 'Canadian' defence requirements, Mr. Pearkes has gone to Mr. Neil McElroy at the Pentagon in Washington. Mr. McElroy is quite rightly concerned with the defence of the U.S., not Canada. He will fit Canada into the pattern which best suits their defence, and their production needs, and their full-employment; choosing weapons which will keep American factories busy, bring income into the U.S., help bring down the cost of their defence purchases through home manufacture and large foreign sales; deciding war strategy which will best protect the U.S.A., but not at all necessarily Canada. After all, he is responsible to the American people. It would not be hard for the brilliant teams of Public Relations boys in Washington to confuse and frighten Mr. Pearkes with their huge array of missiles, planes, space projects, and talk of push-button warfare, and convince him that he, as Minister of Defence of Canada, was way out of his depth, and we had best leave it all to them. It is also quite certain that they suggested that Canada would be 'allowed' to produce the new picket plane for the Arctic, (what happened even to that deal we shall mention later). It would be easy to satisfy Mr. Pearkes that this was a fair exchange for the Arrow. You see, Mr. Pearkes does not know a bomber from an airline transport. He could not possibly know what was being accomplished at Avro, nor understand it, and what it meant to the country. He could not possibly know that we, right here in Canada were as

advanced as any similar group in the U.S., if not more so. He could not possibly understand the senseless vandalism he committed when he ordered eleven Arrows, and a complete production line cut up for scrap. The most charitable conclusion as far as Mr. Pearkes is concerned, is that he knew not what he did.

As for Mr. Diefenbaker, a lawyer may not know much about industrial problems, the value of research and development to the country, the time factor in the race for advanced defence weapons, the importance to the whole Western world of an advanced plane like the Arrow, the necessity for continuing manpower teams, the need for continued and intelligent planning far ahead of requirements, or any of the other factors involved, to say nothing of economics, present and future. But even a lawyer should know something about contracts. He should at least have read the very strict requirements and procedures laid down for both Government and supplier in the matter of contract fulfilment and contract termination. He should have the latest and most technical intelligence available on the important matter of Canada's defence needs. But the information he gives the public is quoted from the 'Atlantic Advocate', whatever that is, and the daily newspapers. So we are paying for two American Bomarc bases, (or at least for clearing the sites), to be under the control of the USAF, for the protection of their SAC bomber deterrent force; bases which they wanted so badly - to straighten out the kink in their line, that they would have paid for them anyway. They do not defend Canada. And we are now trying to decide which of their surplus or obsolete interceptors to buy to replace the interceptor we had, the Arrow, which we were told 'we no longer needed', because interceptors were 'obsolete'. This is scarcely a picture of a military decision being made by a responsible Government.

The facts behind the scenes regarding Mr. Diefenbaker's dealings with the Company are even more difficult to reconcile with his public statements. To make a major national decision for reasons of ignorance or of political expediency is bad enough. To add personal animosity is even worse. Mr. Diefenbaker particularly detested Mr. C.D. Howe and anyone who had ever worked with him. (It would be difficult to work with an Opposition, when another Government was in power.) There are many stories of his particular dislike of Mr. Crawford Gordon. Mr. Gordon once opposed him while he was in the Opposition, and they had a violent disagreement. We can only sympathise with anyone who would try to give to Mr. Diefenbaker any of the hard practical facts of life, no matter how true, if he did not wish to believe them. Apparently Mr. Diefenbaker neither forgives nor forgets, not even in national office. There have been persistent rumors for a long time of some of the ways in which this long-standing grudge has affected his dealings with the Company; that as soon as he could do so, he was going to hit them hard. It is hard to believe that the head of a Government would let a personal animosity influence decisions affecting thousands of people and the country as a whole; that he was so determined to ruin this Company that he ignored all warnings as to the consequences; that anyone, in any position, who warned him, or opposed this action, or tried to inform the public of facts, was called 'pressure' and fell under his displeasure. But nothing else can explain the policy he has followed since last September. Certainly it was guaranteed to cause maximum confusion and uncertainty, so that the Company would be 'wrong' no matter what it did. Certainly he suddenly chopped the program in February in the most vicious, irresponsible and vindictive manner possible, without consultation or warning.

Mr. Diefenbaker would have us believe that he gave these defence problems long and thorough study, that he considered every alternative, that he tried to consult with the Company as to alternative programs to relieve dislocation as far as possible, that money was available for an orderly slowdown, that every effort was made to retain technical teams, that he had persuaded the U.S. to share defence production, that any unfortunate results of the cancellation were the fault of the Company. As we said, Mr. Diefenbaker may know nothing of industrial or defence problems, but he should know something about contracts.

The Company had separate contracts. One was for the design, development and production of 37 'development' aircraft. One was for a research and test program to be done with the first seventeen of these aircraft. This was a separate contract, having nothing to do with the cost of the Arrow itself. It was worth millions, both to us, and to other countries, who had not yet solved the problems it dealt with. If the design and development program was successful, if the plane met the requirements laid down for it by the Government and the Air Force, the Company then hoped to get a further 'production order' to turn them out in quantity for the use of our Air Force, and for sale to other countries who did not have similar aircraft. The 'development program' had been subject to yearly or twice-yearly review ever since it began. In these reviews, the program was checked for any necessary revision, and costs were closely inspected. Any change in cost had to be justified, even when it concerned only a piece of bought-out equipment.

When Mr. Diefenbaker made his ambiguous speech on September 23, 1958, he said: "The Arrow will not be ordered into production at present. It will be reviewed again on March 31st." He suggested that the bomber threat had 'diminished', and that we might therefore need fewer interceptors than we had anticipated earlier. That was all. He then took off for a trip around the world - not to Washington to seek alternative defence contracts, as he should have done, if he had meant that the Arrow program was cancelled by this speech in September. No one in the industry or in the Air Force, or among the various suppliers, some of whom had members in Ottawa almost constantly, interpreted this statement as anything out of the ordinary. Neither did the newspapers, immediately. In December, the Toronto Globe & Mail said: "As a matter of record, no decision has been made to dispense with the Avro Arrow. Mr. Diefenbaker's announcement of September 23, said its development would be continued until next March 31, after which a final decision would be made." As late as February 5, 1959, Clark Davey, from Ottawa, said: "The future of the Arrow is as much up in the air as before the 1959-1960 estimates were tabled". After the speech of September 23, there was some editorial speculation in various newspapers as to just what Mr. Diefenbaker meant, but no definite conclusions, - until Maclean's issue of October 25, 1958 hit the newstands. It contained a vicious editorial, (following up an article by Blair Fraser) scarcely a single statement of which was true, or based on facts. This seemed to be the signal which let loose the howling press attack all across the country. As more and more newspapers fell into line, the lies, distortions of fact, and deliberate suppression of information grew in volume, until it resembled nothing previously seen in Canada except a violent election campaign.

In the atmosphere which followed the attack by Maclean's magazine, Mr. Charles Grinyer, head of the Engineering Division at Orenda, tendered his resignation to the Company. Within fifteen minutes, Mr. O'Hurley, Minister of Defence Production, was on the phone from Ottawa. He begged Mr. Grinyer to withdraw his resignation, to go on and finish the job. Mr. Grinyer said he could not work any

longer for the Government under these conditions; that he could not ask his men to stay and use their very competent brains on work which was going to be wasted. The assurances given him by the Government were so convincing that Mr. Grinyer withdrew his resignation. The next morning he called together all his supervisors, told them of the assurances given him by the responsible Ministers of the Crown, and asked them to stay, and to persuade their men to stay. What do you think Mr. Grinyer could say to these men on February 20th? Mr. O'Hurley, of course, did not have to face them.

In November, other officials of the Company went to Ottawa to ask about going ahead with alternative projects; to release men from the Arrow contract to go to work on alternative work. They were assured that the Arrow had not been killed; that the 'development contract' for 37 aircraft, and the 'research and test program' were not in question; and that they would probably get a production order for at least fifty aircraft. (It was well-known in the industry that this was the minimum that the Air Force had asked for, so it sounded logical.) It has been stated that this assurance was given to the Company by at least four Cabinet Ministers, including the Acting Prime Minister.

Also, in November, after the Government had cancelled the Astra-Sparrow development program with RCA in Montreal, Avro was given a contract to obtain and install the alternative Hughes missile and fire-control system now available, and to make the necessary modifications in design to accommodate it. This was what Avro had wanted to use ever since it had been available. The Astra-Sparrow program was a costly one, done at the request of the RCAF - and with the backing of the USAF - for what were very good reasons at the time. Avro had been told to design the Arrow about this equipment. This represents only one of the many costly delays and changes in requirements from the Government and the RCAF, about which Avro was helpless, but which had added to both the time and cost of the Arrow. With this new directive in November, at what time were they to assume the contract was cancelled? The previous September? Incidentally, none of the Hughes MA-1 fire-control systems had been fitted to any Arrow aircraft at the time the program was cancelled, nor had they been in Canada. The empty 'boxes' had been tried for size, and then removed, pending completion of structural modifications. Yet when photographers were refused permission to photograph Arrows which workmen had been cutting up for a week, with torches, Mr. O'Hurley said "No Arrows are being cut up. We cannot allow photographs for 'security reasons'. These planes were fitted with the secret MA-1 fire-control systems". As we said, Mr. O'Hurley (Mr. O'Hurley's Department was responsible for the MA-1 system, as well as for the destruction of the aircraft.)

Still later, officials of the Company wrote Ottawa and made appointments, to try to arrange alternative projects, and an orderly slow-down, if there was any chance of the Arrow being cancelled. Five times in one week, they were given written appointments. Five times they went down to Ottawa and back. Two appointments were broken before the time set. Three others were cancelled after they had waited hours in Mr. O'Hurley's office. They went down again on the Saturday. This time they saw a man from the Department, not the Minister. He, of course, had no authority, and could tell them nothing. Probably Mr. O'Hurley hasn't either. But Mr. Diefenbaker says 'no one from the Company contacted the Government or tried to see them'. And the public believes it. When asked in Parliament whether or not the Company had been consulted before the cancellation, Mr. Pearkes said merely: "Members of the Company have been in Ottawa on a number of occasions".

He did not answer the question (he never does) nor did he say all appointments had been cancelled, time after time.

What the Company had been told in September - by the Government, not from press reports - was to get the price down by installing the MA-1, and speed up the delivery date, to facilitate getting a 'production contract'. This was confirmed in November and December by Cabinet Ministers. Therefore, in spite of the press campaign, the Company was working at top speed to fulfill their contract with the Government, on final work on the Mark 2, modifications for the MA-1, and the installation of telemetry equipment on the sixth, seventh and eighth aircraft, for the research and test program. Everyone knew that March 31 might tell them that there was to be no 'production order', but completion of the development contract and test and research program would ease the slow-down on the Arrow, and the speed-up of alternative programs. The first Mark 2 Arrow had been fitted with the new, powerful Iroquois engines, and was ready to roll out to Flight Test to begin flying within days. It was fitted with masses of delicate test equipment for checking every phase of engine performance and flight characteristics at various altitudes and speeds. Everyone expected that it would easily break the world's speed record. Even the Mark 1 had almost done so without trying.

Into the midst of this atmosphere, came the sudden cancellation of February 20th. There was no advance notice, no warning, no consultation. If proof of the latter is needed, the first intimation the Company had of the contract cancellation was a phone call from the wife of one of the men, who had heard it on a news broadcast. Even the Government representative of the Department of Defence Production at Avro, had to contact Ottawa in order to find out if it were true. He was stunned. There had been no prior information or consultation, no prior permission given to the Company to release men for other projects, nor any consideration of these projects (in spite of the impression the Government has tried to create). After eighteen months in office, the Government had no defence plans in existence, no alternative contracts, no integrated 'sharing' of defence orders with the U.S. promised so often and so glowingly by the Government, and which should have been arranged by then, if ever, to go into effect at once, to retain the men it had taken Canada so long to acquire, and the know-how we had been told so often before that we didn't have.

Not only was the 'further production order' killed, but also the existing 'development contract', and 'research and test program'. Absolutely nothing was left for the Company, not even a request from NATO for modifications to the CF100. That also had been completely ignored. Only the small contract for CF100 repairs, and the U.S. contract for the Avrocar were left, and no one knew how much work would still be done on those, nor who would be kept on for these small jobs. They could certainly not absorb more than had been working on them, certainly none of those who had been working on the Arrow project. It would just be a matter of re-shuffling to keep those most needed. This would have to be sorted out, in the light of the sudden developments. For very good and sufficient reasons, the Company was forced to terminate all employment and close, at least temporarily. It is significant that those most affected, who would suffer most from this series of events, those who worked at Avro, did not blame the Company. Even a floor-sweeper at Avro knew more of what was involved than Mr. Diefenbaker seemed to know.

Nearly two hours after the announcement had been made public, the Company received its first notification from the Government. This was a telegram which said,

following the form of all such terminations: "You shall cease work immediately, terminate sub-contracts and orders, place no further sub-contracts or orders, and instruct all your sub-contractors and suppliers to take similar action". Even if the Company had ignored the terse order of the first sentence, they could not have charged to the contract one hour of work after that time. And they would still have been obligated to pay the three weeks' termination pay. In two hours, one man, by telephone, cancelled all the sub-contracts they had placed in the past five years.

As we said, Mr. Diefenbaker should certainly know about contracts. Government contracts are standard forms. So are terminations. However, when the Company closed, Mr. Diefenbaker suddenly became alarmed. This might be a political 'boomerang'. So he turned on the Company and accused it of closing down 'in order to embarrass the Government'. As Mr. Hellyer said in Parliament: "The Prime Minister did not anticipate the extent of the consequences of the short circuit which he caused by pulling the switch on that Friday morning. He seemed to be hurt as well as surprised". Apparently he believed the Company would absorb the shock of his inept bungling, and carry 14,000 people on its payroll for free, to save the Government the embarrassment of its own action - a Government which had refused to consult with the Company even with regard to alternatives. As a matter of fact, if the Company had tried to do so, it could have been infinitely more embarrassing for the Government. But what can fourteen thousand people do whose work has just been cancelled without notice - just stand there and look at it for two weeks, knowing that it is all utterly wasted? Or should they go down and watch the cutting torches destroy in a matter of days, the outstanding and record-beating products of seven years of effort and achievement?

The reports of the number called back the following week, were of course, grossly exaggerated by the press, as was all other information. Outside of accounting, auditing, payroll and personnel departments who were working around the clock to ease the personal problems of the employees, there were very few around, except to pick up their books and equipment, or register for unemployment insurance.

Mr. Diefenbaker also claimed, publicly, of course that 'Avro Firings were Needless'; that the Company knew that fifty million dollars was available - according to the Toronto Star, February 24. In the House of Commons, Mr. Pearson said that he had searched the estimates over the whole period, and could find nothing which allotted this money to A.V. Roe, for any purpose whatever. Even a termination contract has to be negotiated, and is a complicated - and much more costly - process. A lawyer should at least know about contracts. The penalties the Government must pay for termination of the contract would have been sufficient to complete the whole 37 Arrows, and the development and test program. Mr. Diefenbaker also announced that his Government was sharing the cost of re-hiring 1000 for six months. The Toronto Telegram on February 27, said: 'Government to share brains' pool cost. 3000 Avro jobs for six months. Recall 1000 Engineers!' There never were more than three or four hundred engineers at A.V. Roe. By the time a small percentage of them were recalled many had gone to the U.S. Of those who remained, six months' make-work on nebulous projects did not look very interesting or sure compared to the work they could do on interesting projects in other countries which did not treat their leading industrial and research establishments in this day and age, as Canada does.

Mr. Pearkes made a most illuminating statement in Parliament regarding the termination. He was asked whether he or any officials of his Department had seen

the officials of the Company before the announcement made on the Friday, to give them some warning that this announcement was coming. Mr. Pearkes answered as follows: "The officials of the Company have been in Ottawa within the last two weeks. They had seen 'the report in the press' which had been put out, the statements by the officials of my Department which were 'reported in the press' when the estimates were tabled, clearly showing that there was enough money either to continue the development or to cancel it. There was no hesitation. There was no attempt to confuse anybody. It was clearly stated that both were possibilities." Well, it may be inexcusable, but this layman must be pardoned for being confused. Perhaps it is just as well for Mr. Pearkes that he chose the Army for his career, so long ago. He would have been in a pretty mess if he had cancelled his contracts in industry on the basis of such statements as the above.

To justify what they have done, the Government has tried to put off on the Company all the blame for the mess, ignoring every circumstance of contracts, time schedules, manpower availability and alternative projects.

- They said the Company had no alternatives. But they had refused to discuss any of several the Company had under study, or to inform them that they could release men from the Arrow program for other work. The Company was 'under contract' to finish the Arrow program within the time specified, until notified officially that it was cancelled.
- They did not mention to the public that the 'development contract', and the 'research and test program' had not been threatened with cancellation; that only a further production order was under consideration. With this, an orderly slowdown would have been possible, and a speed-up on other work, if given approval.
- They said the Company should have known from 'Press Reports'. Since when have companies been able to cancel contracts on the basis of press reports? Would they ever get another contract if they did? Anyone trying to decide his contractual obligations on the basis of all the hysterical articles in the press during the past six months or more would have suffered a mental collapse.
- They said the Company should have known six months or even a year ago, that the Arrow would be cancelled. But Mr. Pearkes himself said in the House of Commons on March 2, to justify the official confusion, that the decision depended on answers from Britain and the U.S., and he himself 'did not have the final answer until a few weeks ago'.
- Mr. Diefenbaker now says that he 'told the Company in September' (now that the press has convinced the public that this was so.) But what he did tell the Company in September was: 'get the cost down, speed up the completion date, and a production order will be possible.' This the Company proceeded to do. Would any sane Company drop seven years of outstanding effort so near to completion, on that information, or on the basis of conflicting press reports?
- They said among other things, that the 'cost had gone up too much', that 'we couldn't sell it', that the Government had nothing to do with the dislocation to the industry, and that the Company 'should have had alternatives'. We give the evidence on these points also.

The costs quoted by the Government were widely inaccurate and contradictory. They included costs never included before, in any country, in computing the cost of comparable planes. Although the Company gave them a written price guarantee last October, they concealed this fact. Even after they were forced to admit this guaranteed price in Parliament, they continued to give the public higher figures. We are now finding out that to manufacture even the American F105, an inferior plane, in Canada, will cost more than to have built the Arrow. Computed on the same basis as American costs, the Arrow was a real bargain, compared to anything available.

With regard to rising costs due to changing requirements, it is interesting to read in the *Globe & Mail*, April 23, of the attitude of the Navy under similar circumstances. In the Commons Public Accounts Committee, it was admitted that 'the total cost of vessels built six years ago is not yet known'. The Auditor-General said he "has no criticism of the accounting procedures used by the Navy. The vessels cost more than originally forecast due to frequent changes in plans and specifications to improve the fighting qualities of the ships". He went on to say: "No good naval officer is worth anything if he is money-minded. The designer of a naval vessel wants the best he can get. The committee should temper its criticism with this in mind." Apparently, what is bitterly condemned in the case of the Arrow, and the Air Force, is good and admirable practice for the Navy, and never gets beyond the Public Accounts Committee, as a case for discussion.

The Navy destroyer escorts (small conventional ships only) cost \$26 million apiece. But the Conservative member from Halifax seriously suggest that we also build atomic submarines in Canada - in Halifax, of course. He says he suggests this because 'it costs this country \$300 million a year (to subsidize the Maritimes) and no Canadian saves anything by subsidizing the Maritimes. It will be better to help us up to our feet and let us make our own way'. By subsidizing the building of very expensive atomic submarines to replace the other subsidies! He says also: "We would build the (atomic) submarine in Canada, not for appearance's sake or for the sake of prestige, but in terms of useability". (sic).

This is a strange argument indeed to come from a man whose Party has just cancelled the Arrow, an advanced interceptor, ahead of anything comparable to the Western world, cheaper and better than anything else available, so useable that the U.S. and Great Britain are working on similar planes which won't be ready for several years, which NORAD and Britain say is needed 'now'; not duplicating any existing product, providing work in research, development and manufacturing in many fields, work not done anywhere else in Canada, saving the millions now being paid in 'unemployment insurance' and, even more important, keeping in Canada skills and know-how we had never kept or attracted here before.

But the following reasons were given, by his own Party, in the press and in Parliament, for scrapping that whole program and destroying even the existing planes: it cost too much for Canada; we couldn't sell it anywhere else; the U.S. had an equivalent (it didn't, as we now discover) and could build it more cheaply; there is no justification for producing defence equipment merely to 'provide employment, or subsidize' a region; we are not going to manufacture equipment in Canada simply for the 'prestige' of making our own equipment. We will discuss whether or not these statements were true with respect to the Arrow, in later sections. But we can think of no other reason for building atomic submarines in Canada, except for 'prestige' or to give 'employment'. Certainly, the cost of atomic submarines would make the cost

of the Arrow look like chicken-feed. Certainly, if we couldn't afford the Arrow because 'we couldn't sell it', and would not be able to use enough for ourselves, we couldn't afford to build atomic submarines. We couldn't use very many, even if the Navy were going to be the only service we had left, and these subs. their only equipment. We certainly couldn't sell them abroad, since both the U.S. and Britain are already far ahead of us on their own. They have the production facilities, and the know-how. We haven't it. In the case of the Arrow we had the production facilities, the know-how and five aircraft already flying, and 32 others partly built and almost completely paid for. But we were told we couldn't afford it. In the case of the submarine, other countries are far ahead. In the case of the Arrow they were far behind.

The Arrow was far more useable than the foreign planes we are now about to purchase; in view of all the available evidence it was badly needed, and we could certainly have sold it (anyone but Mr. Pearkes); it cost less than others now available; and there is no 'equivalent now available anywhere else'. The rest of the country is now paying unemployment insurance in the Toronto area. Metropolitan Toronto alone has voted \$2-1/2 million extra for relief. We will not, however, be paying it to the top-notch men who have gone to help build up the U.S. and their 'prestige'. But we will be paying far more for their products than we would have paid for our own, and will be getting nothing else in return.

Our Government is now agreeing to underwrite, for Canadair, our American-owned subsidiary, and for two American private airline companies, the cost of producing planes for them 'under license' in Canada. This will give us nothing but, according to the editor of the Financial Post, will cost every Canadian four dollars apiece. It will give no work to our research and design teams, in aircraft and electronics and related fields, whom we need so badly in Canada. It will give us no defence whatsoever, although the Chief of NORAD says our interceptors at present are 'of older design', and we need supersonic interceptors, the best available; that there is no such plane now available for several years, until the F108 is ready. And we will be subsidizing, not our own defence, nor the development of our own advanced interceptor which was badly needed by us and the whole Western world, nor our own research and design teams, but two private non-scheduled American airlines, and an American subsidiary of the same Company which owns Convair and other companies in the U.S. It is quite obvious that we can 'afford' anything and everything, no matter how expensive, nor how useless to Canada, except of course, the Avro Arrow.

They said we couldn't sell the Arrow, but they didn't tell us that Nato had requested us to re-equip our squadrons in Europe with high-level interceptors. The Arrow would have fulfilled very requirement of type and availability. (See Mr. George Bain's article in Globe Magazine, February 14). But Mr. Pearkes said "There is no SAGE in Europe, so we can't sell the Arrow to NATO". This was pure deception. He neglected to say that the Arrow does not depend on SAGE (ground control radar), thanks to its advanced radar equipment, and two-man crew, It can operate with it, if desired, but was designed to operate without it and far beyond it. His only purpose was to kill any thought of its sale to NATO.

'We couldn't sell it' but it was not yet in production. No one places definite orders for a plane not yet in production, with its own Government welching on it, afraid to go ahead with it. NATO's request was killed by Mr. Pearkes. How about NORAD, the combined forces for the defence of Canada and the U.S.A. headed by

General Partridge and Canada's Air Marshall Slemon? In October, 1958, they both stated that interceptor aircraft would be needed for the 'foreseeable future' and that the Arrow was 'at least five years ahead of any equivalent interceptor'. General Partridge stated 'We need the most advanced interceptor available for as far ahead as we can now foresee'. He said they would have nothing like what they need until the F108 is flying several years from now. He said 'There is nothing now available except the F101'. The Arrow had almost the speed and range and ceiling predicted for the future F108. It could have been modified to increase the range, if required. The F101 is far inferior to both. It is not difficult to see that NORAD would have demanded such a plane - if it had been put into production by our own Government.

The Company also had an inquiry from France regarding purchase of 300 Iroquois engines. The Company so informed the Government. The Government did not even acknowledge their letter.

An article in an American magazine 'Missiles and Rockets', April 27, 1959, says, with regard to new equipment for NATO: "The European NATO nations now realize that the big fighter (the American F105) fulfils their defence requirements". Since they depend on the U.S. for 'aid', it is not difficult, as the article not too subtly implies, to get these nations to 'realize' that they need an American interceptor. The F105 is as heavy as the Avro CF105, is being proposed to do the same job, but has only one J75 engine to do it with. The Mark 1 Arrow had two J75 engines. The Mark 2 Arrow had two newer, more powerful Iroquois engines, for added power, safety and speed of climb. We deal with this plane, the F105, under the subject of 'Integration' and what that word means to the American industry, and the Pentagon. It is enough to say here, that if it would satisfy NATO requirements, the Arrow would have done so even better. We could have at least used it for our own squadrons, who would require over a hundred planes, as well as for our own Arctic, where we need another hundred. Our Government is now considering the American F105, or the F11N, among others, for NATO, and USAF squadrons for Canada's RCAF bases. Why not the Arrow - a better plane, for less money?

It is not difficult to see from all of this evidence, so carefully suppressed by the Government, that there were very great uses and markets for the Arrow, and also for the Iroquois engine - if they had been put into production, had been flying, and had been backed by our own Government. A number of American reporters got the impression that they didn't try very hard to sell it, and wrote sceptical articles about their 'efforts', and the attitude of Canadians in general to the whole thing. Actually, the last thing in the world that Mr. Diefenbaker and Mr. Pearkes wanted, was for anyone to say right out loud that they would buy it. They did everything possible to prevent it. It would have been most embarrassing, since they were determined never to let it be produced.

Neither had they any intention of giving Avro any alternatives. This was borne out by Mr. Fleming's statements in the House of Commons. Also, NATO had asked that the CF100 be modified to extend its usefulness until an interceptor like the Arrow was available to replace it. Their request was completely ignored. This would have provided an additional, or at least alternative, contract for Avro, to take up some of the slack. Interviews to present other alternatives and proposals were cancelled.

Neither were they interested in the fate of the industry. A brief from the Air Industries and Transport Association, asking for information regarding Government intentions towards the industry, and warning them that the industry was running into serious trouble on all fronts, due to lack of any Government policy, planning, or consultation, was presented to the Government in December, 1957. It was ignored. When questioned in Parliament this winter, Mr. Diefenbaker pretended to know nothing about it, then that it was 'secret', until someone pointed out that it was in the Parliamentary library. It was never even acknowledged.

As for 'integration' of defence production, all they have obtained are a few radar sets for the Dew Line, a small contract for Bomarc 'wings and tails' for Canadair, the private 'non-sched-airline' plane for Canadair, the Arctic picket plane 'bait' which Canadair thought it would win, (the tenders have now been extended and specifications altered, so that Boeing can obtain the contract), the Nato replacement plane (we haven't got that contract either, although Germany has been given a contract to manufacture planes for NATO, and the U.S. is trying to talk the other European countries into manufacturing her F105, in bits and pieces all over Europe, under license).

It becomes quite clear, in the light of overwhelming evidence, that the Government was deliberately deceiving not only the public, but the Company, and deliberately putting it into an impossible position, in which it could take no action to save itself; so that, whatever course it took, could be used against it. This, of course, has been done with great success since February. However, to create the necessary public opinion to allow this to be done, it was necessary for the Government and press to grossly deceive and mis-inform the public. If they had had a good case for cancelling the Arrow, they could certainly have allowed the public to be told the facts, and to listen to the evidence of informed authorities. That they could not do so, tells its own story. The normal processes of democracy would have prevented them from carrying out this vindictive and costly blunder.

The contradictory, false and inexcusable statements which Mr. Diefenbaker and Mr. Pearkes have given to the public as justification for this action, imply that they are merely excuses to cover up the real reasons. The lack of concern both before and since, for alternative contracts, or for the fate of the industry, or of those who worked there, would seem to bear this out. The facts which have long been known to every informed person regarding the Arrow and its place in our defence, are now coming out. Now that the Arrow has been killed, even the press is publishing them. In the light of the facts, compared with the statements they made so loudly and so often, it will be a long time before these men can justify what they have done, and why they did it.

In the face of all the evidence to the contrary, the people of Canada were told the Arrow was obsolete, a costly failure, and money down the drain. They were told that we couldn't sell it, implying that no one wanted it, and suppressed evidence to the contrary. If the head of the Government of Canada has allowed political expediency and personal vindictiveness to influence such important decisions, if he has allowed a personal long-smouldering hate to drive him to hound this Company and kill the Arrow, the most advanced interceptor in the Western world, of which we were told we 'owed it to the Western world' to put it into production, it is a shocking indictment of responsible government. It has far-reaching implications with respect to its responsibilities at home, and its responsibilities in world defence. We present the evidence.

..... AND BEYOND THESE MEN.

There were of course, other, more powerful forces behind the scenes, which made possible this powerful and bitter lobby. Calling Avro a 'lobby' was a perfect smoke-screen to distract attention from the real one - an old trick - but still successful. It has become very obvious that the Arrow was not the real target at all, as far as these other forces were concerned. In fact, many people believe that if it had been produced by our wholly-owned American subsidiary, Canadair, under American license; (even at greater cost, as is the Navy's Argus), there is little doubt that it would now be in production. (The Government has been searching without success for a satisfactory substitute to be manufactured in Canada at a comparable price.) The real target was the Company - the only part of the industry which was doing research, design and development to any extent in Canada; which was helping to build up subsidiary industries, to design and manufacture in Canada everything from highly-specialized electronics equipment, to plastics, machine tools, new metals and alloys, and equipment of every kind. Many of these firms were former Canadian companies which had never before produced competitive, high-standard work, nor heard of working to ten-thousandths of an inch. Trained and assisted by Avro, they were now capable of skilled work and outstanding products. Many of them were, for the first time, becoming able to bid on foreign contracts. One, in Western Ontario, had just received an order for a \$300,000 contract in South America. Other companies were set up by newcomers to this country from Europe. One skilled tool-maker from Europe had spent hundreds of thousands of dollars to build and equip a plant in Hamilton to manufacture equipment. With an order from Avro to start, he planned to eventually expand and be able to handle many other types of orders. Others had come from the States to set up subsidiary industries and employ Canadians to not merely sell, but, for the first time, design and develop products in Canada.

When Avro began work on the CF100 and Jetliner, they could not even interest American firms to bid on equipment. Few of them could be bothered with an order from Canada. When those planes flew, they were asking to be allowed to bid. When the Arrow was begun, they sent up their top men to open up Canadian factories to design and develop equipment in Canada. We were beginning to receive attention and respect.

When the first Orenda engines were produced, 95% of the components had to be obtained from the U.S. When the last one rolled off the assembly line in the fall of 1958, 95% of its components were made in Canada.

Few Canadians know any of these things. Few of them have any idea of what a change this had created in Canadian industrial development in the short space of nine years, or of the favorable climate it was creating in Canada, to attract industry, and also to attract and hold the 'skilled immigrants' we were told Canada must have in order to grow and develop. There had been nothing to attract them here before. There had been nothing here to keep our own graduates either. For years we have been paying to educate them here, and then losing them at an appalling rate to the U.S., not only for better pay, but for the opportunity to do interesting and worthwhile work. Such opportunity did not exist in Canada. This export of our best trained and most highly qualified citizens has been a far greater loss to Canada than we could afford. Neither could we replace them with 'skilled' immigrants. The lack of industrial development and opportunity which forced our own men to leave, could

certainly not attract top-notch men from other countries to replace them. Slowly but surely this situation was beginning to change.

Many teams of research men, scientists and engineers had also been attracted here by Avro, to consult on highly specialized problems, to study what we have done in Canada. An Avro designer was the first man outside the U.S. to win the Wright Medal for Aircraft Design. Avro experts were the first ever invited from outside the U.S. to give papers at an American symposium, on aeronautical problems they had solved, and on time - and cost-saving methods.

This growth of all-Canadian industries, this recognition of Canadian ability in design and production, this growing prestige through outstanding industrial research, development and achievement, this climate of expansion and growth, creating our own products for our own markets, opening up foreign trade and export markets, using some of our raw materials at home, instead of shipping them out of the country, attracting to this country the industries and the highly trained men we are told we need, and keeping those we already had, would seem to be of unquestionable value to Canada, to its future development and growth. But, strangely, it was not welcomed in many quarters. We were told we were 'too small', 'too poor' to do these things for ourselves. Too small to grow! Too poor to use our own resources, our existing man-power and top-notch men, instead of sending them all out of the country! It sounds too incredible to be believed by so many people.

An article in the Globe & Mail, March 31, 1959, suggests a reason for this unprecedented campaign against everything Avro was doing, and everything it stood for. It states: "The two leading exporters of capital, the U.S. and the U.K. are animated by different motives involving different methods and producing different results. The U.S. seeks to create new raw material sources for its expanding fabricating industries, and new outlets for its own export surpluses. Great Britain seeks to create a more active flow of two-way trade." It goes on to show that the U.S. tends to set up subsidiary firms in other countries, only when necessary to avoid tariff barriers, but still keeping the business, profits, and know-how in the U.S. Also it does not encourage export trade from these branches in other countries, as it would compete with her own. There is, of course, plenty of evidence in Canada to support this.

For a long time, the far East, near East, and South American countries were staked out by the big powers as sources of raw materials, and markets for finished products. Any industrial development by these countries themselves was discouraged. These countries did not become very prosperous; they remained backward and primitive, developed few skills, and remained second-class nations. But the countries which exploited them became fat and wealthy, and developed highly-industrialized and highly-skilled economies.

Thirty or forty years ago, there were a great many Canadian-owned businesses, small, but growing. There were few American subsidiaries. We even developed a good deal of our own mineral wealth. Then the U.S. began running short of raw materials, having used up most of her own. She began looking to Canada. Having found that we would part with them easily, she has been taking them ever since. She also badly needs markets for surplus production in the U.S. American firms have been steadily buying out any business or industry in Canada which was sufficiently large or efficient to provide real competition. Some are simply bought

up and closed. Some are operated in such a way that they supplement the ups-and-downs of production in the American parent company. A very few, such as Canadian General Electric, do hire Canadians for top jobs, and even do some development work in Canada. But even this company has only one Canadian share-holder. All the profits go to the U.S. The directors of these companies are American, their policy is decided there. American industry has no intention of losing either this unlimited source of cheap raw materials, or this good market. We have now been staked out for this role, as India and China used to be. By now, American financial interests own or control so much of Canada, and so-called 'Canadian' industry and 'expansion', that they can call the tune for Canadian policy, even to influencing our Government. Why not? This is what the real owners of business and industry do in every country. This makes it very easy to eliminate anything which interferes with their plans for Canada in the industrial picture.

In this role, Canada does not of course need her skilled or educated men. If they emigrate to the U.S., we lose nothing - except the cost of educating them. We keep the unskilled and semi-skilled labour only. Skilled immigrants coming to Canada soon find they must also move on. Soon only their semi-skilled and unskilled remain. Our Minister of Citizenship and Immigration speaking in Toronto recently, indicated that she considers this a fair exchange. She said "Even now they (immigrants) are doing jobs which native born Canadians cannot or will not undertake; they have proved to be a mobile labour force". What this usually means is that they will work for low pay in order to become established, forcing down the wage rate for other Canadians, and lowering the standard of living for everyone. This has happened in Canada before. In every case the result has been the same. Without sufficient native industry to retain our own highly trained workers, as well as absorbing the newcomers, the net result is not only a great loss in quality, but little gain even in quantity. Neither our skilled immigrants nor our native born skilled men can find employment, and must emigrate.

Unfortunately, many powerful groups in Canada find this situation desirable. A great many Canadian financiers, investment houses, insurance companies and our C.M.A. like this set-up. Subsidiary industries using only semi-skilled labour at low wages for assembly-line production only, represent a desirable situation - and higher profits. It keeps wages down in our own small industries as well as in our American-owned subsidiaries. (Some of the results of this policy are noted in a later section.) Since Canadians, their financiers and even their Government are backing this policy, since they practically beg the U.S. to come in and take us over for this role, why shouldn't they?

A case in point, which adds a particularly bitter background to the present situation, is the story of the Avro Jetliner. If you remember, (and few Canadians do), some ten years ago, the Avro Jetliner threatened American supremacy in the civil aviation field. It was the first one on the continent, nine years ahead of the first American Jetliner, and only a few days from being the first in the world (just behind the British Comet, which was not designed to be competitive with it). It would have given Canada an unbeatable lead in the field of Civil Aviation. The American aviation industry took quite a beating from their own press for being caught flat-footed by Canada. In fact, like the Arrow, it got most of its recognition from abroad. Like the Arrow, Canadians were told by their Government that it was a 'failure'. Mr. Howe implied that it had serious design faults, and that we

'couldn't sell it'. Like the Arrow, it exceeded the requirements laid down for it. Like the Arrow, it was designed and built in less time, at less cost, than anything similar designed elsewhere. It cost only about eight million from scratch - tooling, plant equipment, design, building up a design staff - and two aircraft.

Avro had worked closely with our own Canadian airline, TCA, to design a plane to meet their requirements, as well as those of other airlines. At about the time the first Jetliner flew, TCA, under Mr. C.D. Howe's jurisdiction, had a change in management. One of the first things it did was to back out of its proposed purchase of the Jetliner. One of the Jetliners was cut up for scrap; the Company was ordered to stop production, and concentrate on military planes. The Korean war was used as one excuse, although Avro had, or could have obtained facilities to handle production of both planes. Mr. Howe also said "You can't build a plane without orders", although he knew the Company had from fifty to a hundred potential foreign orders on its books, in spite of TCA's cancellation. The implication he deliberately left with the public was that the plane was a failure, no one wanted to buy it. It sounds familiar, doesn't it!

Of course, since TCA had made a decision not to buy it, they could not afford to let other foreign air lines get into the jet age ahead of them.

The remaining Jetliner flew for almost nine years, in Canada and the U.S., setting records and collecting test data, without any serious design defects showing up. It proved more free of 'bugs' than most original designs elsewhere. With this nine-year lead, if allowed to continue, Avro could by now have been one of the world leaders in the manufacture of civilian jet transports. They are now being violently accused of having no commercial designs to fall back on. By the time they could have begun again, it was too late. They were up against a now alert American industry, all of its firms heavily supported by government orders, and all of them assured of purchases from at least some of their own airlines, a very helpful sustaining basis from which to get orders from other countries. The American industry had been saved the humiliation of seeing Canadian jet planes flying on American airlines. Mr. Howe later received a medal from the American aviation industry, for his 'services to aviation'.

On a certain Saturday in the summer of 1957, the remaining Jetliner had just had a nosewheel replaced in a routine overhaul, and had months of flying program ahead of it. When the staff came to work Monday morning, they found it had been ~~cut~~ in two by the Sunday night shift, in such a hurry that not even the equipment had been removed, or the plane properly dismantled. No one knew who had ordered it, or why. The 'first Jetliner on the North American continent' was quickly reduced to scrap. The Smithsonian Institute had once asked for it, but it was not even kept for our own Air Museum, as any other country, proud of its skills and products would have done. With great difficulty, someone just managed to salvage the nose section, all that is now left of this achievement. Why? Well, it may be pure coincidence, but the Saturday Evening Post appeared on the stands exactly one week later, with a full-page ad of the new Boeing Jetliner, the 707. It said: "America's first Jetliner. The only American jet transport now in the air". (There never had been another in the U.S.) When that ad went to press, the Canadian Jetliner was flying, with a flying schedule ahead of it. When it appeared on the news-stands, it was not. Would Boeing's have been embarrassed to have the Canadian Jetliner still flying, and known to have been nine years ahead of them? Or would Mr. Howe

have found it embarrassing to have Canadians know that there had been one here, nine years earlier, and we had missed the boat, because he had ordered Avro to discontinue its production?

Eleven supersonic Arrows are now in process of being cut up for scrap. Mr. Diefenbaker has prevented the 'embarrassment' of ever letting the first Mark 2 Arrow, with its powerful new Iroquois engines, take to the air, to bring the world's speed record to Canada, and prove how far ahead of anything in the world we had been for the second time. The first Mark 2 was just ready to begin flight-tests on Friday, February 20. Asked in Parliament if it could not be allowed to fly, to at least show what we had produced, and bring these records to Canada, Mr. Pearkes answered, with great satisfaction, that he could not grant this request, since 'none of them now remained intact'.

TCA officials have privately admitted since, that the Jetliner was one of the best aircraft they ever had a chance to buy, and one of the easiest and cheapest to maintain - a very important airline requirement. TCA is now using for the same purpose, a similar type of plane, the British Viscount, developed several years later. But Pierre Berton has never written a column blasting Vickers in England for all the millions they have let the Canadian taxpayer pour into their Company for aircraft we could have built here. They are also a large company; they also provide defence equipment on order for their government.

When American interceptors very soon take over our airports and Western bases, which we can expand for their use, but not for the RCAF and the Arrow; to defend us against the bomber threat we were told no longer existed; when we find we have paid more for inferior planes both for Canada, and for our Nato squadrons, and have lost a great deal more into the bargain, will Mr. Berton write another column about how we have kept Northrop or Boeing or Convair in business, and poured millions of taxpayers' money 'down the drain' and out of the country? And will our Government admit how it lied to the public, and sold our industry down the river?

This time, it was the Arrow, not the Jetliner, which not only threatened American technological supremacy, but has also been helping to build up a wide range of industrial development in Canada, threatening not only some of their markets, but also their unlimited supply of our raw materials. If Canadians became development-minded, and Canadian industry began to surge ahead, we might even for instance, some day decide to use our Nova Scotia coal and Labrador iron, and build a mill, smelter and steel foundries on the shores of the St. Lawrence, to produce steel for our own markets, as well as for export. Other small countries do, some of them much smaller than we are, for example, Sweden, with a population of only seven and a half million.

What we did do, suited the pattern much better. Instead of borrowing capital to develop our own iron mines, which we had already surveyed and opened up, we went to Cleveland and said "Here it is, boys. Do you want to take it over? It's all yours", and then helped build, not a mill and smelter, but a railway and seaway, so that they could take the ore out of Canada and down to the south end of Lake Michigan, manufacture it, and sell back the finished products. (There was no hope of a seaway, until they wanted that iron ore, cheaply.) With all this wealth, we do not export steel, we import it. This is what used to be done with the raw

materials of the far East. Who gets the profit? Not Canada.

This set-up is much too profitable to let anyone like A.V. Roe come in and try to reverse the trend. Our Canadian investment houses, banks and insurance companies, our mining companies, and even our railways, related to so many interlocking American directorates, and so closely tied to the American financial giants, are very happy with this set-up. They don't want it disturbed either. They are not concerned over unemployment, or the loss of our best men to the U.S., or the ownership of our larger industries, our mines and forests, as long as they can clip coupons on the development and sale of our natural resources, and get their profits out of the sales made by branch firms set up in Canada by American corporations to sell American designed products in Canada, without even paying tariffs. In fact, the investment houses have just recently submitted a brief to Mr. Diefenbaker advising him not to worry so much about unemployment, to concentrate on retrenchment, deflation, sound money - to improve the financial picture - for investors and promoters. Unemployment does not hurt them - not for quite a while, (until the home market disappears; but they have forgotten the lessons of the last depression). In fact, many of them believe it has definite advantages. Many of them much prefer the 'unskilled immigrants' who can be induced to work for \$30 or less a week. This makes for higher profits, but does not seem to reduce the price of goods, houses, etc. It merely widens the 'spread', and increases the profits.

In the press, on the financial pages, and in Parliament, when they talk glowingly of Canadian 'industrial development', it usually turns out to refer merely to more mines opened up for American investors, or millions of acres of far northern oil lands sold to them on 99 year leases, to be held until needed, so that they will not be used to compete with existing sources they already own. This is 'industry'? This is 'development'? This makes Canada prosperous and booming, and attracts valuable industries and men to Canada? Don't be silly! 'Development of Canada' is evidently a fine thing, but only as long as Canadians do not get the silly idea of using their own raw materials, to develop and manufacture their own products for their own markets, and even for export.

So once again, the story has an old familiar ring. Canada is 'too poor' to manufacture her own needs, we can't afford our own defence equipment, it 'costs too much', we 'can't sell it', it is 'cheaper to buy American', the Arrow was no good, obsolete, 'overtaken by events', a costly failure, a blunder.

Not only the product is attacked. The Company is also attacked. It had 'no alternative products', it was a 'lobby', it 'tried to embarrass the Government', it was 'irresponsible'. Other companies have bought out Canadian companies and closed them, other companies have moved their manufacturing operations from one locality to another, other companies have refused to stock-pile coal which cannot be sold in Canada, because we have no demand for it, other companies expand and diversify, other companies sell stock, other companies take all their profits out of the country (A.V. Roe has not taken one cent of profit out of Canada). But only A.V. Roe is blasted for these business operations which have been standard practice in Canada ever since the year One. Every phase of their operations has been bitterly attacked in the press, in Parliament, and on the street. Is it because they do not send their profits to the States? Because they do not bring in all their products from there, and merely sell them here?

These attacks and whispering campaigns have even included the men who worked there. They have been maligned, belittled, their work called 'useless'. They were called 'overpaid' although few of them made as much as the average Toronto school-teacher, with none of the benefits. They made less than real-estate salesmen (a new arrival here for only three years, is making between 8 and 10 thousand a year selling real estate. I believe they take a three-month course). They have been refused work in the Toronto area, and not only refused it, but insulted into the bargain. Even those on low pay, or unemployed, in the Toronto area, have shown a vicious satisfaction in the closing of A.V. Roe. Do they not know that this is just what other employers wanted, to eliminate any area of good pay and good working conditions for average employees, so that they could once again force down wage scales for semi-skilled workers, office help and so on? This campaign has been so successful, that even these people join in, to their own eventual loss.

In spite of Mr. Berton, it is not easy to work for the Government, on contract. It is always a gamble, for everyone concerned. They are subject to every kind of insecurity, from changing requirements, changing economies, to every change in the political atmosphere, to dealing with ignorant officials, in addition to the usual hazards of scientific and industrial competition in research and discovery. These hundreds of graduate engineers, designers and technicians have built up the best team of science and research on the North American continent, over the past ten years or more. They have done it in spite of a constant drain to the U.S. for more security, more pay, and more opportunity. The Government asked these men to work for them. Anyone who knows anything about air industry and science knows the terrific rush needed on any project. Time is of the utmost importance in our race to produce the best, ahead of the rest of the world, including Russia. This team came up with the best jet interceptor in the Western world, for our first-line defence, in conjunction with our second-line missiles (now admitted to be the necessary pattern) in competition with over a hundred companies in the U.S.A. Although the U.S. has only ten times as many people, we have only three producing aircraft companies, and one only manufactures 'under license'.

These men have stayed in Canada in spite of many tempting offers from the United States, at salaries two or three times as high as they were making in Canada. They were loyal to Canada, and wanted to see her take her place in ability and development with the rest of the world. They worked hard to make the best, under the strain of never having enough money, and always having to beg the Government for what they could get to cover expenses. Seventy percent of all the research done in Canada was done at A.V. Roe. And it was not just theoretical research. It was translated into actual products, and applied. Three times they came up with the best plane of its type in the world. Twice they were actually years ahead of anything like it elsewhere. Twice they have produced here in Canada, aircraft engines which were admitted everywhere but in Canada, to be the best there were. But they have never received any credit in Canada, only from outside the country. And now they have seen the whole country turned against them, because of a powerful lobby which is strong enough and vicious enough to ruin anything which does not serve its purposes.

When a team of Russian scientists and aircraft designers toured Avro in October, 1958, they could not understand the Company's worries about the future of the program. They said: 'You have an excellent plane. How is it you

might not produce it?' When told it was a matter of economics, of money, they said: "But that should not be your worry. That is what your Minister of Finance is for; to find the money for what the country needs." East Germany and Czechoslovakia are 'poor little satellites'. They are each designing and building their own planes, not Russian designs under license, but their own designs, designed and produced by their own men in their own factories. But the United States will not 'let' us, it seems. At least our Government has not been successful in 'getting permission'. Perhaps they really didn't try.

With all these accomplishments to their credit, these men have had their work taken away from them, and given to the U.S. to be done in American factories. The headlines now say 'Arrow Killed. Canada to Use U.S. Planes'. The lobby has accomplished its purpose.

There is, of course, no other work for these men in Canada. Seventy percent of the research work done in Canada has now gone. Other plants cannot absorb them. They do not even answer applications. One man sent out applications to 47 firms across Canada. Only 20 even bothered to answer. He is now regretfully and bitterly leaving Canada, and going to work in the U.S. for Minneapolis-Honeywell. (Canadians buy a great many of their products.) One man went to 37 firms in the Toronto area in a week. All are 'Canadian' firms. All require a great deal of engineering and design work. They all told him the same thing. 'We do not hire engineers in Canada. All our design and engineering is done by the parent company in the U.S.'

Avro and Orenda employed between four and five hundred engineers and scientists. The only other large employer in Ontario is the Ontario Hydro, with nine hundred. Of the jobs available in Ontario, the general opinion is that over half of them are so routine and uninteresting and un-demanding that they could be handled by a reasonably intelligent graduate of Ryerson Technical Institute. To handle the type of work which was routine at Avro and Orenda, most firms think they need at least a Ph.D. Avro had one of the top designers in the continent. They had one of the only three men on the continent who was an authority on high-pressure systems. Twenty-five of their men are now working for the National Aeronautical and Space Administration (NASA) on space vehicles, for the American Government. Two hundred are on loan from Canadair to Convair and Boeing (Mr. O'Hurley called this a defence-sharing contract). There was nothing for them to do in Canada. Few of them will come back. One visa office alone, in Ontario, has issued 2,600 visas since the first of the year.

American firms in the past ten years have put on high pressure campaigns to get these men. They used to have to offer special inducements to lure them away from Canada. Now they are a free gift from Canada, who no longer wants them and considers them no loss, making only token gestures to keep them. American firms can now pick and choose among those who are leaving. They have been busy since the morning of February 21st, picking off the best men. They can be more highly selective now, since there is little choice left for these men. The technicians, the skilled workers, the men from the shops, with years of experience in building fine products, the necessary foundation for any industrial development - are on the street, almost eight thousand of them still unemployed, from Avro and Orenda alone, in addition to associated industries. Those who have found work are in other lines, starting from the bottom, all their years of experience wasted. Those with the most

training and experience, the men 'over forty', are too old to work in Canada. Many self-help projects, many new firms, have been started by these men, showing the calibre and initiative they have to offer. They are trying, but they have little hope of success, in the current atmosphere. Even established firms are having tough going.

And Toronto firms refuse to hire them. One man had a job almost assured, until he put down on his application that he had worked at Avro. He was not allowed to finish filling it out. Yet a similar firm turned down an order for some precision work, because they had no one 'who could handle close tolerances'. The client said: "Why can't you? Those chaps from Avro can". Is this what they are afraid of? Have they been inefficient, badly-managed, paying such low wages for skilled work, and in a rut for so long that some new blood would kill them? Or a new idea or method? Perhaps that is why we have to pay out a billion dollars a year in tariffs to protect these industries, and in spite of this, they are still so inefficient that Canada buys more fully-manufactured goods outside the country than any other country in the world. We can buy few good-quality products made at home. When a company does produce them, Canadians kill the company, or Americans buy it out.

So the world's most outstanding interceptor is now being cut up for scrap, as the continent's first Jetliner was, so that Canada, and even more important - America, can forget that we were ever ahead in any such outstanding developments. But this time, there are eleven immensely valuable aircraft, and a whole, complete production line which was ready to roll; this time, there were other firms who would have been glad to use the existing planes for research and testing, because they are now trying to solve the same problems which Avro had solved, very successfully. But having condemned it as 'obsolete', 'overtaken by events', a 'costly failure', our Government cannot afford ever to let it fly again, to prove just how far ahead of anything else it was, how outstanding and reliable its performance would be.

When the Jetliner was cancelled, the firm was at least left with the contract for the CF100, which went on to set records for performance and reliability not equalled by any comparable plane, which with the Orenda engine, saved Canada millions in purchases and brought her millions in export business. This time, there is nothing left, not even the contract to modify the CF100, as requested by NATO. Even that was ignored.

Now we are getting back to normal. Avro is no longer producing planes which threaten the supremacy of American industry, and put Canada on an equal basis in technological know-how and progress. Our subsidiary industries are closing, one after the other, or going bankrupt, as many already have. The American suppliers are giving up Canadian design and development, and merely selling American-designed products again; many are not even retaining their Canadian branch offices. The skilled European who opened the plant in Hamilton has lost his investment. So has a small printing firm in Brampton which had built up a successful business in Technical publications with five years of hard work. This is being repeated across the country.

The technical men we have attracted to Canada in the past ten years, with all their know-how and skill, are returning home, or going on to the States, along with the best of our own graduates, who were for once beginning to believe that there

was a future of great development for Canada. They know better now. Not only the Government of Canada, but the people of Canada, and the press, have forcibly convinced them of Canada's attitude to the future. It is that new whine we now hear from all over the country: "We are too poor, we are too small, we can't afford to do anything. Everyone else can do it better, so why should we bother?" A strange new tune which has developed in Canada, one of the richest countries in the world, with wealth, space for expansion, with schools, universities, brains, and proven ability to equal the best - and not by any means the smallest population in the world. Even the U.S. has only ten times as many people, not a hundred times as many, as you would think to hear people talk. Satellite countries like East Germany and Czechoslovakia are producing and designing planes - not under license. Sweden has seven and a half million people. She has her own steel industry, lumber industry, aircraft industry. Her own airline buys her own planes. Her Air Force buys her own jet interceptor. What is more she owns them, not someone else. And far from going broke, she is prosperous, and even takes better care of her own people than we do. She has learned that what you can afford depends on what you earn, that just 'saving a dollar' is not enough, if you sit on it, instead of using it to build up your own country's future. We used to think Canada was like that too.

We have far more to start with than India or China had. They no longer allow other countries to develop their wealth, and China at least, is now going ahead for the first time in hundreds of years, whether we like it or not. But our good 'Canadian' magazines and press keep telling us 'we can't do anything for ourselves'. Our American magazines and TV and radio beamed across the border all day long, tell us that 'no one but the U.S. can do anything well', until we have begun to believe it. American industry does it from inside the country too. They are here, running our industries, our so-called 'Canadian' business, American-owned. They own them, because we are convinced that we can't afford to develop our own raw materials, or run our own industries - 'we must have foreign capital'. And we are so afraid that we won't get it, that we don't just borrow it; we practically give them the country, make no restrictions and never limit the profit.

Many other countries use foreign capital for development, certainly, but not the way we do. Venezuela has now raised the Government tax on oil company profits from 50% to 60%. Barron's Financial Weekly says: "The price declines were extremely orderly . . . and of fractional size". A few years ago, our Government reduced the tax on dividends to foreign corporations, including oil companies, from 15% to 5%. Venezuelan oil is still being imported into Canada by American firms who also own our Western oil reserves.

Everyone knows the story of our give-away 'bribes' to induce so-called 'risk capital' to build our gas pipeline, and of the fantastic and unlimited tax-free capital gains made by these promoters. Some of them put up as little as \$300 to make a fortune. Of course, they took no risk at all. Many more cases could be cited.

Brazil is now trying to attract foreign investment, but a recent article in Time magazine noted the very stiff terms under which it must operate, to Brazil's benefit. They are having no trouble in getting it. But these firms must set up a separate Brazilian company, over 50% Brazilian-owned, the profits they may take out of the country are limited severely, they have a limited time in which to train Brazilian personnel to take over a fixed percentage of all jobs, including technical

and executive, and to arrange for at least 95% of the product to be manufactured in Brazil. Compare this with one of our largest 'Canadian' industries, our 96% American-owned automobile industry. The design and engineering is done in the U.S., a large percentage of the components are made there, and come in under special tariff concessions, the profits go to the States, and the technical know-how stays there. Policy is decided in the U.S., and we do not compete with them in exports. In fact, we do not export at all without their permission. Brazil is not as stupid as we are. Neither are Sweden, France, West Germany, or even perhaps, East Germany, to name a few. In fact, it is difficult to think of any other country in this present year, which lets itself be exploited to the extent to which we do; which is so completely dominated from outside the country, and which, above all, cares so little about it.

It is not hard to see the forces which could swing into action all across Canada to kill any Canadian achievement and industrial development which might threaten this monopoly and control; which might equal American prestige in the technological field, attracting men and industries to Canada who had a great deal to offer to our future development; which might also give us independence in military or foreign policy. This latter has been a frequent source of irritation to the State Department and the Pentagon. Now they no longer have to worry. This is not the first time it has happened, but it has usually been done more quietly, behind the scenes. Never in the history of Canada have so many lies, distortions and contradictions, even whispering campaigns, swirled around any product or company. Never have Canadians done their work so thoroughly for them. A violent election campaign is the only kind of thing which has ever approached it. And this was supposed to be a 'purely military decision, arrived at for purely military reasons' - to quote Maclean's magazine.

A purely military decision, properly arrived at on the basis of the most expert and factual information, and carried out in a responsible manner, - with this we could have no quarrel. As it turned out, the military reasons, the expert advice, were the only things not considered, in this hysterical campaign whose purpose was to prevent any such thing as facts from reaching the Canadian people, or to bury them under a mass of editorial opinion and public deception. Of course, they didn't really matter anyway. This decision was not made possible at top-level conferences with careful consideration of every aspect of the problem, with the most highly classified information available - but in the gutter. The experts were replaced by the press, and every man in the street. They now 'know' more about defence than the Chiefs-of-Staff of NORAD, more about the Arrow and its usefulness than the men who design, fly or evaluate them, more about Avro than the people who worked there. A Prime Minister who carries his personal hates into public and national office, a retired Army General from Victoria, B.C. who dislikes the Air Force, and is easily confused by fast-talking teams at the Pentagon, have allowed this to happen, indeed, backed it to the hilt. They not only threw away the Arrow and the whole investment in it, they were not satisfied until they had thoroughly discredited it, and the people who had created it. They have tried to ruin the reputation of both the plane and the Company. While other countries were rating the Arrow above anything they had, an outstanding interceptor with nothing to equal it by several years, our Government and press degraded it, called it a 'costly failure', a 'blunder', a 'waste of money'. This has been a performance never duplicated by any other country, one which has merited us the incredulous contempt we are now getting from other countries.

In Parliament, the Government has been asked a great many questions regarding their conflicting statements and even more contradictory behaviour since. They have not really answered a single question, except with evasions and double talk. We have lost count of their contradictions. They have fallen all over themselves with conflicting figures, cost estimates, performance data - all distorted beyond reason. They have not even waited for the smoke to clear on their excuses for scrapping the Arrow, before standing up and proving that they did not even believe them themselves, that none of them were true, that they were exactly that -- excuses - to kill the Arrow, and even more important, put A.V. Roe out of business, if possible. And having almost completely succeeded, they have not even tried very hard to hide their satisfaction, or to pretend to think it worth saving.

Beginning with Maclean's attack of October 25, 1958, this flood of mis-information was so outrageous, that we began to collect as much authentic information as we could find, in addition to information which had long been available. We sent this to Macleans in December. It was returned with no comment on the subject whatever. The information which follows is basically the same as was available last December, and before. Everything we prophesied then as a result of cancelling the Arrow, has since been happening. Everyone we know who is aware of the facts regarding missiles vs interceptors, the Arrow vs other planes, the present defence picture, the relation of military procurement to economics, the defence production integration situation, considers it one of the worst blunders ever made in Canada. Everyone who knows the story behind the scenes knows it was done for contemptible reasons.

Americans we have met find it difficult to disguise their inability to understand how Canadians in general could be so incredibly misinformed; their disbelief that our Government could be so stupid. British and American magazines, while trying to be polite, have not quite concealed their sarcasm. Avro and the Arrow have been highly praised elsewhere. Only in Canada was it called a 'costly failure', a 'blunder'. The price per aircraft, delivered complete, which Avro gave to the Government in October, represented the greatest bargain in aircraft ever offered to any government, and the Company took a whopping risk. Our Government is now finding this out, after investigating other sources of supply. Only such a Government as ours would have thrown it away, to pay more dearly for inferior products elsewhere. Only such people as Canadians would have let them. And the worst deception of all is that - they haven't even saved any money at all.

MR. DIEFENBAKER FLIES A KITE.

On September 23, 1958, Prime Minister Diefenbaker said: "The Arrow will not be put into production at present. The Arrow program will be reviewed again on March 31". That was all. Then he left for a trip around the world.

He had scarcely concluded when Maclean's magazine went to press with its October 25th issue. It contained a vicious and hysterical attack on the Arrow, every statement of which was contrary to fact, or based on errors. It was followed immediately by articles, columns and editorials in a portion of the popular press. These repeated the false statements, distortions, misrepresentations and omissions of vital facts. In fact, as fast as one false assertion was proved false, they produced new ones, equally false.

This powerful and vocal lobby was joined by Canadian newspapers and magazines across the country. If it had a good case against the Arrow, it could afford to present accurate facts and complete facts, and reach logical and reasoned conclusions. That it has not done so, leaves grave doubts as to the real reasons behind this campaign. It has obviously been an attempt to confuse and mislead Canadians into agreeing to a decision they would not have approved if given the true facts, and the real reasons for these attacks. This mass of unrelieved misinformation has left a great many people with a feeling of angry frustration and indignation. In a matter of such grave importance to Canadian industry, Canadian defence and Canadian future development, it has been frightening, dangerous and irresponsible.

It has been impossible for the industry itself, or the top men of our armed forces, to fight the attacks of this lobby on its own ground. If the Company attempted to kill some of the more obvious lies it was labelled a 'pressure group'. If it accepted a request to answer Maclean's articles, it was blasted by columnists. If members of the services, or heads of Norad said a word, they were bitterly attacked and told to keep quiet, they were talking out of turn. Indeed, Mr. Diefenbaker and Mr. Pearkes have shown a deep distrust of any Canadian advisers, and even of their own Cabinet, and have turned almost entirely to Washington, and Mr. McElroy. This has made it very easy to influence our Government. Letters or articles, attempting to refute these untrue statements were seldom published. How then could Canadians learn the true facts?

The statements in Maclean's and the press, the conclusions drawn by their editorial writers and columnists in particular, and the statements made by the Government, could be factually disproved by anyone able to read. We have tried to answer Maclean's articles which began the attack, to fill in some of the facts which have been suppressed, to indicate the real reasons and real situation behind this campaign, which have so far only been hinted at. We have tried to answer the false and contradictory statements, made by Mr. Diefenbaker and Mr. Pearkes, to justify to the Canadian people their disastrous decision on the Arrow. We now add the opinions, views and facts stated by others. We have quoted only from publicly available sources of information, omitting a vast quantity of information to be found in more technical or restricted sources, with which to back it up. Mr. Blair Fraser himself, disproved many of his own original statements, but left undisturbed the false impressions he intended to create.

If you remember, the reasons given most frequently in this campaign against the Arrow program, were as follows:

The manned bomber threat has diminished and is no longer important.

All interceptor aircraft have been rendered obsolete by missiles.

Other interceptors currently available, are as good as the Arrow, in any case.

The Arrow could only operate in Canada, because it 'cannot operate without Sage'. Therefore it cannot be used by Nato in Europe. No other country will buy it.

Since we can't sell the Arrow to anyone else, we can't afford it for ourselves.

It would save millions to buy American planes or build them under license.

We are so poor and so small a country that we cannot afford to design and manufacture even one line of aircraft for our own defence problems.

The U.S. has agreed to integrate i.e. 'share', defence production. This will keep our factories busy, and retain our design teams, and we will be much better off economically.

If we don't go along with the U.S. in every respect, we shall lose what little voice we have left in our own affairs.

Every one of these statements is contrary to fact. Even the Government doesn't believe them.

OVERTAKEN BY 'EVENTS'

Do we no longer need interceptors like the Arrow, because 'the manned bomber threat is no longer important'? No country, even our own, believes this. If they do, then the U.S., the U.K. and Russia, as well as several smaller countries, are spending billions of dollars on new development of obsolete equipment. If they do, then the money spent on Bomarc and other anti-bomber missiles is utterly wasted.

Mr. Pearkes stated in Parliament: "We believe that the CF100 is capable of dealing with the bomber that the Russians can send over to this country. It will be touch-and-go as far as the Bear and Bison are concerned, but they have that aircraft in very limited numbers". "The indication has been that the Russians are not continuing the production of any type of bomber more advanced than the Bear and Bison that the number is extremely limited, and these are the only two types which could reach this continent and return again".

If Mr. Pearkes really believes this, then he is wasting millions of dollars in paying for Bomarc. We are now installing for the U.S., to defend their SAC bases (not Canada) against the 'manned bomber threat', two Bomarc bases - a new untried weapon, far more costly than the Arrow, and useful only against 'manned bombers'. Furthermore, unlike the Arrow, and whatever Mr. Diefenbaker says on TV, it will not defend Canada. He and Mr. Pearkes admit (in Parliament), as do all military authorities, that the purpose of the Bomarc line running across the continent below the 49th parallel, and just 'happening' to go across the lower part of Ontario and Quebec, is to defend SAC bases only. It and the Pine Tree Line and the Dew Line have one purpose only, not the defence of Canada, but the protection of the American 'deterrent force', to give it time to get away, after we are attacked.

(Since Mr. Pearkes states that to maintain a deterrent force, such as SAC, is beyond our means, and must therefore be a purely American responsibility, then surely they should assume the cost of protecting it. This should be their share of continental defence, along with the ICBM's, which are also too expensive for us, and many other things which are 'too expensive' for us. But, having the most advanced interceptor in the world standing ready to roll, on a fully-completed production line, with all the design and development costs already paid for, and its excellence proved, not on paper, but by performance, we should have said 'Here is our contribution, our share of integrated defence production. We have nothing like your other weapons, but you have nothing to equal this, for several years'. The Americans needed those two bases we are kicking in for. They would certainly have built and paid for them, and been grateful to us for letting them use the space of which they already use so much, for their defence. But when Mr. Pearkes went down to Washington to beg them to buy the Arrow (so he says), he was, instead, manoeuvred into putting up part of the cost of these two bases. To justify the switch, and explain why he hadn't sold the Arrow, he said: There is no bomber threat; we are now in the 'missile age'.)

'There is no longer a bomber threat' - but Mr. Pearkes has asked the U.S. to take over the defence of Western Canada for us, with manned interceptors against 'manned bombers'. Mr. Pearkes said - he really did - that our Western provinces were 'too far away for Canada to defend'. Too far away from Canada, or what, Mr. Pearkes? So we are now going to improve our Western airfields, to accommodate U.S. interceptors, so that the U.S. can defend Western Canada for us, since it is

too far away from Canada to defend, because we scrapped the Arrow which could have defended it, because there was no bomber threat we would have to ask the U.S. to take over our Western airfields and defend us against. Are you confused? You should read Mr. Pearkes' explanations in Hansard, February 23, 1959.

We cancel the most advanced interceptor in the Western world, and throw our whole investment down the drain, because it was 'obsolete', - 'overtaken by events', said Mr. Pearkes. (He has never recovered from the fact that, on the day the Arrow was unveiled, with Mr. Pearkes officiating, he heard there was a Sputnik in orbit.) But now that we have cancelled the Arrow, it is safe to tell us that 'Oh yes, we do need interceptors, after all'. We need them to defend Western Canada, as well as the East, but since, according to Ottawa, 'RCAF craft are not available for the West', and since Western Canada is 'too far away for Canada to defend' we must ask a foreign country to do it for us.

In recent hearings before the U.S. Senate sub-committee, testimony was given by the members of the Chiefs-of-Staff. It is interesting to compare this testimony with statements made by our Government.

Gen. Twining: - The Russians are now building a new bomber far beyond the capabilities of the Bear and Bison long-range bombers. 'We do not know what it is yet, but it is an advanced heavy bomber'. (It is known as Bounder, and everyone in the forces and industry has been aware of it for quite some time - except Mr. Pearkes: ('They have only the Bear and Bison, and very few of these'.))

Gen White: - 'Advantage of the bomber over the ICBM is - it can carry multiple nuclear weapons - a much bigger yield and variety, and can be deployed. It has greater potential for use in limited war'.

(Mr. Diefenbaker: 'We believe any potential agressor will concentrate on missiles'.)

Gen. Earl Partridge (Norad): - The aim of the North American Defence Command is to hit an attacker as far away as possible, i.e. over the Arctic.

- Bomarc are useless for this function and are intended only as 'defence in depth' to give the SAC 'time to get away' and to provide limited 'point defence'.

- Early Warning Radar Lines can not identify radar signals as intruders, or tell the type of attack, if any.

(Mr. Diefenbaker: '\$20 million for Bomarc will give equal coverage to the same area as \$780 million for the Arrow') - this would be 17 to 20 squadrons.

Gen. Partridge stated that, for these and other reasons, they needed the fastest, highest-flying, longest-range interceptor available, for as long as they could foresee. Unfortunately, he said, until the F108 is in service, several years from now, 'there is nothing now available except the F101'. The F101 has a speed of about Mach 1.3 (under 1000 m.p.h.) and range of 600 miles at most. It is not at all comparable to either the F108 or the Arrow.

(Mr. Pearkes: 'The Arrow is obsolete, 'overtaken by events'.)

The F106, so widely quoted in Canada, as being equal to the Arrow, is not even considered; has never been compared with the Arrow in the U.S. As Mr. Hellyer stated in Parliament: - to compare the Arrow to the F106 is like comparing a car to a horse and buggy. It is rumored to have been grounded because of design faults. It never was designed for Norad's needs, and has now been cancelled. The F108, being developed for the future, is designed for a speed of about Mach 3 (2000 m.p.h.) and range of about 1000 miles, depending, as they all do, on type of mission and other variables. The Mark 1 Arrow without its Iroquois engines had already climbed at just under 1,400 m.p.h. It had exceeded every performance requirement laid down six years ago, (when the Air Force didn't dare mention a speed of Mach 2 out loud). It had been produced in less time, at lower cost than any American equivalent. (We were told it was a 'costly failure', a 'blunder'.)

The first Mark 2 Arrow with new powerful Iroquois engines was ready to fly within a few days, on February 20, 1959. In the U.S., and in Canadian trade magazines, predictions were that its speed, range and performance would be close to that of the F108. The USAF was as convinced of its excellence as was the RCAF.

If the Arrow had been put into production, if they had been coming off the assembly line, if they had been flying, if they had been flown by our own Air Force, there is little doubt that Norad could have convinced Washington that the Arrow was essential to fill the gap until the F108 is in service, a period of several years. According to Gen. Partridge's testimony, and that of Air Marshall Slemon, and much other evidence, 'there is no equivalent now available, and won't be for several years'. There is no doubt that Nato would also have used it, at least for the 12 Canadian Air Divisions, but we shall deal with that later. It is significant that our representative in Norad, Air Marshall Slemon, was not asked for his views by Ottawa. For daring to state two facts, admitted everywhere else, he was told to keep quiet and reprimanded. It was contrary to the mis-information being given out by Ottawa.

"Both Britain and the U.S. are developing new advanced interceptors against the 'manned bomber'. They know that Russia is developing very high altitude supersonic bombers (the U.S. is also developing the B-70 as a successor to the B-52), and that the first line of defence against the bomber is and will continue to be, the manned interceptor. The U.S. are bringing along the F108 to cope with even faster, heavier bomber threats anticipated years hence" - Canadian Aviation Industries, October, 1958.

Mr. Diefenbaker says: "The (long-range bomber) threat against which the C105 could be effective has not proved to be as serious as was forecast. Potential aggressors now seem more likely to put their effort into missile development than into increasing their bomber force". If Mr. Diefenbaker believes this, and if it is why he cancelled the Arrow, he is cheating the Canadian taxpayer by buying Bomarc's. They are much less effective and much more costly than the Arrow. They are no more effective against missiles than the smallest aircraft is. According to military authorities, "there is at present and for the foreseeable future, no defence against the ballistic missile".

Blair Fraser himself tacitly admits the need for manned interceptors in later articles. He says all 'interceptors are obsolete', and writes off the Arrow. Then he says we 'must wait for the F106' (an inferior plane), 'or the F108', which will

not be available until several years later. Why not the Arrow, Mr. Fraser? It is superior to the F106 by a great margin. It is ahead of the F108 in time. It will be available in 1960 to the Air Force. It will have about the same range and speed expected of the F108, although no one knows what the performance of the F108 will be, or that it will even fly, yet.

Mr. Diefenbaker quotes Mr. Fraser regarding the Arrow, but not regarding the need for interceptors. Why do we accept every other interceptor, but insist on writing off only the Arrow as 'overtaken by events'? What special 'events' have singled it out?

'THE MISSILE - IS IT OF AGE?'

Have 'interceptor aircraft been rendered obsolete by missiles'?

If by missiles they mean ICBM's or IRBM's, the answer is 'no'. Military experts have stated that no country will be in a position to wage a war, with missiles only, for at least ten years. Furthermore, if they were, we should give up defence spending and concentrate on survival, because there 'is no defence against these missiles'.

If they mean missiles like the Bomarc, which are 'unmanned interceptors', against manned bombers only, the answer is again 'no', for many reasons. In all military planning, they are being used only for secondary defence 'in depth', integrated with 'manned interceptors', which fly far beyond missile range and constitute front line defence.

Aviation Week (an excellent American technical magazine, with a reputation for reliability and accurate information) on November 10, 1958 - in an article entitled 'New Technology Boosts Interceptor Role, quotes Allen E. Puckett, Assistant Director of Hughes Aircraft Systems Development Labs. (who do work on equipment for both missiles and aircraft):

"New airborne radar with greatly increased operating range and new long-range air-to-air missiles capable of hitting targets at any altitude, give the manned interceptor a significant advantage over unmanned surface-to-air interceptor missiles. Current trend to missiles and talk of push-button warfare tends to obscure the fact that humans are required to exercise judgment and control. If the man is in an interceptor, he is better able to identify the enemy and establish the nature of his force, the type of attack that may be most effective, and something of the enemy attack and counter-measures. He is able to exercise control over the attack on enemy forces far earlier than is possible if human intelligence is exercised only on the ground near targets that are to be defended. Major advances in performance of interceptor radars" (carried in the plane) "now coming into production, extending the range many times over current systems, will free the interceptor pilot largely from current dependence upon ground radar or early warning systems and provide considerably more time for human battle decisions" (The Arrow was designed to be free of Ground Control Radar, or work with it, as necessary). "Vastly superior speed and range of new interceptors will make it possible to engage the attacking force far more quickly, at greater distances from target areas."

Canadian Aviation Industries, October 1958, said:

"Other editors have made wonderfully pat statements about the missile making the manned interceptor obsolete. Who says the manned interceptor is obsolete? What military authority is in a position to have intimate knowledge of the problems of modern air defence of the types of equipment possessed by a potential enemy of the defensive capabilities of the modern interceptor, armed with air-to-air missiles (compared to) the ground-to-air guided missile - what military authority in this category claims that the manned interceptor is obsolete? They do not believe it in the U.S." "The U.S. which developed the Bomarc and other ground-to-air guided missiles, knows them for what they are - short range, area defence weapons, incapable of performing the first essential of identifying incoming aircraft. They are merely a backstop for the long-range interceptors - an inflexible, last ditch defence - and there is no certainty that

their guidance system will not be jammed by attacking forces. There is no substitute for human intelligence and the missile cannot carry it into battle.

"The matter of identification is primary, and no one has devised a way to do it from the ground. It has to be done visually. It must be done by manned interceptors capable of achieving both the speed and the altitude of incoming aircraft, with some performance in hand. Until the incoming aircraft is identified and its hostility is determined, there can be no confirmation of any attack - no alerting of the Norad system.

"The RCAF is scrambled frequently - perhaps several times a day - to identify 'unidentified flying objects' which appear on the radarscopes. So far none has been hostile. Without the interceptor what will we do about the bush pilot (or the flock of geese) who neglect to file a flight plan; about the U.S. bomber with, perhaps, radio failure - fire a missile at them? The missiles cost about a half million dollars each - they are not recoverable. And there are, of course, other considerations.

"We can conclude that, as long as any possible attacker continues to develop manned bombers, the first line of defence against them must be the manned interceptor".

Aviation Week, November 10, goes on to say:

"New air-to-air missiles" (to be carried by the Arrow), "with far greater range and manoeuvrability will be capable of attacking bombers far below and far above the interceptor. The newer radar will leave the pilot relatively free to continue surveillance of the air battle and to exercise his judgment concerning future action. Significant advantage of the manned interceptor will be its flexibility and the possibility of using it in situations which we cannot now visualize from bases or in battle areas quite remote from those now prominent in our defence thinking".

Missile bases are costly installation, which cannot be moved, missile range is limited (Bomarc's most advanced version about 400 miles), cannot distinguish friend from foe, must wait for identification which could be too late, and can be jammed by enemy countermeasures. Contrary to public impressions, Bomarc is not effective against ballistic missiles. It is useful only as second-line 'point defence' against the same type of threat as that for which the Arrow is a first-line defence. Mr. Pearkes must have been turned over to one of the very clever teams of 'experts' (public relations types) they have down in Washington. They can sell you any theory they wish (or whatever weapons they may wish you to take off their hands at the moment). Apparently, when they knew Mr. Pearkes was coming down to Washington to 'sell' a better aircraft, they not only convinced him that interceptors were obsolete because there was 'no longer a bomber threat' but then sold them Bomarcs as a protection against this same threat which 'no longer existed'. They got their two bases. We help pay for them. We prepare the sites, and they design and build all the technical equipment. Remember Mr. Sinclair Weekes and the Canadian Trade delegation? I don't doubt they are again saying with contempt 'We fixed 'em'.

ALTERNATIVES - "JUST AS GOOD".

Although the U.S. estimates that the Russians have from 1000 to 2000 bombers 'capable of attacking the U.S.', and although they have known about 'Bounder' for a long time, Mr. Pearkes said: "There is no bomber threat", and cancelled the Arrow. Then he said "Oh yes, there is a bomber threat", so we need Bomarc's. Then he said "But they have only older models, the Bear and the Bison, (and only a few of these) which could reach Canada and return", therefore the CF100 won't really be obsolete "for two or three years". He said: "We believe that the CF100 is capable of dealing with the bomber that the Russians can send over this country. It will be touch and go as far as combat between the CF100 and the Bear and Bison are concerned, but, as I pointed out, they have that aircraft in very limited numbers".

As we pointed out earlier, Mr. Pearkes seems to get his information from very different sources than the U.S., as far as numbers and types are concerned. But even if we assumed that he was correct and the U.S. was misinformed, it does leave one a bit uneasy to have a Defence Minister who is satisfied with a plane whose chances of combat with even the older types of Russian bombers, is merely a 'touch and go' one. When bombers carry nuclear weapons, this hardly seems quite good enough. Furthermore, the CF100 production has been discontinued. What are we going to do for replacements? On February 20, Mr. Pearkes said: "Perhaps the most efficient (bombers) which the Russians will have in the very near future could not be engaged by the CF100 in its present form; but if we can add certain other equipment to the CF100 then I believe the CF100 will be able to engage effectively the majority of the Russian bombers". An obvious criticism was made by Mr. Pearson. Pointing out that this was hardly adequate defence, he said: "In February 1959, they (Government) are giving further study to what will take the place of the CF100, and it will not be the CF105. If they have been engaged in these studies, why were they not concluded before such an important decision was taken to end the Arrow and disrupt an important section of the industry?"

When Mr. Pearkes speaks of adding "certain other equipment to the CF100" it would be interesting to know what he means. Two years ago, the Air Force placed a requirement for a new version of the CF100, to be known as the Mark 6. This version was to incorporate an after-burner for increased thrust, and accommodation for air-to-air missiles. The design work had been done, and the first Trial Installation flown, when this Government came into office. One of the first things they did was to cancel the program - another case of all the money, time and effort being wasted, merely to allow the Government to tell the public that they were 'saving money'. Of course, they didn't save any money at all. All the work done was scrapped, but the most necessary changes were later incorporated in what was known as the Mark 5M. Surely an inefficient and wasteful way of 'saving money'. Are the changes to which Mr. Pearkes refers again, to be of a similar nature? They are two years too late.

No longer having the 'obsolete' Arrow, because there is no longer a bomber threat, Mr. Pearkes states, with a straight face, that even the CF100 is not obsolete after all. It will be useful for several years, 'as long as there is a manned bomber threat', in fact. Of course, it only flies at about 500 m.p.h. and Russian bombers are faster than that, and we had an Arrow which had already flown at nearly 1,400 m.p.h. and was expected to approach Mach 3, with its new engines. But it was

'obsolete'. Apparently, only the Arrow was 'overtaken by events'. Or was the Arrow so far ahead that it came up behind them on the second lap around, while Mr. Pearkes wasn't looking? Or were the 'events' quite different from the military ones to which Mr. Pearkes attributes this odd situation?

To be 'obsolete', all need for such an object must have disappeared, or something else, definitely superior, must be available to take its place. Our own government has demonstrated that the first condition is not true. How about the second? The CF100 is certainly not superior to the Arrow. If it will not be obsolete for several years, it is incredible to say the Arrow is. Furthermore, having cancelled the Arrow 'because we no longer need interceptors' our government is now looking all over the place for some other interceptor to take its place. We really do not have a very good choice. It seems that there is nothing at all available which is even comparable. Furthermore, the government has been finding out to its surprise, that it is not going to cost them any less, not even to manufacture under license, not even to buy an inferior plane. The rock-bottom price given the Government by the Company last fall, turns out to have been a real bargain. Any other Government in the world would have taken it fast. All the pre-production planes were already flying. The first three Mark 2 Arrows were ready to begin flight-tests within days. The remainder of the 37 aircraft were 60% complete, and the materials and equipment 100% finished, or on order. These were not prototype planes. These were production line planes. They had eliminated the costly prototype method, by means of highly successful preliminary calculations, design work, and wind-tunnel and pre-flight testing. Engineers from other countries found it hard to believe that the first plane off the line had exceeded performance predictions, that not a single line or contour had had to be changed to improve it. Our wind-tunnel tests in U.S. facilities were the only ones to be 100% successful, with no costly snags or hold-ups.

In addition, a valuable research and test program was partially completed. (This and other costs were not inherent in the plane itself, and would never be figured against the cost of the plane in any other country.) The first Mark 2 Arrows, about to fly, had already been fitted with complicated and delicate telemetering equipment to record every phase of engine performance, high-speed, high-altitude conditions, and behaviour of the various components. This was immensely valuable information, which would have been made available to other countries, who have not yet solved these problems. North American Aviation, which is designing the F108, had given our engineers entry to their plant, something they did not give to other firms. We had a vast amount of information which they did not have.

When Convair designed the F102, they tried to eliminate the prototype and begin with an assembly line, as Avro did. The F102 was designed to fly at Mach 1.5. When it came off the assembly line, it would not fly faster than Mach .95. The whole plane had to be redesigned, and the extremely expensive production line, tools, jigs, everything scrapped and rebuilt. Avro was successful where they had failed. Even the CF100, designed to be sub-sonic only, so far exceeded specifications, that it has been flown supersonic. These things are never told to Canadians. This kind of careful and successful work has resulted in planes which are cheaper and better. But even when they are five years ahead of anything else available, even when they exceed specifications, even when produced in less time, at less cost, we are told they are 'costly failures', that we must throw the whole investment down the drain and buy American, 'because we cannot afford it', and they can do it better.

So reports have it that Ottawa is now considering the F106, or even the F156N, among others. They are not remotely comparable to the Arrow, and will not do the same job at all, but they do have one advantage. They are made in the U.S.A., so there will be no 'pressure' brought to bear on us, if we decide to spend our money on them; no press campaign to show how we really throw our money 'down the drain' - and out of the country altogether.

In July, 1957, an article in Maclean's stated: "According to one English technical writer, the CF105 is four years ahead of anything in its class in Britain, and two years ahead of anything comparable in the U.S." (By the latter, he was referring to the F106, not then flying.) In October-November 1958, Blair Fraser confirmed the fact that even when the Arrow program was well on its way, the U.S. and U.K. stated 'that they were not then designing and did not intend to design' anything comparable to the Arrow. Since the Arrow was produced in less time than any comparable plane in the West, (in spite of delays caused by the Government and Air Force), how have they produced something better now? They haven't.

We hope Mr. Pearkes knows what everyone else knows about the F156N, that 'new', cute, little plane which was on the front pages recently - as a plane 'designed for the first time, expressly for our allies in the smaller countries (sic)' - according to the President of Northrop. Do they know that the small, slow, little thing is a converted trainer which was developed five years ago - for the USAF (not for 'our allies') - but not quite acceptable, and never ordered into production - until revived now to sell to suckers like us? Northrop needs business. It is a company with a record of bad design and failures. But to keep it in business, the U.S. government even took a contract away from another company recently, and gave it to Northrop, even though their price was much higher. The U.S. government accepts its responsibility for the orderly continuation of work, and knows how important it is to keep together the design teams which have been built up, even in one of the less efficient companies. When the Arrow program was laid down, Avro had two alternative designs. One was for a single-engine, single-seater plane. The other was the twin-engine, two-man interceptor which later became the CF105. In consultation with the USAF, the RCAF decided that the second type would be the type needed for the defence of the far north. Two men were essential for handling complicated navigation and fire-control systems. Two engines were needed for a margin of safety on Arctic patrol. In any case, the USAF indicated that, if a plane of the first type were required to meet other needs, they could modify the F102, if necessary. At that time, many people in the U.S. and U.K. were going through the 'missile jitters', ready to discard interceptor aircraft. (Mr. Pearkes has just caught them. He didn't have them last summer, when he said there would be a need for manned interceptors for many years. Or has he not been talking to his advisers, since the Government told them to shut up?)

Neither the U.S. or U.K. had anything like the Arrow then, nor planned any for several years. Then they began to re-assess the situation, and both of them changed their minds, and began to plan on interceptors again. Having heard via the grapevine, of the Arrow's excellent design, its unusually successful wind-tunnel flight-testing and high performance potential, the American Aviation industry began to take notice. They suddenly realized that this might be another 'Avro Jetliner' and catch them flat-footed.

The American Air Force laid down requirements for the F108, a supersonic interceptor. To design a brand new plane takes years. It is still in the design stage. The cost will be far higher than the CF105. For Norad's requirements, they have realized the Canadians were right, Arctic interceptors need two men and two engines. But the F108 will not be available for several years.

Convair meanwhile, modified the F102, to create the F106, purely a stop-gap plane. It cost \$150 million just to 'modify' (not design) the existing F102 and its existing production facilities. In cost, that would be the equivalent of spending \$150 million just to 'modify' the Arrow Mark 1. Canadian newspapers to the contrary, Americans and American trade magazines frankly admit that the F106 is not comparable to the Arrow, never designed for the same purpose (modifications have their limits) and quite inadequate for the requirements of Norad. It has no future development possibilities. Further production has now been cancelled. However, it has been successfully used by our Canadian press and government to help kill the Arrow. Now they are trying to sell them off to their allies, as they do with so many of their obsolete, unsuccessful, or just surplus planes, at dumping prices - to the suckers.

Mr. Fraser, along with the rest of the press, dismisses the Arrow as an obsolete aircraft, and then recommends even more obsolete planes 'such as the F104 and F106,' both good enough planes for their purpose, but not in any way comparable to the Arrow, and never designed to fulfil the same function.

The Arrow's tests have far exceeded predictions and specifications. Its performance per given engine has not been equalled anywhere. In contrast to the distortions and attacks in the Canadian press, and the spurious arguments used by the Government to kill it, here is an American opinion. Aviation News of November 10, 1958 said:

"Arrow is bettering its performance predictions. Estimates are that the Orenda Iroquois engines will give the Arrow a top speed of better than 2000 miles per hour, or in excess of Mach 3 at 40,000 ft. and above. The price will be 3.6 million per aircraft, for 100 Arrows as of now. Speculation is that it will be difficult for foreign governments as well as that of Canada to turn down a Mach 3 aircraft that is flying in early 1959. This would be several years before other Mach 3 aircraft now in development, and would give Canadian industry an achievement that could not be ignored."

Except by Canada. We can ignore our own achievements better than anyone else.

On September 23, Mr. Diefenbaker said: "The Arrow aircraft and Orenda engine appear now to be likely to be better than any alternative expected to be ready by 1961. It has thrilled us with its performance, its promise and its proof of ability in design and technology". In February, he scrapped it to prevent the first Mark 2 from ever flying. First the Jetliner, in Civil aviation, and now the Arrow.

Canadian Aviation, November 1958, had an article entitle 'Shelving the Arrow is bad military, economic medicine - West's most advanced interceptor may be last token of Canadian political and technological independence'. In this article it gives further comparisons of the capabilities of the Arrow as compared to

other (American) defence weapons. (Note that all the weapons mentioned are effective only against the 'manned bomber', precisely the same threat which Mr. Diefenbaker and Mr. Pearkes say no longer exists to justify the Arrow. Yet these are the weapons we are now buying or considering.)

"Ceiling - Bomarc - up to 100,000 ft. (some figures quote 75,000 ft.)

- Arrow - well above 60,000 ft. plus the height of missiles fired from the plane at this height" (new ones will have a range of 6 miles). "It thereby matches the Bomarc's kill altitude. The Arrow, in addition, carries up 6 to 8 missiles on each flight and can bring them back if not used.

"Speed - Bomarc - about 2,000 miles an hour". It cannot however, be launched until the target has been identified, course plotted, and decision taken to destroy the target. Once fired, this cannot be altered, new factors allowed for, or the Bomarc recalled. Its gear can be jammed by enemy counter-measures.

- "Arrow - without operational engines, has already climbed at 1000 miles per hour" (it actually climbed at just under 1400 m.p.h. and was not full out). "With Iroquois engines, it is expected to reach 2,000 m.p.h. It has proven capable of achieving more speed than any other airframe design for any comparable amount of power available".

Further, it can take off at once; can receive course plottings while climbing, can identify, make decisions, change course, and think its own battle. It can then fire its missiles, or bring them home along with itself. The Bomarc does not come back.

Another important factor, seldom mentioned, is the 'rate of climb'. That of the Arrow is very high, compared to other planes - i.e. it can get up there faster. This was also true of the CF100, even though a much heavier plane than similar American planes.

"Range - Bomarc - most advanced version - about 400 miles". (Others, about 250).

- "Arrow - conservatively estimated at about 1500 miles" (As with all aircraft, even the F108, these figures, as well as maximum speed, vary greatly with the type of mission being flown. Other sources have put the Arrow range at more nearly 1000 miles, the same figure which has been given for the F108's expected range. In any case, it far exceeds the figures given by Mr. Diefenbaker to Parliament, which were ridiculous.) "It can, moreover, attack more than one target on each flight. Each of its 6 to 8 missiles is capable of killing an intruder. In the North American defence concept, margin

of range is critical".

The Arrow has been designed to operate either 'with or without Sage (ground control radar). It can operate quite independently of it. It can also be phased into it if required. Mr. Pearkes has been well-informed of this, but continues to state the opposite.

Canadian Aviation goes on to say:

"The most critical phase of our type of defence in the current cold war, (i.e.) denying the enemy the advantage of surprise, is a constant watch as to whether an attack is actually taking place. Radar systems and missiles cannot tell us this. The most critical phase of the watching must be carried out by manned aircraft with the ability to intercept the unknowns and make positive identification. Until the interception and identification have been completed, missiles and bombers must remain in tactical and strategic reserve."

As to other fighters -

"The CF105 has been widely recognized as the most advanced interceptor in the free world at its present stage of development. The belief that the U.S. has an aircraft with the performance capabilities of the CF105 presently in production, is erroneous. The F106, the latest of the American Century series now in production, has been singled out in a number of reports and commentaries following the Prime Minister's speech, as comparable to the CF105, and available to Canada. This is not the case.

"The F106 is a single-seater, single-engine plane, therefore lacking the twin-engined CF105's margin of safety for long patrols over isolated areas which are the everyday duty of Air Defence Command squadrons.

"The CF105 with the same amount of armament as the F106, is far above the range of the F106. Operating at the same range, it can carry much greater fire-power. It has a much greater intercept and kill capacity. With two more powerful engines than the F106's one, it is much superior. The F106 was not designed for and cannot fill Norad's requirements for a long-range interceptor".

The CF105 can and does, but government and press have told us that the F106 is equivalent to the CF105, and 'just as good', therefore we do not need the CF105.

"That Norad's chiefs and defence planners are still seeking a plane similar to the CF105 is proved by the development work now begun in the U.S. on the F108, a twin-engine, two-man interceptor. It is still in design and engineering stage, therefore three or four years away from production, and several more years away from operational service. The CF105 would be available for squadron service in 1960".

'NO SAGE IN EUROPE'? - SO WHAT?

Regarding our commitments to Nato, the 12-squadron RCAF division in Europe, General Loris Norstad said: "Generally speaking, Canada's NATO partners have more advanced fighter planes than the RCAF". The RCAF trained German pilots on the Sabre. The German defence ministry has now bought Starfighters, making the Sabre their trainer. The Sabre, with the CF100, is still the RCAF's chief operational plane in Europe."

On February 14, writing in Globe magazine, Mr. George Bain, foreign correspondent, says: "That is the (urgent) question - of the re-equipping of Canada's 12-squadron air division in Europe. It is now flying F86's and CF100's, both of them useful aircraft, capable of having their usefulness prolonged by being modified to take guided missiles, but both of them nevertheless, aircraft already well advanced into obsolescence that have an operational usefulness of perhaps three or four years yet having no replacement in sight. This applies whether or not the Government decides to place a production order for the Avro Arrow. According to Defence Minister, George Pearkes, the Air Division wouldn't get the Arrow anyway. One reason is that the Arrow is designed to work with the Sage ground control system, which doesn't exist in Europe". This statement of Mr. Pearkes, which he has made so often, is pure deception. The Arrow is of course, designed to operate with SAGE, if necessary. It is also designed to operate without it and far beyond it, and completely independent of it. It is designed to carry equipment of its own which completely frees it from any reliance on ground control systems. Mr. Pearkes is well-informed of this. It is not the reason he is not allowing the Arrow to be used in NATO whose requirements it would fill perfectly. If he does not know it, after being so informed he is not to be trusted with such important decisions. If he does know, and is using this lie to help kill the Arrow, by barring its use by our NATO squadrons, he is guilty of gross deception, in a matter vital not only to the Canadian economy, but also to her defence and that of the West. This statement of Mr. Pearkes has been repeated by the press, to prove we can't sell the Arrow or use it for our Divisions in Europe, and Mr. Pearkes has never retracted it. It is reminiscent of Mr. Howe's justification for cancelling the Jetliner - 'you can't sell a plane without orders', when he knew the company had orders on its books. Both these statements, used as they were, are equivalent to an outright lie.

Mr. Bain goes on to say, there are three possibilities: "That our NATO Air Force will be withdrawn entirely, - that Canada will replace manned aircraft with ground-to-air missiles, - that an aircraft of U.S. design will be bought or built under license in Canada to re-equip the Air Division. The first of these is highly improbable." He then goes on to say that if Canada insisted on equipping our Air Force with missiles instead of planes, NATO would have to accept, but "the fact that its first choice was more high-level manned interceptors would not be altered. The likeliest of the three possibilities is that, regardless of the decision the Government takes concerning the home defence squadrons, the Air Division in Europe will get another round of aircraft. They will be American - possibly the Convair F106, or the North American F108, although the 3 or 4 years in which the Air Division ought to be re-equipped might need to be stretched if the latter were chosen". In other words, it won't be available for years.

Apparently then, NATO wants Canada to provide high-level interceptors. The Arrow would be the perfect plane, both as to type and availability. Mr. Bain says the English Electra is not advanced enough, and the F108 will be too late. Only the F106 - and the Arrow - will be available at the right time. Then why not the Arrow? Why an American plane, which will have a very limited service life, which cannot be modified further - a stop-gap aircraft, which the U.S. is discontinuing? There is only one reason. Defence Minister Pearkes has himself deceived the public into believing that because 'the Arrow operates with Sage', it cannot be used by NATO, deliberately neglecting to mention that it can be used by NATO perfectly well, because it also 'operates without Sage'. He does not retract this, and writers like Mr. Bain are forced to base their articles on this misinformation. Since this is not the true reason, why does not Mr. Pearkes tell us the real reason he does not want the Arrow produced? Would the U.S. like to get rid of its F106's to someone else, so they would not lose that \$150 million investment? Or is just getting the Arrow scrapped sufficient in itself?

Since the F106 has been cancelled, we note in the April 27 issue of an American publication 'Rockets & Missiles' that it is now the Republic Aviation Company's F105 which is being plugged for sale to the Nato countries. This plane is a heavy interceptor, almost as large as the Arrow, but with only one J75 engine. It is therefore slower, with far less 'rate of climb', with less missile or armament carrying capacity, and requires longer runways. Speed, and 'rate of climb' are two of the most important qualities in an interceptor. Even the Mark 1 Arrow had two J75 engines. The Mark 2 Arrow had two much more powerful Iroquois engines.

If she can persuade the Nato allies to buy this plane in quantity, the U.S. hopes to be able to bring its cost down to \$2 million apiece. If produced in a quantity of 200 or so, the far superior Avro Arrow would have cost only \$2-1/2 million apiece. That would have provided 100 Arrows for the ten or twelve bases in our Arctic which are already capable of handling a plane like the Arrow. This would have given complete defence coverage to Canada, across our Arctic, from coast to coast, without U.S. interceptors moving in. The other hundred would have equipped our Nato squadrons in Europe, which must be re-equipped, within the next three or four years. The cost of these 200 planes would have been only \$500 million, spread over several years. We understand that the Canadian Government has been investigating the possibility of producing the American F105 in Canada. It has found that, if equipped with a sufficiently powerful engine to serve our RCAF (and NORAD's) requirements for the Arctic, it would cost more to produce than the Arrow, and still be an inferior plane. Perhaps if we had produced the Arrow for our own needs, NORAD and the other NATO countries would have found this out also, and bought it.

It should be remembered that the Government and Air Force were also attacked for deciding to produce the CF100 in Canada. It was said then that American planes would be better and cheaper. Neither of these statements has proved true. The CF100 and Orenda engine have cost Canada less than any equivalent we could have bought even if it had been available. On this subject, Canadian Aviation, September, 1958, says: "There is no evidence that first line equipment, while it is still first line equipment, is available at substantial savings in either the United States or Britain, over the cost of producing weapons tailored to Canada's particular need. On the contrary, experience with the Avro CF100 and its Orenda power plants was that the Canadian-produced aircraft cost less than comparable U.S. and U.K. units."

Mr. Bain says that, in spite of the coming need for re-equipment, the Canadian squadron is the "best air formation in Europe. When No. 1 Air Division got them, its Sabres with Canadian-built Orenda engines installed, were the best there is. Testimony to the worth of the CF100's, of which there is one squadron on each of the four bases, is that they were supplied at the direct request of SHAPE. The CF100's together with the RAF Javelins, make up the only all-weather component of the Nato Air Forces". Supporting the claim that the Canadian Air Division is the best in Nato a claim endorsed by others are these facts: It holds the air gunnery championship, with more than double the score of its closest rival. The U.S., acknowledging that it could not win, did not enter. It is the only formation in Allied Air Forces, Central Europe, that has come up to the serviceability requirements set by that Command. "It does more flying than any comparable formation in the command (chiefly) because its good serviceability record permits it. (This) contributes to pilot skill, which in turn contributes to winning gunnery championships".- and battles.

This is not surprising to anyone who has seen the CF100 flown into American bases, and seen comparable American planes arrive, with spare engines, spare parts, and endless work to get flying, while the Canadian crew sets down its CF100, goes off to bed and flies the next morning. The CF105 was designed to have similar reliability and all-weather characteristics. These would seem to be rather vital if war should come. So why can we not use the Arrow for Nato, Mr. Pearkes? Why can we not sell the Iroquois engine to France as requested? Why can we not also use the Arrow in the Arctic, for Norad, in view of the testimony given by General Earl Partidge to the Senate sub-committee? If your Government had put it into production, and the Mark 2 Arrow were flying now, there is no doubt at all that the U.S. would have to buy it. Was the pressure put on by the American industry lobby simply because it was not made in the U.S.A. and they would not allow a Canadian plane to take over such an important role? Or did your Government have more personal reasons of its own for preventing its sale? And because you can't say this out real loud, you have been using every other kind of pretence to hide the real reason?

A LESSON IN ECONOMICS

'We can't sell the Arrow' - although it was not yet even in production to prove whether we could or not. We have been told that it cannot be used by Nato, although it does operate without SAGE, in spite of Mr. Pearkes statement to the contrary. So we are told that we 'can't afford to design and build a plane for ourselves'. Canada is too poor.

Since authorities agree that manned interceptors will be needed for many years (and even our Government now admits it), and since the Arrow is indisputably ahead of any comparable interceptor, what happens if we kill it and the design part of the Canadian Aircraft Industry - as we killed the Jetliner and the chance of world leadership in the Civil Aviation field ten years ago? And what possible arguments can be raised for doing so?

There are two alternatives:

- (a) We buy American planes instead of the Arrow;
- (b) We build or buy American missiles, and use them to supplement U.S. aircraft squadrons which will take over Canadian defence completely, and reduce our RCAF to second-line groundsmen.

If we buy American planes, of course we could not 'afford' to build them here. The only difference in cost between building American-designed planes, or designing and building our own, is in the design costs, plus the cost of whatever tooling may already have been designed in the U.S. In the case of a replacement for the Arrow, we cannot save this cost, because all this had already been done, and paid for. The design was done, even to the Mark 2 version. The production line had been designed, built, set up completely, and had already turned out five aircraft. There were already five more, of the Mark 2 version, much more powerful than the first ones, almost ready to fly. One was ready to begin flight tests the week after February 20th. The design, tooling, jigs, machines, production line, ten valuable aircraft, and the parts and partial assembly of 27 more, had all been done, built and paid for. All it would cost us to keep them rolling was the cost of production - labour and materials. Even with the design of an equivalent plane already done in the U.S., we would still be 'in the hole' by quite a large amount before we could get it to the stage the Arrow had already reached. We would still have the cost of setting up a complete production line, and manufacturing all those planes and components, as well as production costs of materials and labour, in order to get them rolling. Obviously, it would cost more than for us to continue with the original plane, already on the assembly line, the methods established and men already trained to build them. Can anyone in his right mind show how we would save any money by scrapping everything we already had, and duplicating the work and costs, to tool up for another plane, no matter where it was designed?

In Maclean's editorial, they dismiss 'economic factors - which some people seem to think should have entered into it' most sneeringly, although that has been the chief basis for the attack on the Arrow program. If this question were decided on 'purely military grounds', the Arrow would be immediately ordered into production. There 'is nothing else now available to take its place'. A purely military decision would be - which aircraft is best suited to our needs and Norad's needs.

On such grounds there would be no military hesitancy in adopting the Arrow. Nothing else approaches it, according to the testimony of the Chiefs-of-Staff of Norad. A purely military decision - would not scrap interceptor aircraft in favour of missiles, since every expert has said that we will need such interceptors 'for the foreseeable future'. A purely military decision - would not permit the misinformed articles and untrue statements of the press and Government. A purely military decision - would not be thrown into public debate at all. It would be decided on the basis of the 'most expert military opinion and advice available', as a result of reasoned and logical debate, with access to all available information, classified, and unclassified. As it is, the Arrow has been cancelled against the best military advice; not in serious debate, but in the emotion and hysteria of a public storm of misinformation and attack, on every basis except 'military needs'.

If we cannot afford to build the Arrow, already in production, we obviously cannot afford the higher costs of scrapping all this, and tooling up from scratch to begin production all over again of a different plane. So we can only afford to buy planes made in the U.S. We have proved that they would be inferior. Let us see whether or not we would save all those millions which Maclean's and our Government tell us we would.

We are told that we cancelled the Arrow because of cost. But we could have produced a hundred from now on, at a price of less than 3-3/4 million each. If we produced 200, the cost would have dropped to about \$2-1/2 million each. This is pretty cheap for an aircraft of the high performance of the Arrow. There aren't any others around for that price that could take its place. In the matter of costs, an even stranger series of contradictions turns up in statements made by the Government and press. Mr. Diefenbaker cited the Bomarc as a replacement for the Arrow - a whole hundred Arrows to be exact. The cost he gave to the public for 100 Arrows, and designed to frighten them out of their feeble wits, was variously, - 1,200 million, 780 million, and, when someone pointed out the Company's pledged price, he admitted it would not be more than 375 million for 100 Arrows. He has, at various times, given all these figures as the cost 'from now on', exclusive of costs to date, at other times admitting that they included these costs, at least the higher estimates. He is now edging the price up again. On March 9, at a press conference, he said the Arrow would cost \$780 millions. (He admitted in Parliament that this includes a research and test program - but not in public.) At the price given by the Company for a quantity of 200 or more, that would pay for more than 300 Arrows.

He then said publicly, on TV, that \$20 million paid for Bomarcs, would 'equal the protection of the same area' as would be provided by \$780 million worth of Arrows. For incredible distortion and outright dishonesty and pure deception, this would be hard to beat.

- One base, or squadron, of Bomarcs, complete with missiles, will cost, it is estimated, \$120 million. Two bases will cost \$240 million. If Canada is paying one-third, as we have been told, that would cost us \$80 million. In fact, this figure was given in Parliament but, to the public, Mr. Diefenbaker says '\$20 million'. According to estimates we have heard, \$20 million will be about the cost of building in the roads and clearing the sites for 2 bases. If this is our total contribution, it is so paltry as to be meaningless.

- One base, or squadron, of Arrows (12) would cost approximately 45 million. The Arrow returns. It can perform many functions, is more flexible, can attack more than one target on each trip. In spite of Mr. Diefenbaker, who again juggles figures, its range is estimated at more than twice that of Bomarc, its kill ceiling, with its missiles, at least as high, the speed of the Mark 2 as about the same. The total cost of one squadron of Arrows, is just over one-third of the cost of one squadron of Bomarcs, or Canada's share of each base. The Bomarc is a one-shot missile. The Arrow is not.

- 780 million dollars would buy between 200 and 300 Arrows, depending on which quantity price you use. This would provide at least 17 bases, or squadrons. That would be sufficient to protect not only the East, but to go all across Canada, covering even the West and also to supply our squadrons in Europe, with some left over to sell to NATO. If we can expand our Western airfields 'for U.S. interceptors', as Mr. Pearkes now plans to do, they would certainly be able to accommodate Canadian squadrons of Arrows. So would our 12 existing bases across the Arctic.

Is this 'equal coverage' to that provided by \$20 million spent to clear the roads and sites for 2 Bomarc bases in the East - to defend the SAC?

- Ten Bomarc bases at least would be needed to equal the protection of ten Arrow squadrons, and are estimated as the minimum required to give any kind of coverage for the lower edge of Canada, if used for Canadian defence. Ten Bomarc bases would cost \$1,200 million dollars. Each base is equipped with 60 one-shot missiles, good for one mission only - cost \$400,000 each.
- Ten Arrow squadrons, or 120 Arrows, would cost about \$450 million. The spares and missiles would not cost as much as Bomarc extras and replacements. If the missiles were taken aloft and not used, they and the Arrow would return to be used again. One squadron of Arrows could fly sixty missions in just five flights each, and be as good as new for further missions. Sixty missions flown by a Bomarc base would leave it with none, and a replacement cost of \$24 million.

Of course they do not serve the same purpose at all, at any price. All authorities agree that they are for point defence only, to supplement the first-line defence of interceptors like the Arrow, and to give the SAC more time.

No comparable price has been quoted for the planes Canada is said to be considering, but we do know their performance. Compared to the Arrow, they would be utterly useless for Canada, and a waste of money at any price. Of course, their performance figures, as well as the price, have also been distorted, as compared to the Arrow. One plane, considered recently, as a replacement for the Arrow, was found to cost more to manufacture than the Arrow, and was an inferior plane. Since even Mr. Diefenbaker and Mr. Pearkes seem to be quite unable to assess performance data, and the press has been even worse, it is no trouble to fool the average Canadian, and deceive him completely, as has been done.

The price per plane, is, incidentally, only the 'actual' price tag, and only represents the beginning of the difference in cost to the Canadian taxpayer of building in Canada, or buying planes or missiles outside the country. The 'percentage' of this 'actual' cost which has to be met by Canadian taxpayers gives an even more unbalanced picture. The Financial Post, September 20, 1958, estimated that for

every hundred million dollars spent on the Arrow in Canada, 65 million dollars comes back to the Government directly in the form of taxes, corporation and income, from the industry itself. This leaves only 35 million to be paid by the rest of the Canadian taxpayers for one hundred million dollars worth of aircraft. For every hundred million dollars worth of defence equipment purchased outside of the country, it costs the Canadian taxpayers exactly one hundred million dollars, there is no aircraft industry to pay anything back in taxes, and we have lost all the plant, equipment, design teams, know-how, and subsidiary industrial development (already contributing so much to Canada), for which we have already paid over \$300 million. This is not all. Even the \$35 million it costs us does not go out of the country. It goes for wages, salaries, homes, cars, clothes, food, everything which keeps our other industries going, even to our mines and farms. Furthermore, it keeps thousands of our top-notch designers, engineers, research workers and skilled men of many kinds, working in Canada, instead of leaving for the States. It has built up and would continue to sustain a large electronics industry of very great importance to Canada's future development. It finances research, not only in electronics, but in processes, new materials, high-strength alloys, etc., all of which becomes available to other Canadian industries - and not just at the pleasure of the U.S.A. A plant manager in Western Ontario said that you could tell when a small plant had received an order for components from Avro. Its standards immediately improved from stove-bolt standards to those of high precision capable of handling the latest precision work. Few of them had ever before heard of working to ten-thousandths of an inch. Avro itself has helped train these companies to handle the new type of work. (In bidding on orders for American components, there would be no chance to learn as you went, you could either compete or lose the bid.) In addition to all this, we get a hundred million dollars worth of aircraft for only 35 million dollars, approximately. This may not be important to anyone disinterested in the aircraft industry, as Maclean's implied, but it certainly affects more people than the Reeve of Toronto Township, or a few local housing contractors.

By cancelling the Arrow, we lose the major part of our aircraft industry. Of the remaining firms, deHavilland is a small firm employing relatively few people on small commercial planes, a very limited field. Canadair is an American-owned subsidiary, manufacturing and modifying foreign planes 'under licence'. It is owned by the same American firm which owns Convair and other American firms, so it will probably be kept going, if Canada continues to build any planes at all. If she doesn't, even that plant will have served its purpose. Even now, at least two hundred of its men are 'on loan' to the American company, as there is nothing for them to do at Canadair. (Mr. O'Hurley has told us this is a "defence sharing contract". It sounds better.)

We also lose the important research and development teams of the large electronics industry, which Avro has encouraged and helped to establish in Canada. There are about 600 other small firms who depended mainly or wholly on aircraft design and development to give them a start in this country. Their highly trained and skilled men are doing vital research and design, which will eventually extend to many other industries. These will be lost to Canada. Don't try to fool anyone that manufacturing American planes or American electronics components 'under licence' would keep these men here. There would be no work for them. They can only go to the States, which knows enough to use their kind of skills.

We also lose the millions of dollars which would be returned in taxes from the industry. In addition, Avro paid about \$80 thousand a year in Municipal taxes alone. The good Conservatives in Peel County and Toronto Township are now making bright little speeches, saying that this will not affect them at all, but how they fought in Toronto Township, to keep the assessment a few years ago - when they thought they might lose it!

MOST IMPORTANT OF ALL, AND NEVER MENTIONED, IS THE FACT THAT IT WILL COST THE CANADIAN TAXPAYER MORE ACTUAL DOLLARS JUST TO TERMINATE THE ARROW CONTRACT AS IT WAS DONE, THAN TO HAVE FINISHED THE 37 ARROWS ON ORDER, AND TAPERED OFF THE DEVELOPMENT IN AN ORDERLY MANNER.

With even 60% of the cost returning in direct taxes, (to say nothing of all the other benefits to the whole community and the country), even a hundred Arrows, even if they cost \$375 million, would cost us as taxpayers, outside of what the industry itself paid back, just \$150 million. That is just about what contract termination charges to Avro, Orenda, and all the sub-contractors will cost.

Instead of saving us money, therefore, the Government has lost us more money than it would have cost us to finish the contract. We have also lost:

- five complete aircraft, already flying, and highly successful;
- five Mark 2 aircraft, the first ones ready to start rolling off the assembly line and begin flying in February; now being cut up for scrap;
- 27 other aircraft, sixty percent complete, and almost one hundred percent paid for;
- a total of 100 Arrows we could have gotten for almost the same money;
- a complete production line, tools and machinery, designed and set up to turn out planes on a production basis, no further tooling required to produce them as fast as required; (how many Canadians know what a production line such as this is like, or the precision, work and cost involved? It is the tooling up which is the most expensive part of any production program);
- expensive research and testing equipment, a research program and already collected data worth millions, partially completed, all the immensely valuable information only partially evaluated, and now a total loss;
- a healthy industry, our largest - and almost our first - focal point for research, development and industrial expansion, already attracting attention, prestige and - as a result - top-notch men and industries to Canada, as nothing ever had before. (Prestige is not altogether useless; it can be a very valuable thing for a country, if based on solid achievements.)

Avro did not just build aircraft and engines, good as they were. It was also a research and development centre, more extensive than N.R.C., which returns no product, industry or export business. There is no more reason why these costs should be charged up to the Arrow, than for charging to it the costs of N.R.C., or of University or medical research. At least 70% of all the research done in Canada was

done at A.V. Roe. (There is not very much left.) Avro's research and development work was available to any industry anywhere in Canada, at no cost. All of this is lost, for which we have already paid our good money, and received good value. Along with the money invested to date, we have thrown away everything it bought for us.

- We have lost the design teams built up over twelve years with great difficulty, and the know-how we were so often told we 'didn't have'. Oh yes, we have lost them. They won't come back again. Their most frequent comment in the past few weeks has been 'Never again, not in Canada!' Neither will they be proud ambassadors of Canada in the U.S. or Britain. One man spent the week of February 23, listing the best men in his office, and their qualifications, and trying to sell them to the highest bidder. American companies kept phoning all week. They had recruiting teams in Toronto as early as Saturday morning, February 21. They must have known before Avro did. Bendix Aviation Corporation would have taken Orenda's whole team of top men. Continental Aviation, which had no man-power shortage, called with a list of men (by name) whom they wanted before someone else got them. Almost every company in the U.S., aircraft, electronics, or suppliers, were trying to get them. One company which had never before hired men from outside the country, as all their work was secret, had broken down their work into components, in an effort to use some of the Canadians from here on work which could be declassified. North American Aviation, whose doors are usually closed to other companies, has long admitted engineers and designers from Avro for consultation, and has taken fifteen of them. They are now hiring more. They are working on the F108, which is still in design stage, many of the problems still unsolved, which had been solved by Avro on the Arrow. These are the men Mr. Diefenbaker kicked in the teeth; that he and the press insulted all across Canada. These are the men who make up the 2,600 requests for visas since the first of the year, from the Toronto office alone.

TOO POOR TO DO THINGS? OR TOO POOR BECAUSE WE DON'T?

"The nation which, in this twentieth century, cannot keep her scientists and engineers fully employed, is on the down grade".

There has been a great noise recently over the need to expand our Universities, to train more scientists and engineers in Canada, to compete with the growing strength of Russia and China. Why should we? We are losing even those we have to the U.S., and have been doing so at an enormous rate, for years, simply because we have had so few jobs, so little work that is vital and interesting, to keep them here, and pay so little for the few jobs we do have. To pay the costs of educating more of them, is simply another free gift to the States, since most of them must go there as soon as they graduate. They are lost to Canada forever. This may not matter to Maclean's, or to Mr. Diefenbaker, who are quite disinterested, but it should be of vital concern to Canada. After the cancellation of the Astra-Sparrow program last fall, the American consulate had on one day completely run out of visa forms and had a backlog of 400 requests. Many had already left Avro because of the uncertainty, caused by attacks in the press, and the Government's indecision, and the lack of planning. Now they have to go. The ads in the papers are not from Canadian companies. U.S. firms have been trying to get our men for a long time, and here they are, a free gift from Canada. They know exactly what they want, and can pick and choose them, now.

Since 1945, there have been 7400 engineers graduated from the University of Toronto alone. There were also engineers graduating from other Universities, many who have come from other countries, and the thousands who were already in practice. But there are at present only about 17,000 engineers in Ontario. Since the Department of Aerophysics was set up at the U. of T. after the war, at the expense of the taxpayer, they have graduated 45 with a Master's degree, and 30 with a Ph.D. Of these, about 75% are now working in the U.S. It costs quite a bit to give a man five to seven years of expensive education, and then give him away to another country for free.

The largest employer is the Ontario Hydro, with about 900 engineers. Avro and Orenda were next with about four to five hundred altogether. Approximately 70% of all research work done in Ontario was done by the teams at Avro and Orenda, as well as the largest proportion of original design and development work. A very large percentage of engineers working elsewhere, are doing work that could be done by a Ryerson graduate. There are very few jobs which offer any challenge to their ability, or provide work which is original or stimulating. Many men in these other firms have admitted time and again that they would be way out of their depth doing the kind of work which was taken for granted at Avro and Orenda. Engineers from Avro and Orenda, who have been intensively investigating available work in Ontario, have come to the conclusion that any firm in Ontario, doing the type of work handled as routine by the average engineer at Avro or Orenda, would demand a Ph.D. to do it. In general, this indicates how low is the standard type of job available. Of course, there are only a few doing work requiring a Ph.D., even by their standards.

Perhaps this explains why such a large percentage of our engineers in every field leave every year for the U.S. The only alternative for most of them here is an utterly boring, routine job, with no opportunity for creative or original work, let

alone research. Why? Perhaps the answer was found by the fully-qualified engineer who visited 37 'Canadian Firms' in one week. All require engineering and design for their products. The answer was the same in every case: "We do not hire engineers in Canada. All our design and engineering is done by the parent Company - in the U.S." Perhaps it is also because Canadians have the same attitude towards this as towards everything else. When there is a big job to do, they call in an American firm because, of course, 'they can do everything better than we can'. So our engineers must go to the U.S., join a firm there, and come back here to do our work, as Americans. One Canadian firm we know has handled large jobs in England, South America and India. Asked why they went so far afield, their answer was: "There is very little work of any importance for a Canadian firm in Canada. An American firm is called in for every big job. We have a high reputation only outside of Canada". That sounds familiar to anyone who has followed the story of the planes Canada has produced, - the Jetliner and the Arrow, and the Orenda and Iroquois engines, and the CF100, and even the Caribou and others. Hundreds of Canadians have been working for years in the U.S. on American planes. Now there will be hundreds more. There is no other way to work on planes for Canada. We will be using the planes they make, but they will not be here. So perhaps we should let the U.S. take over the expense of our University system as well, since they get the benefit. We could keep our teacher training faculties, and our Commerce and Finance (we have plenty of Insurance companies), and Banking, Mining and Agricultural courses, but that is about all.

One man making \$5000 a year at Avro (less than most Toronto school-teachers), had such qualifications that he was offered \$10,000 a year in the U.S., and the cost of getting whatever degree he wished from Stamford University. They spent thousands to come up here to get just three men they couldn't find in the U.S. Another from Avro, a Ph.D., now has a well-paying job on the staff of M.I.T., the most outstanding school of its kind in the U.S. Another chap brought his parents up to Canada with him when he was only 17, to be sure of getting into the RCAF; stayed with it instead of joining the USAF later; returned to Syracuse University, got his degree, and came back to Canada to work for Avro. He was convinced Canada had a great future. He married here, had two children, owned his own home. He spent a great deal of his spare time with youngsters in the Air Cadets, and other community work. He has now left. It broke their hearts, but as he said, he had no choice. He came back a few weeks later, with job offers from the U.S. company which now employs him, for a few more of the ones Canada no longer wants.

We could list similar stories endlessly. These men have been turning down these offers for years, to stay in Canada, proud of what they were achieving and creating as Canadians. These were the 'overpaid' people at Avro. Land-speculators and car-salesmen have it better - and easier. A man in this country only three years, is making between 8 and 10 thousand a year selling real estate. I understand they take a three-month course. They create nothing. Few of these men wanted to leave. They wanted to help put Canada in with other countries, large and small, nearly all of whom are ahead of us in these fields.

Now they are bitter, completely disillusioned about Canada. It isn't the first time it has happened in Canada. There was the Jetliner. There were many others. A little item on Canadian Aviation History recently said: "The twin-engine bomber 'Canada' was designed by Curtiss Aeroplanes and Motors Ltd., Toronto, headed by J.A. McCurdy. At least 12 were built during 1915-1916. They had passed all tests when production was stopped".

Enough said. We have been trying for a long time, but the pattern was set in 1916. Every time our aircraft industry begins to get somewhere, or produces something outstandingly successful, civil or military, we get frightened and throw it away, and kill the industry, with nothing to take its place. Can we 'afford' to lose all this? Russia considers her scientists and engineers more important than real estate dealers and car salesmen. Perhaps that is one of the secrets of her success.

Judith Robinson, in the Toronto Telegram, February 10, said: "A final decision regarding production of the CF105, the Avro Arrow, will not be announced until March 31." (So they said.) "But in Toronto the - shall we say eagles? - are gathering this week. In Toronto newspapers, American aircraft producers and their subsidiary aviation engineering firms are advertising for engineers and technicians. Already from U.S. firms, groups of executives have moved into Toronto hotels and passed out the word that they are there to interview top-flight aviation experts who may wish to consider leaving Canada for more certain and rewarding employment in the United States. One such group started interviewing Monday and found the material offered so good and so plentiful that it has prolonged its stay until Wednesday night instead of leaving today.

"By the time it and a couple more delegations like it have come and gone, it may not matter very much what the politicians decide in Ottawa. The team that designed and built the Arrow in Canada for the defence of Canada will be broken up. The men who invested seven years of their professional lives and their engineering genius, enthusiasm and skill to the production of the best and fastest interceptor aircraft now flying in North America will write off the investment as lost and leave for the United States.

"Canadians will then be able to put the millions their betters have saved for them on the Arrow into the unemployment relief fund".

But as we pointed out, we didn't save anything at all. The unemployment relief fund will have to find it somewhere else. A note in the Toronto Star, February 27, says that Metropolitan Toronto has added \$2-1/4 million to its relief payroll because of the layoffs at Avro. Really saving money for the taxpayer, aren't we?

The U.S. pays 10% of its gross national product for defence, the U.K. pays 9.3%. Canada pays only just over 5%. This would be fine, if we were doing something better with it, but we are not. Is Canada so much poorer than West Germany or France, both left bankrupt after the war? The money approved by the West German budget commission for purchases and/or licence production of aircraft, amounts to \$512.5 million dollars for one year. Of course, she is buying American aircraft, is even being licenced to build them. If she were not prevented from designing and building her own, she would not be buying them from outside the country either. France, much poorer in every way after the war than Canada, and with a very small area to defend compared to Canada, will be producing the Dassault Mirage III interceptor by September 1960, with a production rate of 9 per month until July 1961. She had been practically guaranteed an order by Germany. But Lockheed, in the U.S., had tooled up for 400 Starfighters. When the USAF cut back its order, Germany 'changed her mind' and bought Starfighters. In spite of this, the French Air Force placed an initial order for 100 of their own French planes, and they did not cancel it just because someone else didn't buy it. They "couldn't

afford" to lose their investment. Even Yugoslavia is now trying to establish its own jet aircraft industry. Sweden already has one. Every other country seems to know that a healthy aviation industry, with its research and development, is necessary for any country which wishes to keep abreast of technological advance; that they cannot afford not to have it. They also know that this is too expensive for private companies to finance alone, so their governments support them, for the sake of the benefits they bring to the whole country.

The Hon. E. Fairclough, speaking at the dinner of the Toronto Chapter of Internal Auditors, April 23, said: "Immigrants are sharing the overhead costs of government, education, transportation and other services. They have offset to some extent the loss of skilled people through emigration; have contributed education and training furnished by their countries of origin.

"They filled gaps in employment when workers were sorely needed in the post-war industrial expansion; even now they are doing jobs which native-born Canadians will not undertake; they have proved a mobile labour force".

This recalls a chapter called 'Another Phase of Immigration' in a book called "Colony to Nation" by A.R.M. Lower. It points out that at various times in her history, Canada has imported cheap labour in large numbers. In every case, it has forced down the standard of living, and has resulted in large numbers of native Canadians, raised and educated here, leaving for the U.S. In every case Canada has been the loser. He points out that in the end Canada had gained very little in population, since 'emigration' had counter-balanced 'immigration'. He goes on to say that the 'emigrants' to the U.S. "included too many young people of energy and good education. To replace them within a single generation called for too great a step in adaption on the part of the children of recently arrived immigrants, however good these latter might be intrinsically. Immigration was proving as injurious for the quality of the population as it was ineffective for the quantity". This is now being repeated again.

Why? Because there is just not enough industry in Canada to absorb both the new and the old. Since the new will work for lower wages in order to get a foothold, the old is forced out to the south. Even among the new arrivals, the 'skilled' immigrants, the ones we have so long tried to attract here, are being forced to move on. Several hundred of them came because of the opportunity provided by such industries as Avro and Orenda. These people do not come unless we have worthwhile opportunities to offer them. Many of them were on the last two ships sailing back to England and Europe again. Many of them were among the applicants for American visas. They are not interested in selling real estate. In any case, in Canada, one is too old at forty. If cheap labour is all Canada wants, there is at least more security back home, for most of them. So they have sold the cars and homes and furniture they were spending their money on in Canada, and left.

But cheap labour which will work for \$20 to \$30 a week is considered by certain circles to be a very fine thing for Canada. Eventually, they will want something better than mere existence, but then we can bring in some more, and they will have to move on to the U.S. It has even been suggested in some quarters that we must lower our wages sufficiently to compete with wage scales in the Far East, or we will lose our markets. (They don't mention that profits are limited there too.) To carry this to its logical conclusion, we shall have to reduce our standards to those of a coolie economy, from which China is now trying to pull herself up to ours.

She found that a 'coolie economy' did not get her very far, that home markets had something to do with prosperity, as well as foreign markets. Perhaps it isn't the 'various ethnic cultures' we are really interested in, Mrs. Fairclough, after all.

Maclean's wasn't quite disinterested either, it seems. They phoned one man from Avro three times, following February 20, telling him they had just the job for him, requiring a man with experience and education. When he finally went down, they offered him this wonderful job, at \$19.75 a week! But, they said, when you really work into it, you can make a lot more than that - even as high as \$28 a week. 'And we only work a 30-hour week here. You would appreciate that'. Well, it's nice to know that people at Maclean's have it so easy. I certainly hope most of them make more than that. I am sure they do. But is it quite nice to take an unemployed man all the way down to your beautiful new building just to insult him?

I don't doubt that Mrs. Fairclough spoke for her Government. I am sure they do not care in the least that these men are leaving Canada. I am sure they are quite happy to be able to force down the wage-rates, and the standard of living, to eliminate industrial development, except for the opening up and sale of our resources, which they call 'industrial development', in Canada.

As we said before, every hundred million dollars spent outside the country, is one hundred million dollars gone completely. Not one cent of it comes back in taxes, not one cent of it helps build up Canadian industry and business to make us wealthy enough to pay a fraction of the cost of our contribution to Nato and Norad. Yet pay we must. We can only afford what we earn. But all our purchases go to build up American industry, to give jobs to her scientists and engineers and skilled workmen, to buy houses and cars and refrigerators and clothes and food for Americans. It goes, above all, to pay back in taxes to the American Government, so much of their defence costs that only a fraction has to be met from the rest of their economy. Every Nato country has to pay its share to Nato defence. But the U.S. keeps all the business. Other countries know that they can afford to build almost anything in their own countries; it is only when the money leaves the country that they go bankrupt. Britain and the U.S. have learned this. So have Sweden, Holland, France, West Germany, and now Russia and even China, to name a few.

Mr. Jack Raymond, in a dispatch from Washington entitled 'discontent in Nato' recently pointed up the general discontent among Nato countries in Europe over this situation, and their economic and military dependence on the U.S. If even these small, war-impooverished countries, poorer in raw materials than Canada, are insisting that they should share the development and production, as well as the cost, why not Canada? Where do we get the money to pay for defence, if not from industry and employment and taxes returned. We get only a dribble by setting up assembly lines of semi-skilled workers to manufacture 'American components under licence'. We have too much of that already. This kind of thing attracts none of the top-notch industry and skilled men Canada 'so badly needs'. We were attracting them for a while. Now they are going home, or on, to countries who know that 'prestige' resulting from outstanding achievements brings a good deal to a country in many tangible forms. But we scoff at 'prestige', and we are already humbly begging the Americans to give us a few crumbs from their huge defence larder, since we have none left of our own.

Mrs. Fairclough's speech, as reported in the Globe & Mail was headed: 'A Nation is Made of People Who Use and Develop its Resources'. She couldn't have been talking about Canadians. We don't use them. We don't develop them. We give them away, and our people as well.

'RABBITS'

If we cannot find a better plane to replace the Arrow, if we cannot afford to scrap existing assembly lines and tool up for another plane, a process which would cost more than to continue with the Arrow, and if we do not buy planes in the U.S., which are inferior, we have another alternative.

We build or buy American missiles and use them to supplement U.S. aircraft squadrons which will take over Canadian defence and establish bases all over Canada, or take over existing RCAF bases, with (as Mr. Diefenbaker has tacitly admitted), military control over these areas. Let us consider the latter, since this now seems the ultimate purpose of the campaign against the Arrow - to first discredit it as an aircraft, then to use missiles as the proposed substitute, and then when the public mind has written off the Arrow, to admit that we do need aircraft after all. But since we no longer have the old 'obsolete' Arrow, we must let the U.S. take over our defence with their own aircraft, as well as control of our missile warheads, and their firing.

The Arrow will, of course, have been scrapped by then - all the fine serviceable planes already flying, and the many partly built ones, cut up for scrap - so that it will not be available for comparison, with other and later planes. This was done before - to the Jetliner, the one survivor which had been flying for nine years in Canada and the States. Now, six Arrows are being cut to pieces with torches. (Nearly two weeks after this had begun, and four days after it had been reported in the press, Mr. O'Hurley, Minister of Defence Production, stated that this was not so, although it was being done on direct orders from his Department. Later in the same day, he retracted this, and said he had 'just been informed that this work had begun this morning'. He later corrected this and other mis-statements, and almost got them right, the third time. Does Mr. Pearkes not trust Mr. O'Hurley to run his own Department? It would be only fair to inform him of what is going on.)

So they are now doing to the Arrow what Mr. Howe did to the Jetliner, Avro's beautiful lead in the Civil Aviation field - scrapped it so that the U.S. will have no competition. And now they ask why Avro does not have a commercial plane to fall back on? This time it is worse. This time there are ten planes, each worth, even at production costs, at least 3-1/2 million dollars. The ones they are cutting up now are also chuck full of very expensive and delicate equipment for the test and research program, which was so important. Grown men cried when the Jetliner was cut up. They stay away from the assembly line now, as they would from a death house. Although it is fairly certain that both North American Aviation and a British company, which are trying to solve problems of future high-level interceptors which Avro had already solved, would give their right hand to get hold of those planes. Mr. Diefenbaker cannot afford to ever let them fly, ever let them out of his grasp. It would make him look like too much of a fool. So they are to be reduced to scrap. The Jetliner is almost forgotten. Soon no one will even remember the Arrow, he hopes, and we can all go back to the farm. Unless it is occupied by a USAF squadron.

A dispatch from Ottawa, September 9th, 1958 states: There are now approximately 8,000 U.S. armed forces personnel in Canada. Most of them are presently manning radar warning and control stations in the North and in Newfoundland. When the facilities are set up for refuelling tankers, this number is expected to increase by

4,000 in the next year or two. The number would increase further if Canada gave permission to the U.S. to establish anti-aircraft missile bases in this Country". This would make quite an impact on this country. If they also move into our (former) RCAF stations, and take over, we will to all intents and purposes be an occupied country, in the same sense as West Germany is (or Poland or Hungary, all of them conquered countries.) We would be a military satellite as well as an economic one, which we now largely are.

On October 3rd, Dr. Norman A. Mackenzie, speaking to students at U.B.C., as reported in the Globe & Mail, said: "Such a change in (defence) policy brings its own penalty. We are becoming unhealthily dependent on another country for the means to defend ourselves!" Some of the implications were spelled out. He warned that the present trend may wind up by placing all Canadian military-scientific research in U.S. hands and forcing Canada's ablest scientists to seek employment with U.S. firms. "In this arrangement, we buy their weapons, we are trained and directed by them, we provide their forces with bases and facilities in appropriate areas across our country". If matters continue in this fashion we may drift into a condition uncomfortably like that of certain Middle Eastern and Latin American countries, which draw their supply of modern weapons from one of the Great Powers and in consequence find themselves bound to support the policies of their armorer on pain of being left defenceless. A nation in that position may be independent in name, but has no real independence in fact. "Even if we manufacture something in return, the money value is not as important as the loss of the technical nature of the work. It is not enough that we supply the U.S. with rifle butts, while it supplies us with guided missiles." (And USAF squadrons.) Yet this is the course that Blair Fraser recommends at the end of his recent series, in order 'to maintain our independence of action', such little as even he admits we have left. It would, on the contrary, eliminate it. (Mr. Diefenbaker has now set us on this road.)

General Macklin, on November 11th, said:

"Even now, Canadian armed forces cannot complement each other in the simplest operation of war. Not one of them can carry out a strategic decision of its own Government without help from some other country. We have an Air Force armed with obsolete jets, strategically hog-tied to the USAF. It has no air transport, strategic or tactical, that can lift the army with its equipment. It has no tactical aircraft that can intervene in a land-battle. The RCAF is preparing to give up air warfare and get right down to earth to fire untested, obsolete U.S. anti-aircraft missiles. It will soon wield no more air power than a flock of common barnyard hens".

Mr. Leroy Pope, in a dispatch from New York (U.P.I.) says:

"Canada's hesitancy over the Arrow fighter plane looks to some cynical Americans as evidence that Canadian nationalism is hardly skin deep.

"Official Washington and U.S. Air Force and Aircraft Industry leaders say it is an excellent bet that the Diefenbaker Government will abandon the Arrow come March 31. Thereafter, it is figured, Canada will have to buy not only the Bomarc missile with its Sage ground equipment, but also will either have to buy a new U.S. fighter plane for use by the RCAF during the next ten years, or turn over the primary defence of Canada to the U.S. Air Force.

"From the narrowly professional point of view, simply adding the whole of Canada to the vast defence perimeter of the U.S. Air Force makes good sense to U.S. generals. They won't say so for publication because the striped pants gentlemen in the State Department would be too annoyed, but privately the military men say - "even if Canada does build her own planes for her Air Force, they wouldn't count for much. The responsibility would soon fall on us in case of real trouble. So why encourage the Canadians to go to all the trouble and expense?"

"Naturally, the U.S. aircraft companies would far rather see their planes man the Arctic defence line than see Canada's Arrow not only manning the Canadian skies, but taking over a segment of the NATO business the Yanks have long regarded as their own preserve."

"If Canada is really determined to have an air force equipped with her own planes, some U.S. observers say, she will build the Arrow regardless of whether the U.S. agrees to buy it for NATO or NORAD.

"But Americans note that so far, the protests in Canada against the proposal to abandon the Arrow do not sound very tremendous. Indeed, those Canadians who say 'We can't afford the Arrow unless the Yanks will buy it', seem to have the dominant, if not the loudest, voices".

(Well, Mr. Diefenbaker did it, and anyone who protested was called a 'lobby'.)

Now, let us consider just what the 'narrowly professional point of view of U.S. general's might be. In her article entitled 'Rabbits for the Eagle' (Toronto Telegram, February 10, 1958), Judith Robinson ties it all together very well:

"But before we agree that Unemployment relief is the better bargain for our money, let us get a few other alternatives straight, for they concern us.

"U.S. defence planners, quite rightly from their point of view, are no more interested in the safety or survival of Canada, as Canada, than the U.S. Attorney-General is interested in Canadian sovereignty. Their task is the defence of the United States and its people. Canada can provide for the defence of the United States three things: a narrow margin of time, distant early warning signals, and rocket bases. Just those three things.

"Manned supersonic fighters based in Canada have no place in U.S. defence plans. U.S. supersonic fighters to combat a second-wave attack with manned bombers on U.S. power and communication centres will, according to plan, be based in the United States. The margin of time provided by Canada makes that possible and preferable.

"True, manned supersonic interceptors based in Canada might be useful in defending Canadian centres from attack; but what U.S. defence purpose is served by defending Canada? If a rocket attack on the United States were to be launched across the Pole and were to succeed in the first round, that would be that. If the U.S. were to survive and launch a counter-attack, the attacker, according to plan, would be driven back from the north half of North America and the initial gain won back.

"For Canada? Don't be silly. For the 'American Way of Life'. Canada as an area of desolation; dead, blasted and contaminated; a no-man's land half a continent deep would be an asset from the point of view of U.S. defence planners. It would provide manoeuvring space; the necessary thousands of empty square miles above and across which two world powers would battle for domination of each other and the sun and moon and stars.

"It is Canada's role in any all-out war that can be foreseen by realistic defence planners looking at things from the Pentagon in Washington.

"Canadian defence planners, no less realistic, see another less dismal role as possible for Canada in the defence of North America. As they see it, the ability to play that role effectively and the possibility of thereby saving Canada from utter destruction in any war of giants would depend on the sort and number of manned fighters with which Canada's northern defences were supplied. The possession of and the ability to produce in adequate numbers a jet interceptor of the required range, speed, manoeuvrability and fire-power might make the difference between utter destruction and partial salvation to Canada in such a war. So what are we doing?

"We are leaving it to politicians in Ottawa to decide, with the help of U.S. Secretary of Defence McElroy, whether we can or cannot afford to produce the CFT05 for the use of the Royal Canadian Air Force.

"..... 'The bald eagle, chosen emblem of the United States of America, lives for the most part on carrion', according to the books, 'but will not infrequently take living prey such as rabbits'. Such as rabbits!"

Fantastic? If you think so we advise you to read United States Military and service publications, releases from missile and space planners, or merely the following from a speech by Senate majority leader Lynden Johnson:

"The United States should strengthen our strategic air force auxiliary, and expand our research and development programmes, speed up the development of the intermediate or intercontinental missiles, strengthen our educational system, provide a top level information service, military planning, establish a new defence weapons development agency, streamline the decision making process, accelerate the nuclear submarine programme, eliminate overtime limitations, increase co-operation with our allies, build shelters and store food and machinery as a precaution against a Russian attack, build as quickly as possible the early warning system capable of detecting missiles".

Senator Johnson goes on to say that control of outer space means total control of the earth. "From space the masters of infinity would have the power to control the earth's weather, to cause drought and flood, to change the time, raise the level of the sea, divert the gulf stream and change temperate climates to frigid. Therefore, our national goal, and the goal of all free men must be to win and hold the ultimate position from which total control of the earth may be exercised".

Whom the Gods would destroy they first make mad!

PAWNING OUR TRINKETS.

A country, like a family, can only afford what it is able to earn. We have given up the return we would get in taxes from producing our own defence equipment in Canada, and the subsidiary industry it was attracting to Canada. We have lost the top-notch men who could spark industrial research and development. Our technicians, our skilled man-power are on the street. The 'skilled immigrants' are leaving, to return home or go to the U.S. We have the highest percentage of unemployment in the Western world - 8.7% compared to less than 3% in Great Britain. So how do we earn the money with which to pay the U.S. for our defence equipment?

The only other source of these billions of dollars would be to sell more of Canada to foreign control than we already have - like the family, unwilling to work to earn a good living, which pawns its possessions one by one, until, when they are all gone, it is reduced to poverty.

Fifty years ago, most Canadian companies were actually owned by Canadians. Only a handful are left that really count. Hundreds have become Canadian in name only. They are now American-owned subsidiaries. Fifty years ago, we owned our forests, our mineral reserves, our water power. Now, try to walk up a forest stream a hundred miles or less north of the St. Lawrence. Hundreds of square miles are posted 'Consolidated Pulp and Paper - Keep Out'. Try fishing in New Brunswick for one of our 30 lb. Canadian salmon. All the streams are posted 'American Fishing Clubs - Keep Off'. Wenner-Gren is being given half of B.C. Our mines are 60% American owned; our petroleum industry, including oil and gas, 74%; our chemicals 51%; our electrical apparatus industry 68%; automobile industry 96%; our rubber industry 88%; our net debt to foreign investors at the end of 1957 was 11 billion dollars. And this ownership is not in the form of loans. We do not just have the original investment to pay back as many other countries do when they acquire development capital. This is either equity or outright ownership, and almost impossible ever to get back. As the companies grow, the American ownership increases. Even industries with Canadian names on their boards of directors are American owned or controlled. Even our banks and railways are subject to American pressure and control through interlocking directorates. Since these are the interests which largely pay the campaign expenses of our two major political parties, even our government can hardly be said to be independent. What else have we left to sell out? We are already an economic satellite, to a certain extent a political satellite, and are fast becoming a military one, as was so clearly pointed out in Mr. Fraser's articles. All we needed was to scrap the Arrow, let the USAF squadrons take over our defence, license our supplies of Bomarc's, decide what weapons we can have, cut off the supply, or refuse it altogether, if they decide that Canada is expendable as a buffer state, and force us to follow their policies as closely as any Russian satellite is tied to Russia. The Americans don't have to use force, they very largely own the country, and our sources of information and propaganda. They simply talk us into accepting the situation. It hasn't been very hard.

Mr. Alan Armstrong, Financial Editor of the Toronto Star, quotes Mr. Ian F. McRae, Pres. C.M.A., to the effect that Canadians buy more fully manufactured goods from outside the country than any other country in the world. He also states that we pay a billion dollars a year for tariffs (a dollar a week for everyone in Canada). Our other Canadian industries are so inefficient that they must operate

behind tariff walls of 20% to 50%, paid for by the Canadian consumer. And they still complain that they can't compete with even the U.S., in spite of much lower wages. Has anyone protested this cost to the Canadian consumer and taxpayer? We get little in return for it except higher prices. It hasn't increased the efficiency or quality of Canadian products, or built up as much progressive Canadian industry as Avro's Arrow program has, for just over \$300 million over a five-year period - \$60 million, per year compared to a billion on tariffs, per year.

But Canada was told that the Arrow was a 'costly and bitter failure', that the investment was 'money down the drain'. The only 'failure' was the failure of Canadians to give it the credit other countries gave it, to have any conception of the importance of industrial and technological development to their country. It was 'money down the drain' only because the public and the government threw away the whole investment, as they did with the Jetliner ten years ago, just when they were on the verge of getting something back from the money and effort. We were told we were saving money, because 'thrift is the great Canadian virtue'. If you told a Canadian he could save a dollar, he would pass up the chance to make a fortune, and would throw away his birthright. But this was the greatest deception of all, for we haven't saved a cent, not even in actual cost, in dollars and cents, and we have lost more than we can ever get back. We have no factories, no skilled manpower, no planes, no defence in return for our investments. And we still have to find new weapons and pay for them, in the U.S. at American prices.

In the U.S. when the Government wants a new plane, it lets development contracts to several firms. Eventually one of these is selected, and ordered into production. Each firm is paid its development costs under a separate contract. Costs for flight-testing are absorbed under the heading of Air Force budget. When the plane is ordered into production, none of these costs are included in the 'cost per plane'. It is a separate contract. And yet it is a much more costly process than ours, when everything is included. When the cost of the Arrow is given, all these costs and much more, are included, and placed side-by-side with these American 'production costs'. One American firm has not in years produced a successful design, but still gets development contracts. It built a flying wing which was ordered scrapped, partly due to stability trouble. Its next plane, a fast fighter, had an annoying habit of losing wings in flight, and had to be expensively re-designed. Convair's F102, had to be re-designed and the whole production line scrapped, and re-tooled, because it did not meet specifications - by a long way.

All of this makes the Arrow look like a very cheap plane by comparison. It was produced in less time, at lower cost than any equivalent. Avro has never yet had a failure. Every plane and engine it has designed has been successful beyond specifications and predictions, and years ahead of equivalents elsewhere. But in every case but two, the Canadian Government has killed them, whether civil or military. This time, it has tried to kill the Company too, with the help of the press, and the people of Canada.

Maclean's concludes its editorial of October 25, with the following: "But what, we'd like to know, is so difficult about making up our minds to stop manufacturing a military aircraft that has outlived its usefulness? What's so courageous about facing up to the fact that the making of war machines has only one legitimate object and one legitimate excuse? That object is military defence - not pump-priming in behalf of business, not the preservation of full employment; the object is military defence and nothing else. If we ever lose sight of this simple fact or even waver from it by

the slightest degree, capitalism will deserve all the libels heaped on it by its most envenomed critics. And the society we seek to defend will be no longer worth defending".

This makes magnificent reading. We heartily wish it were true. But even if every word of it were true, it would still be no argument at all for scrapping the Arrow; because every charge it has applied to the Arrow and its usefulness and its purpose is false. There is far more evidence available to prove this than we have been able to include in this letter.

There is something in that last paragraph which sounds like a pathetic defence of a religion they would like to believe in, and must passionately avow, to drown out any small doubts which might make themselves heard. Books could be written on the economics of defence industries, cold wars, etc., in our present state of capitalism. One might come to some unpalatable conclusions in such a study, as to just what is keeping our economy going at present, without either a little more planning or the biggest bust in history. I could recommend a little book by Prof. Morgan, called 'The Perpetual War - or Homo the Sap'. At least it is interesting. However, and I again quote from Canadian Aviation, November, 1958, -

"Much as the British Government might be impressed with the Arrow, they are conscious of the necessity for a healthy defence industry within the U.K. They realize that to any mature and seasoned government, matters of defence and economics are inseparable. Mr. Diefenbaker would do well to study the attitude of the British Government in this respect, and to think again on the Arrow and the Bomarc. He should look particularly at the cost of the two systems. For if he has been advised that the Bomarc is cheaper, he has been grossly misinformed. And as a result, the public has been grievously misled. For the Bomarc, like all present-day anti-aircraft missiles, is limited in coverage, is costly, and is a one-shot expendable article. There is no evidence that first-line equipment, while still first-line, is available at substantial savings in either the U.S. or Britain, over the costs of producing weapons in our own country. On the contrary, experience with the CF100 and Orenda power plant was that Canadian produced aircraft cost less than comparable U.S. and U.K. units.

"It should also be remembered that economy in the national context means more than dollars saved. It encompasses jobs and vigorous industries turning our national resources into products to fill our own needs and earn dollars for foreign trade. It has also been pointed out by others that the Government cannot in conscience divorce decisions on procurement for defence (or other purposes for that matter) from considerations of the over-all effect on the national economy".

A FEW CRUMBS.

What is offered to take the place of the Arrow in our economy?

We were promised integration with American defence production, in return for integration of defence. We heard a great deal about it from Mr. Diefenbaker - about how it would be much better for us, much more in line with our capabilities than to produce our own designs, such as our advanced interceptor, the Arrow. Mr. Pearkes and Mr. O'Hurley have done a really good job on integration! Hasn't it worked out nicely?

It would seem logical that out of the vast pool of defence material now being produced and developed for the future, into the cost of which we all have to pay, that the U.S. should pick certain of the largest fields, such as SAC, or deterrent bomber force, which she already has, and add to that the defence lines for protecting that force, i.e., the Dew Line, Pine Tree Line, and Bomarc Line, since they admittedly serve no other purpose. (What Mr. Diefenbaker admits in the House of Commons, and what he still kids the public with on TV, are, of course, two different things.)

The U.S. could also control completely the field of large missiles, since she already does anyway, and atomic submarines, which she also has. These are immensely expensive, and she has already spent billions on them, and has hundreds of firms engaged in work on them. We would merely be duplicating work already done.

Out of the remaining requirements, however, it would seem logical that the other countries should each develop its own answer to at least one problem - and not just leave all the design and development in the States, with small hand-outs to other countries, if and when they can get them. After all, the United States does not have a hundred times as many people as Canada, only ten times as many. She is turning out hundreds of types of armament, including many types of planes. Losing one plane could not hurt very much.

This is especially logical when such a country already has such an item far ahead of anyone else. Canada had an advanced interceptor, better than anything any other country had, and years ahead of any competitor, with planes already coming off a production line, all the really big investment already done. Could any kind of integration be more logical than for her to put it into production for her own use and that of Norad and Nato? Integration is supposed to prevent duplication, and therefore make defence more economical for all countries. Apparently, however, it is being used only to prevent duplication of American products by anyone else, with everything integrated in the U.S. Is there any economy or sense, in scrapping a plane ready to go into production on existing production lines, all the research and development almost complete, the improved second Mark ready to fly, the testing and data programs, worth millions to all countries, as well as to future designs, almost completed, its performance proven - to scrap it, throw it all away, so that the U.S. must go through the whole process and come up with theirs five years later, and we have nothing in the meantime? With normal development during that time, ours would have been improved sufficiently to still be ahead of anything else, and far more cheaply. The Mark 3 version was already on paper. This is how American firms cut costs. In scores of aircraft companies all over the country, design teams are

kept together year after year, constantly working on improvements and modifications, keeping up to date with new methods, requirements and improvements. One aircraft develops from another. As one tapers off, and goes into production, their design teams intensify work on the next.

This was what Avro had tried to work into - first with the Jetliner, which could have continued with modifications and improvements for years, (as Douglas did with the DC-3), and now with the Arrow. Each time it was killed on the verge of success. In spite of this lack of continuity, everything she has done has been better and cheaper than any American equivalent. The Orenda and Iroquois engines have not been matched anywhere in the U.S. But with the exception of the excellent and reliable CF100, everything has been 'chopped' just as it was about to go into production, and begin to bring back continuing returns for the original work and initial expense. And many interests would have killed the CF100 as well.

So once again our plants close, our design teams are dispersed to other countries, and as always, we will have to begin from nothing again. Even small-plane deHavilland is in trouble, due to lack of Canadian support. Her only sales of the Caribou have been to the U.S. The RCAF cancelled its order. This discouraged other countries from buying it, if its own country would not back it. American-owned Canadair is still going. It provides no threat, manufactures only under licence. It already has the contract for several of the \$4 million Argus, a modified Britannia, for the Navy. It expects to get any contracts to be let for picket planes or NATO replacements.

Canadian Aviation, December 1958, in an article 'Production Integration Should Include Arrow', states: "There have been continuing talks between Canadian and American defence officials re integrating the defence industries of the two nations ~~for~~ a weapons pool common to both. At the risk of suggesting the obvious, it is ~~assumed~~ the Canadian representatives have drawn to the attention of their American colleagues the fact that Canada has an advanced interceptor, superior to any weapons system at the same stage of development, undergoing flight tests at Malton. The Avro Arrow and its already projected later 'Marks' would be capable of filling Norad's advanced interceptor role for at least the next decade. If we are going to integrate production programmes there is no better place to start than by phasing the Arrow into the common weapons pool. Unreasonable and unrealistic?"

"(Not as) unreasonable or unrealistic as the suggestion that the Canadian industry's role lies in abandoning a presently well-advanced project and tooling up from scratch to turn out components for weapons systems already in production in the United States. And a lot more economical - which is, after all, the prime reason for either nation embarking on any scheme of production facilities."

Commander F.H. Cunnare, director of the electronics production division of the U.S. Defence Department, after a tour of Canadian electronics plants, kindly said: "These plants are producing - and are capable of producing - any 'finished product' we are now manufacturing in the U.S., and also a comparable product in every way." Well! Isn't that nice! After designing and building two engines and three planes, and most of their components, which were world-beaters, with a higher reputation for performance and reliability than similar products in the U.S., we are now told that we are able to manufacture 'American designed products and components', and it is considered a real compliment. Even here, however, the newspaper report points out one little difficulty. 'It might be difficult to get such permission from

Congress, as American business does not like sharing its contracts with other countries. (It was an electronics firm which spent thousands to come to Canada to find three men it could not get in the U.S., and which found them at Avro.)

The American view of what integration means is indicated in an article in an American magazine called 'Missiles and Rockets', April 27, 1959. It says:

"It has been officially announced that the U.S. F105 built by Republic will soon go to the NATO-committed U.S. units stationed in England, France and Germany. And the European NATO nations now realize that the big fighter fulfills their defensive requirements." (The F105 is an American single-engine, single-seater interceptor, as heavy as the Arrow, with less speed, climb and armament than the Mark 1 Arrow. For similar quantities, it will cost about the same, as the Arrow. What made the European nations 'realize' that this was the fighter they need?)

It says: "It is understood here that the first requests to the NATO council will come either jointly or severally from Germany, the Netherlands, Belgium and Italy. England and France are aware of the plan but are uncommitted. Both have their own all-weather fighters under consideration, the French Mirage IV and the British TSR-2 (British Tactical Strike Recon), but these are years away from production and would cost as much as the F105, it was pointed out." But we were told that interceptors were obsolete. We could have told these countries that the Arrow was what they needed, and proved it, but we threw it away. It goes on to describe the American concept of production sharing: "HOW TO SHARE - Under the 'share' plan one of the NATO nations would be named as assembly and test manager. Another - Germany for instance - could produce the guidance, another the wings or air frame, and so forth. Britain, which has three engines suitable for the F105, doubtless could produce the powerplant. These engines are the Rolls Royce Conway, the Bristol Olympus and the deHavilland Gyron. The present F105 carries the P & W J-75 engine". (The Arrow Mark 1 had two of them. The Arrow Mark 2 would have had two much more powerful engines and the Conway engine just wouldn't fit.)

"It is conceded that under the proposed plan certain parts of the plane, possibly the heavy forgings, would have to be made in this country. These would be handled by Republic and might constitute as much as 25% of the cost - the U.S. contribution to the plan (sic). Republic would also gain by providing technical assistance throughout the life of the aircraft."

If you have ever read anything so colossally arrogant, conceited and condescending, we have not. The U.S. which takes it for granted that she is capable of turning out hundreds of planes of all types, without asking any help from other countries, nor any technical assistance, now tells these countries, many of whom have been far ahead of American design, that the F105 (American) is the plane which meets their requirements, and she thinks she can let them build it, but only a little piece to each country. And of course, the U.S. will have to make all the difficult parts, and provide the technical assistance, as well as having designed it. The Arrow of course, was more advanced, as well as being cheaper for the required amounts of power, and we designed and built it all by ourselves. But if we were allowed to sell a plane to Nato, this would spoil the picture presented at the recent World Congress of Flight at Las Vegas. All the nations of the West were supposed to be represented. They all flew past. All the planes were made in the U.S.A.

No amount of this kind of thing would 'enable Canada to maintain her existing defence industries, provide employment for her own specialists and keep abreast of the advance of knowledge', as the newspaper implies. It is not enough to manufacture 'someone else's gun butts in return for their missiles'. (Even the forgings 'of course' would have to be made in the States.) Neither would it give Canada a 'strong bargaining position with Washington' as Mr. Blair Fraser contends. On the contrary, it would eliminate what position we have left, and make us completely dependent. Producing the Arrow, and other equipment, would not only give us a strong bargaining position, it would give us self-respect, world-wide prestige, as being at least as industrially competent as small European countries, and something with which to earn part of our defence taxes.

France has been begging for a small portion of defence orders. (She does, however, manufacture her own interceptors.) The U.S. finally and reluctantly agreed to let her manufacture the Hawk anti-aircraft missile (already designed and developed in the U.S., of course). It has agreed to send the Sidewinder to its allies, but 'not permit them to manufacture it'. It has not yet, however, carried out even these commitments. (Sharing the Work - Globe & Mail.) The article goes on to say "This country is fully able to manufacture most of the new weapons, or at any rate, component parts thereof. All that is needed is U.S. permission. That permission must be vigorously sought if we are to prevent the sacrifice of some of our most talented and creative workers. Integration of defence must not be undertaken if it means the liquidation of important Canadian industries". Very nice. The research and design teams who designed the whole Arrow from scratch, and built it, and flew it, - a better, more advanced plane than the F105, made by Republic, would leap for joy to be 'allowed' to make a little bit of the structure of the F105, but not, of course, anything so complicated as the forgings, and 'under the technical supervision' of Republic, of course.

Very nice - except that the people at Avro and Orenda, who have produced one outstanding, highly successful aircraft after another, who have had hundreds of groups of Americans, as well as those from other countries, come to see their work, who have many evidences of the respect other countries have for the high quality of their planes and engines - a quality and reliability not often matched by American comparable products, and who, in addition, have been ahead of the Americans in their designs, will not be interested in 'getting permission' to manufacture American bits and pieces 'under license'. They know what can happen. Their own government didn't get American permission to manufacture its own plane, which would have filled Nato's requirements also. It isn't trying very much harder to get 'permission' to manufacture 'components'. Besides, it would give few of them anything to do. There is a great gulf between the skills required to 'design and develop' and those required to 'manufacture under licence'. We already have too much of the latter in Canada - in fact we have little else. It would do little more for Canadian industry than the '60 post-offices' proposed by the Government to put new life-blood into our economy, or the 'higher unemployment insurance' which the Toronto Daily Star recommended as a better place for the money to go.

Most of these men, with the Arrow cancelled, have lost the few illusions they had left. They know that Canada has not left the 19th century in her thinking; that she will still sacrifice her secondary industries for a good deal in wheat; that most Canadians still do not believe we can do anything as well as the Americans, in spite of all the available evidence to the contrary, and in any case, why bother? So they will go to the States, or back to England, to countries where they at least

have faith in themselves, advertise their ability and achievements, and don't rely on post-offices, or unemployment insurance, or even 'manufacturing under licence' to keep their economy healthy and earn the costs of their own defence, among other things.

And what are we getting? Nothing. Not anything at all. A few wings and tails for Bomarc - kid stuff - for our wholly-owned subsidiary, Canadair. A few radar sets designed in the U.S. for the Dew Line. A contract for engineering work in the States (says Mr. O'Hurley)? Oh no, that was just Canadair shipping its men down to its sister firm, because it had nothing for them to do here - as Avro has now been trying to do with its men - hire them out to American firms. They have had little success this time. American firms now know that they can get them for keeps - that there will not be anything for them to come back to here, so why pay contract prices? Mr. Pearkes and Mr. O'Hurley talk of trotting all over the world, hat in hand, begging for a little bit of work for poor Canada to do 'to keep us busy, please, sir.' What a laugh! What a joke to every other country! Why should they give us anything, with our own Arrow sitting there being cut to pieces, repudiated by its own country, not because it was a failure, but because it was so successful that they were afraid of it. No wonder our 'statesmen' get a contemptuous brush-off. And what do we get? Not even a \$3000 order for plastic radar domes to use in our own Arctic. A Senator in Ohio says he has a plant that can make them. Even though they will cost more, they won't even let that small order out of the country. And that much-publicized, but very slight change in the 'Buy America Act' won't make any difference at all; not while an American Company can take a case right up to the Supreme Court, and have them throw out for 'security reasons' a bid for two commercial turbines, won by English Electric, over every other hurdle, even the 'Buy American Act'.

Mr. Diefenbaker says: "These companies must be vigorously competitive in going after defence orders". Competitive - in this kind of market, Mr. Diefenbaker? How much did you get, when Mr. Pearkes and Mr. O'Hurley went begging? When you couldn't even sell the Arrow, an advanced aircraft, competitive in design, timing and cost - not only competitive, but ahead of anything comparable? The only competitive hurdle it couldn't meet was the fact that other countries buy their own planes, protect their own industries, subsidize them, and consider them important, while our Government doesn't, and kills them. Competitive market? The bid of English Electric was 19% lower than the nearest American bid, and they had met every requirement. And this was for just two turbines for a power project. Competitive, non-protected, non-subsidized market? Only in Canada.

Photographic Surveys, a Canadian Company, has developed a device which vastly simplifies contour mapping, an advanced development of great value, for instance, to the USAF. They wanted to buy it, but, even though there was nothing like it in the U.S., they said they could not buy it if manufactured in Canada. Rather than risk loss, Photographic Surveys have sold the rights to an American company for manufacture in the U.S. Competitive, non-subsidized, non-protected markets? Where are they? Right here, friends, and only here.

"HITCH YOUR WAGON"

With the Arrow, we had some bargaining power, much bigger than a mapping device. When we threw it away, we showed the rest of the world that we ourselves were afraid to do anything good, that we had no faith in our own ability or products, so why should anyone else? We have very well merited the contempt, the brush-offs, the oil-quotas, the water diversions, the interference in our export trade and in our autonomy, the occupation of our air-fields by the USAF, because 'the West is too far away for Canada to defend', and we must ask a foreign country to come in and do it for us. With our Air Force grounded, a few of them manning Dew Line and Bomarc Bases, for the protection of the SAC, they will soon take over the East as well. It will be most logical.

This brings us to the most important question of all - the total defence picture, our relationship to American defence, our freedom to act on our own in foreign affairs - or lack of it; our dependence on American weapons; how we spend the money we must pay for defence - do we leave our factories empty, paying nothing back in taxes or industry, earning nothing, paying it all out of the country, keeping other countries' industries busy, their economy healthy, paying a large part of their taxes and their defence bill through our purchases, humbly begging them for small handouts? Finally, what does integration of defence really mean to Canada? What does it really involve for us, from now on?

A year ago, the U.S. was somewhat worried about lack of support for some of her 'brinkmanship' policies, in the smaller countries, especially in Canada. She began to tread a bit more softly and reasonably for a while, it seemed. Although partially integrated, we still had an Army, Air Force and Navy, which could be used independently. We could still equip our own forces, send them where we liked, for Nato, the U.N., or anywhere. They represented us and our support, wherever they went. We could dare to speak for ourselves independently. It is a long time since any of the small countries which are dependent on the U.S. for military equipment, have dared oppose U.S. policy in the U.N. or elsewhere. This remaining independence, as much as the threat to their Aviation supremacy, was one of the major reasons behind this violent campaign to make us scrap the Arrow, our one major defence item, successor to the sturdy and reliable CF100.

It succeeded so easily it wasn't funny. Mr. Diefenbaker and Mr. Pearkes, have given them everything they want, with supreme contempt for election promises, economics, integrity, security, or anything else. Did American subsidiaries and financiers and Canadian investment houses have a special ear at Ottawa, and are now demanding a return for their support? These interests have been briefing the Government to 'forget unemployment and concentrate on inflation'. This is the dream-world of the investment houses, stock brokers and the C.M.A. - unemployment, low wages and higher profits off the top, while it lasts. It is also easier to sell a war to people who are hungry and unemployed. The kind of war the American generals have been chafing to get started; not the brush-fire kind of war we could put out if we had conventional weapons, instead of nuclear missiles, but the all-out, end-of-the-world kind.

The headlines in the past few weeks, from the U.S., have shown a renewal of bluster and sabre-rattling in a very alarming form. 'We must mobilize for war'; 'We must meet the threat of the Russian withdrawal from Berlin - our people should be ready for war'; We may not wait to be attacked, we may strike first - pre-emptive

war'. Even a brand-new name for it, to make it go down more easily. Their pathological war-mania is again on the loose. The generals want to try out their new nuclear toys. (And with some of them, this is an accurate description, - we could quote them.) With Canada's independence gone, her Air Force useless, her defence totally handed over to the U.S., they have thrown caution to the winds. The whole continent is now theirs, and we are an excellent no-man's-land.

We suggest you read some recent American service publications, or articles by their 'space scientists'. Not the Atlantic Advocate or the Toronto newspapers, from which Mr. Diefenbaker says he gets his information on performance and defence problems. Read 'The Delicate Balance of Terror' in the USAF Association magazine for February 1959, for one. There are many more. Does it not frighten you that we have hitched our wagon to this star, to these men who have lost all contact with reality, who are capable of any insanity, even total nuclear war, in their dream world of missiles and rockets and nuclear bombs which blast whole countries from the face of the earth; and space warfare, to fight over the planets; and control of infinity; and their pathological fear of the 'enemy' - anyone who challenges their supremacy or their 'way of life', or the status quo? And now we can't even say 'No, we will not go along with you'. We have to - now - because we have nothing left of our own, not even freedom of choice.

On television, March 9, Mr. Diefenbaker said "No one will ever know the strength and force of the pressure brought to bear against the Cabinet" (in this decision). Poor Mr. Diefenbaker! How he has suffered to save the taxpayers' money! How he hates to be opposed or told facts! Having long hated Avro and the men at its head, he had long ago made up his mind to hit it, no matter what the cost. All advice and warnings from experts of every kind against this decision, became 'pressure' to Mr. Diefenbaker. They were told to keep quiet on pain of dismissal. There hasn't been a word out of them since. It is to their everlasting credit if, privately they tried to do what they could.

The current issue of a well-informed trade magazine has this to say: "The Diefenbaker Government has been able to sell out the Canadian aircraft industries, and the economic and political interests of Canada as a nation, because the Canadian people have not been intelligently informed regarding the issues. Had the people been intelligently informed, the repeated mis-statements about the Arrow, missiles, and the problem of defence in general, would not have been believed, and the whole thing would have been foiled by the normal functioning of democratic processes".

Everything we prophesied last December, when we wrote to Maclean's, has followed the pattern we said it would. The Arrow would be cancelled because we no longer needed interceptors, because we had entered the missile age (although every other country was even now designing later versions of interceptors); we would then buy Bomarc missiles to make the public believe we were entering the missile age, (although they were useless against anything but bombers); then, having scrapped the Arrow, we would 'discover' that Bomarcs were after all, no defence either against missiles, or against bombers either, without first line interceptors. We would find that we needed interceptors after all, but having scrapped the Arrow, we would have to buy American planes, inferior ones; or let the USAF take over the defence of Canada - and we would not save any money at all.

We did not quite believe the Government would have the audacity to follow this sequence so soon after the event, or that their contempt for public intelligence was quite so great. But then, when we wrote Maclean's last winter, we did not believe that the Canadian public could be so easily played for fools by playing on their ignorance, their parsimony, their fear of anything successful, their sectionalism, prejudices, their great reluctance to get rid of the mud on their boots and move into the twentieth century; that they did not believe the Professor in Holland who told his graduating class that 'the country which in the 20th Century, can not keep its scientists and engineers fully-employed is on the down-grade'. We were wrong. Mr. Diefenbaker and the press knew them better than we did. We suppose they should. They have been 'influencing' them for a long time.

We have long been under economic leading-strings. We have now bought the American concept of absolute nuclear war with no alternatives, becoming a mere splinter in the vast American nuclear missile complex. The U.S. will be in control of all nuclear armaments in Canada and the U.S. We shall have little voice in their use or disposition. We shall now be in the same position in foreign affairs as other small countries, dependent on American military equipment. For a long time they have not dared oppose American foreign policy in the U.N. or elsewhere. Now neither can we. But everyone in Canada is very happy. They were told they had saved some money, and they believed it.

But please, do not let us feel sorry for Hungary or Poland. They at least resisted.

When we killed the Arrow, in the way we did, and for the reasons we did, we did a lot more than just cancel an aircraft. We gave the world our measure. The U.S. is not to blame. We are free, white and twenty-one. We did it ourselves.