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All of us know, or know where to find out, how an aircraft works. This is the first Canadian book that attempts to tell how an aircraft company works, through the vicissitudes of the last fifty years. While neither definitive nor unchallengable, it is essential for historians of current engineering.

DHC's fortunes have varied between extremes, as indicated by the changing numbers on its payroll, from a few dozen in the Depression to 7000 in wartime, 3000 in the 1950s, 8000 briefly in the 1960s and 4000 today. Hotson's account demonstrates the specifically Canadian character of change from the era before airlines, when DHC was founded as a repair shop and production line for British machines, to its becoming a Crown corporation in 1974, supposedly as a temporary device until a suitable owner could be found. Management has been as important as changing markets in determining the shape and the behaviour of this firm, and presumably of Canadair as well.

An example was DHC's purchase in 1962 of AVRO Canada's Malton plant, for no discernible reason other than that AVRO's managing director asked DHC's to do so. Only thereafter did DHC management begin to consider what to do with a second factory as large as their own. The solution was to build Douglas airliner wings on contract, a financial disaster that led to McDonnell-Douglas purchasing the Malton plant and thus becoming an employer in Canada.

It is surprising how often DHC seems to have acted capriciously or incompetently. In wartime, orders were obtained for more than 1000 Mosquito bombers for Britain, to be delivered by the end of 1943. Although tooling up began in 1941, deliveries did not begin until 1943 and no more than 646 aircraft were delivered to England by V-E Day. In order to get that many, C.D. Howe took direct control of the DHC plant in 1943, removing its managing director and placing J. Grant Glassco in charge. In 1944 a model production-line was perfected, but it was too late for the purpose of the whole undertaking.

In the early years, when deHavilland was a family firm, the British ownership was benign, providing free technology and demanding no dividends. The amalgamation in 1966 of Hawker-Siddeley--now British Aerospace Plc--changed all this. In 1968 the British proprietors ordered DHC to cease production of the Turbo-Beaver and in 1969 cancelled the DHC-7 (Dash-7), fired the president and replaced him with an American appointee. The Canadian government 'saved' the firm as much in 1970, when it made grants to continue work on the Dash-7, as by acquiring ownership in 1974.

These appear to be DHC's most spectacular aberrations from the norm of successful business. Hotson makes no judgements, but
simply presents the recorded and generally-known facts. The gist of his book reinforces impressions that the circumstances of high technology manufacturing in Canada are quite unique, and that these specific characteristics matter more than models derived from dissimilar conditions in other countries. The wheel of policy interests came full circle in 1984 with the recognition now given 'corporate culture' as a factor in market success. This was precisely what the National Research Council attempted in vain to tell the Glassco and Lamontagne committees was prerequisite to successful research. This book's view of the firm is that of a group of colleagues and friends, although hardly any of the individuals is presented as a three-dimensional personality. Nevertheless, Hotson, who joined DHC in 1935, demonstrates throughout his narrative the essential function of the firm's social community in achieving technical successes as well as enough sales to keep the group in business.

Another theme, faint but reiterated, is the relationship between research and sales, or knowledge and management--usually slighter than researchers or economists suppose. A telling sentence is: 'DeHavilland had always worked closely in prewar days with Ottawa's National Research Council on experimental projects... but when the war came such projects only complicated factory planning and interfered with production.' Only one of the paradoxes of DHC's history is that is sold off its SPAR (Special Products and Aviation Research) division twenty years ago to enthusiasts who believed in its future when the firm's hierarchy did not.

The deHavilland Canada Story is typical 'insider' history. It is governed by participants' values and knowledge rather than historiographic method or any outsiders' values. Thus, Hotson does not mention either the Science Council report on STOL aircraft of 1970 or the large government payments to DHC since 1974. He merely narrates what happened so far as the firm was concerned, that the government operated a STOL demonstration service with Twin Otters in 1974-76 and that the firm, almost incredibly, sought to make a long-range Arctic patrol aircraft out of its design for a short-range commercial airliner.

Like most 'insider' authors, Hotson claims to leave analysis for those who specialize in it, in order to concentrate on the basic facts. But his love of the firm and the group show through, as they should, since his tacit thesis is that this social feeling was one of the engines that made the whole enterprise go. Lacking such analysis, even the magnificent illustrations will probably not attract science policy specialists to this valuable book. For us historians, the book may be superseded in future but it is now essential. As one browses through the list of directors in an appendix, recognizing the names of prominent public officials with no personal experience in manufacturing or aviation, one cannot avoid the feeling that, had this book appeared a decade ago, DHC might be better situated today.

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