DOES PLANNING IMPEDE STRATEGIC THINKING?

TRACKING THE STRATEGIES OF AIR CANADA FROM 1937 TO 1976

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INTRODUCTION

What is the relationship between formal planning and strategy formation? Despite a vast literature on planning, very little is known about how it influences the creation of strategy. This paper tracks the strategies of a large airline across 40 years of its history, finding that the organization emerged on a clear strategic course rather early in its history and remained there. We argue that the high degree of planning that arose after the strategic course was set, in fact, impeded strategic change—specifically that operational planning discouraged strategic thinking.

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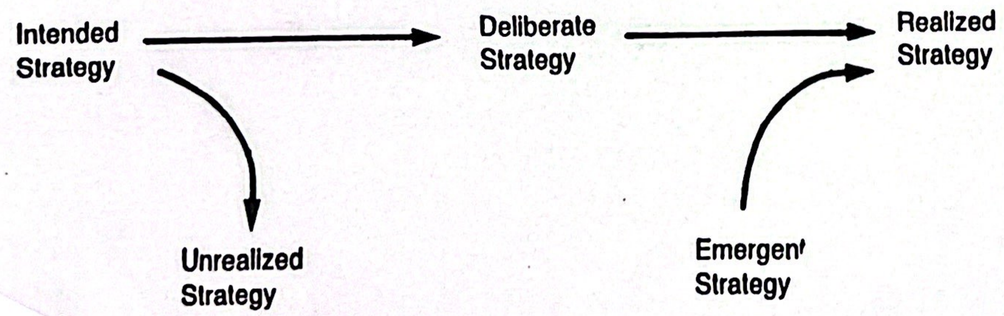
This paper forms part of a larger study in which the strategies of several different organizations are tracked across decades in their history to try to understand how strategies form in organizations, and how their interplay of external environment, leadership, and internal structure affect that process. Some of the organizations studied have been more entrepreneurial in nature (Mintzberg and Waters, 1982, 1984) or at least small (Mintzberg, Taylor, and Waters, 1984), others more oriented to high expertise (Mintzberg, Otis, Shamsie, and Waters, 1987; Mintzberg and McHugh, 1985), and still others rooted in the mass production or distribution of standardized goods or services (Mintzberg, 1978). In a framework developed to categorize different types of organizations (Mintzberg, 1979b), these groups have been referred to respectively as Simple Structure, Adhocracy, and Machine Bureaucracy. Clearly, by virtue of its operating characteristics, Air Canada fits into the third category.

Underlying the research is a particular definition of strategy. Strategy has always been a loose concept in the literature of management. It has generally been conceived in terms of intentions, as if actual behavior—implementation, so-called—were a foregone conclusion. And, whether for purposes of research or practice, the term was seldom operationalized. Strategy has been operationalized in this research by defining it as a pattern in a stream of actions.[1] By contrasting this definition—essentially strategy as *realized*—with the usual one as *intended*—we are able to contrast what we call *deliberate* strategies (patterns realized as intended) with *emergent* strategies (patterns realized despite, or in the absence of, intentions), as shown in Figure 1.[2]

Each of the research studies has proceeded in four steps: the tracking of streams of actions in various "strategy areas" across long periods of time, the inference of strategies as patterns in these streams and the review of all strategies to infer distinct strategic periods in the history of the organization, the in-depth investigation (through documents and interviews) of key points of strategic change, and the development of final conceptual conclusions through brainstorming sessions.

In the fourth step in this study, a number of issues emerged as critical: the strong convergence of strategies over time, the rise of leadership to buffer political influence while the organization fell increasingly under the influence of its

Figure 1. Types of Strategies



industry environment, and the organization's strong orientation to planning and the effect this seemed to have on strategic thinking.

Air Canada is the state-owned airline of Canada and the seventh largest airline in the IATA group in terms of passenger-kilometres (circa 1973). It flies an all-jet fleet to virtually every large population center in Canada, as well as to a number of the major ports in the United States, Europe, and the Caribbean. We traced its strategies from its founding in 1937 until 1976, when the then current chief executive took office. This paper begins with a recounting of the strategies inferred over this time. This is followed by a discussion of the history of the airline in three periods. A full presentation of both strategies and historical periods is necessary to appreciate the patterns of behavior that evolved in this organization (particularly the strong convergent trends over time), the reasons why they evolved, and the effect this had on, as well as the messages it contains for, the practice of strategic management.

STRATEGIES OF AIR CANADA, 1937–1976

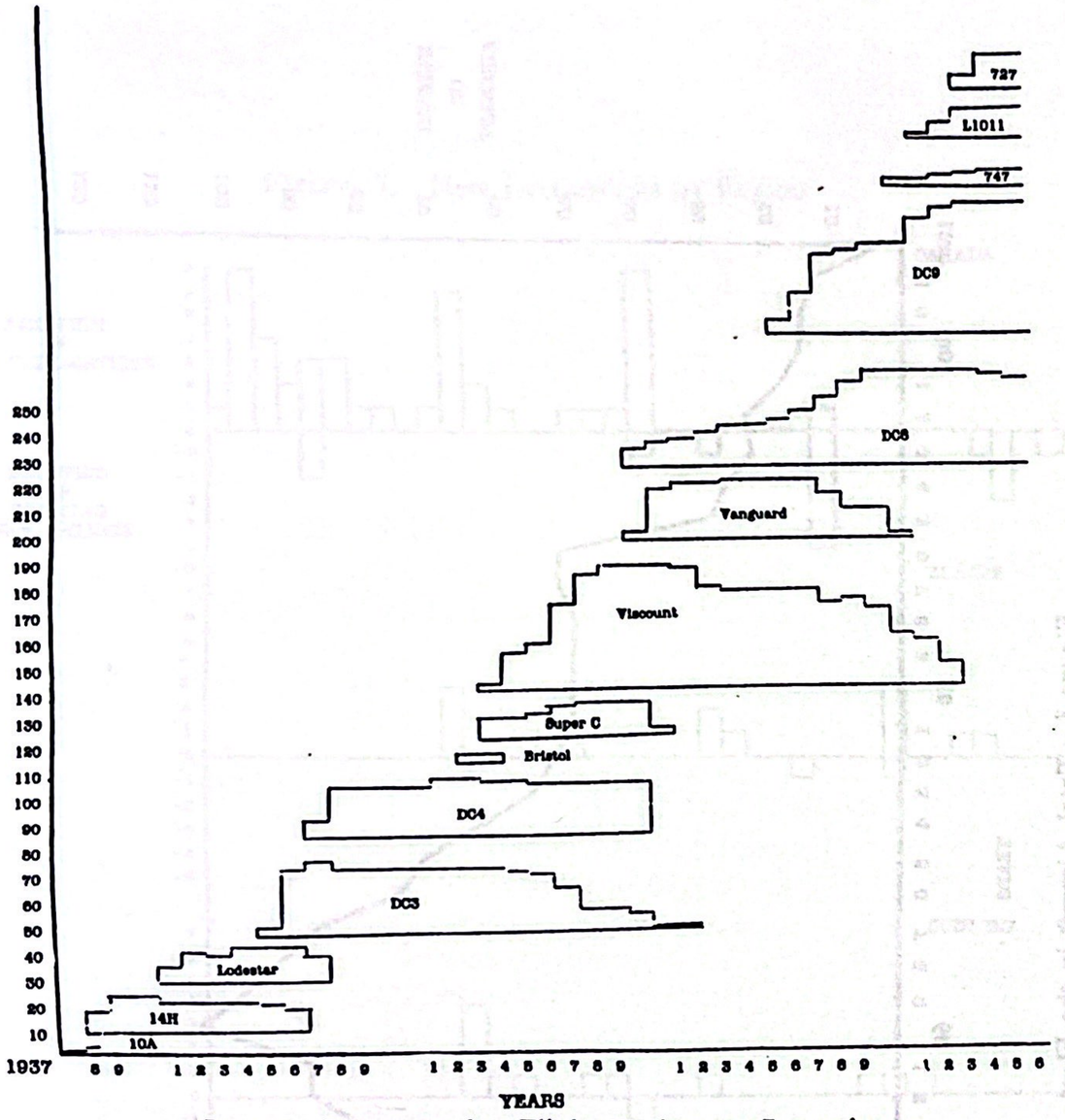
The strategy areas identified in Air Canada are the purchase of flight equipment, the introduction of new destinations, the relationship with the government, the provision of flight services (including mail, regular passengers, charter, cargo, and special services), as well as financing diversification and organizational structure. (Pricing was examined as well, but is not discussed in this report.) Of particular interest in this study was the wealth of quantitative data available in many of these areas. This enabled us to track most of the strategies in quantitative terms (as opposed to work chronologies) and to display our results graphically, allowing the reader to better understand how we inferred strategies.

Flight Equipment Strategies

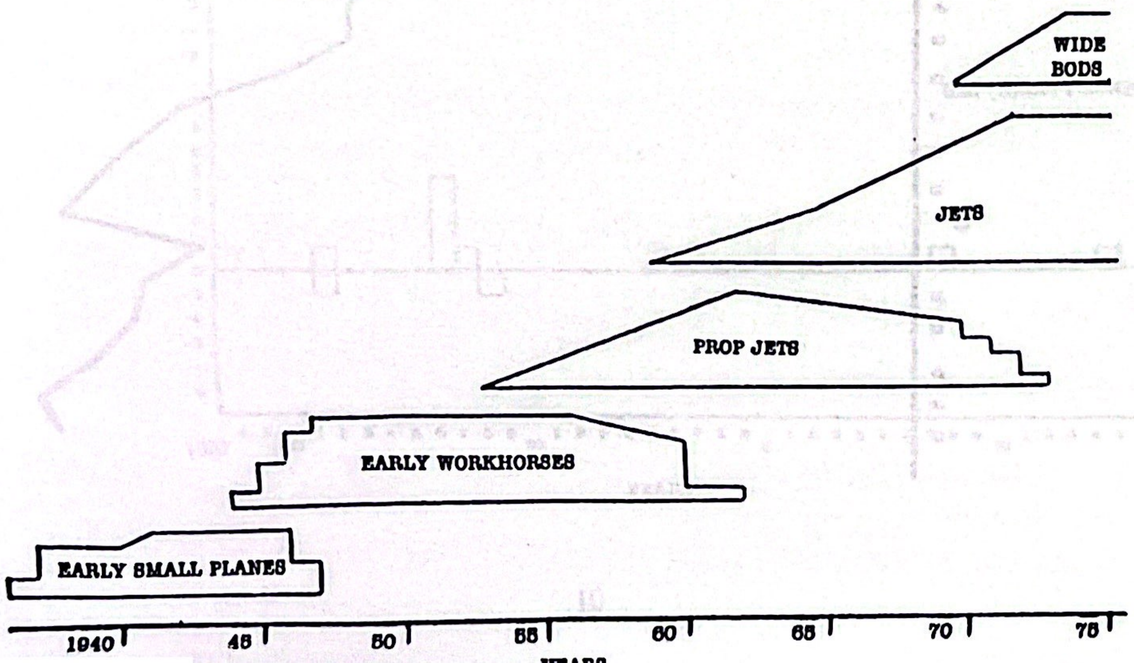
Figure 2, which shows a plot of the actual number of aircraft in the Air Canada fleet over the study period, categorized by type, reveals a number of interesting patterns. The purchase of the different types of aircraft seems to be rather regularly staggered throughout. For the most part, they appear in sequenced pairs of two: 14-H's and Lodestars (which we call the early small planes), DC-3's and DC-4's, (the early work horses), Viscounts and Vanguards (the prop jets), DC-8's and DC-9's (the jets, the former appearing earlier in the sequence than originally expected but falling back into the pattern due to a slower rate of acquisition), and the 747's and L1011's (the wide-bodies). While each block on Figure 2 can be viewed as a cycle of strategy in its own right—that is, a phased pattern of purchase, use, and disposal of each type of aircraft—we have instead chosen to show the pairs as the flight equipment strategies, depicted symbolically in Strategy Diagram 1. (Note than in all these strategy diagrams, the horizontal axis represents the years of the study period, while the vertical axis is meant only to capture broad trends or changes in an interpretive way.)

Of particular interest in Figure 2 is the fact that all of the individual aircraft

Figure 2. Number of Aircraft in the Fleet by Type



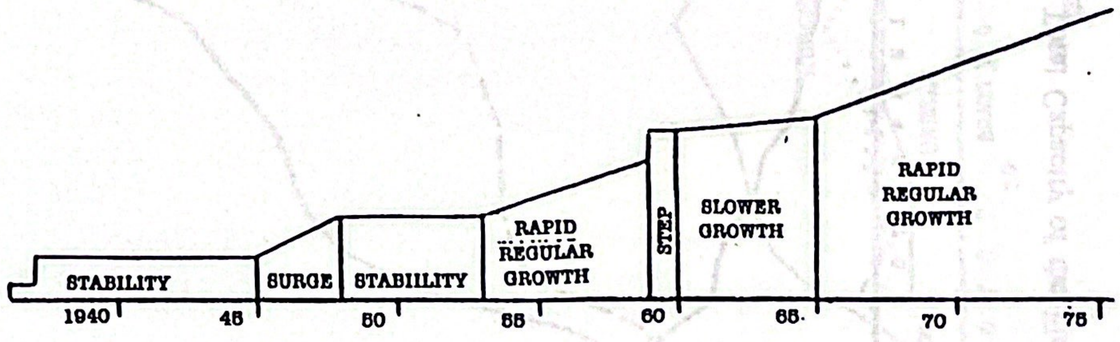
Strategy Diagram 1: Flight Equipment Strategies



blocks before 1954 show sharp stepped increases (especially for the arrival of DC-3's in 1946 and DC-4's in 1948), while none of the blocks after 1954 do, with the exception of the arrival of 17 Vanguards in 1961 (but at this point a much smaller percentage of the total fleet). This suggests a much more regular sequencing of specific additions of aircraft after 1954, implying a more planned, less entrepreneurial approach.[3]

A plot of the total number of aircraft in the fleet (Figure 3) indicates a series of rather well-defined cycles along a path of steady growth, while a plot of total available seats (Figure 4)—a more accurate indicator of resources devoted to flight equipment—appears to be much smoother. After an initial step in 1938, the latter graph shows a fairly steady level of seats until 1945, followed by a sharp rise for three years and then relative stability until 1953. Thereafter, the available seats grew rather quickly and regularly to almost the end of the study period, except for a sharp increase in 1960 which was followed by five years of slower growth. These patterns are shown in Strategy Diagram 2 below.

Strategy Diagram 2: Passenger Capacity Strategies



New Destination Strategies

Figure 5 plots additions and deletions of flight destinations over the study period, broken down by broad markets—Canada, Europe, the Sun Belt (Miami, Tampa, the Caribbean, Bermuda, and Mexico City), and the rest of the United States. Figure 6 plots these same data cumulatively to highlight the relative attention given by the airline to these different markets over time.

In Canada, the data show a good deal of activity up to 1955, in three surges with particularly strong steps in 1938, 1947, and 1955 (8, 6, and 7 new destinations). In the 21 years that followed, only one new destination was added in Canada, while 11 were dropped. (In most cases, these were fueling stops required before the introduction of jet aircraft, or else small centers ceded to regional airlines). Activity began in earnest outside Canada in 1946. In three years from that date, 11 destinations were added, after which only one new destination appeared in each of the next six years (to 1954). Following a hiatus of three years, additions of new destinations outside Canada were made sporadically, producing

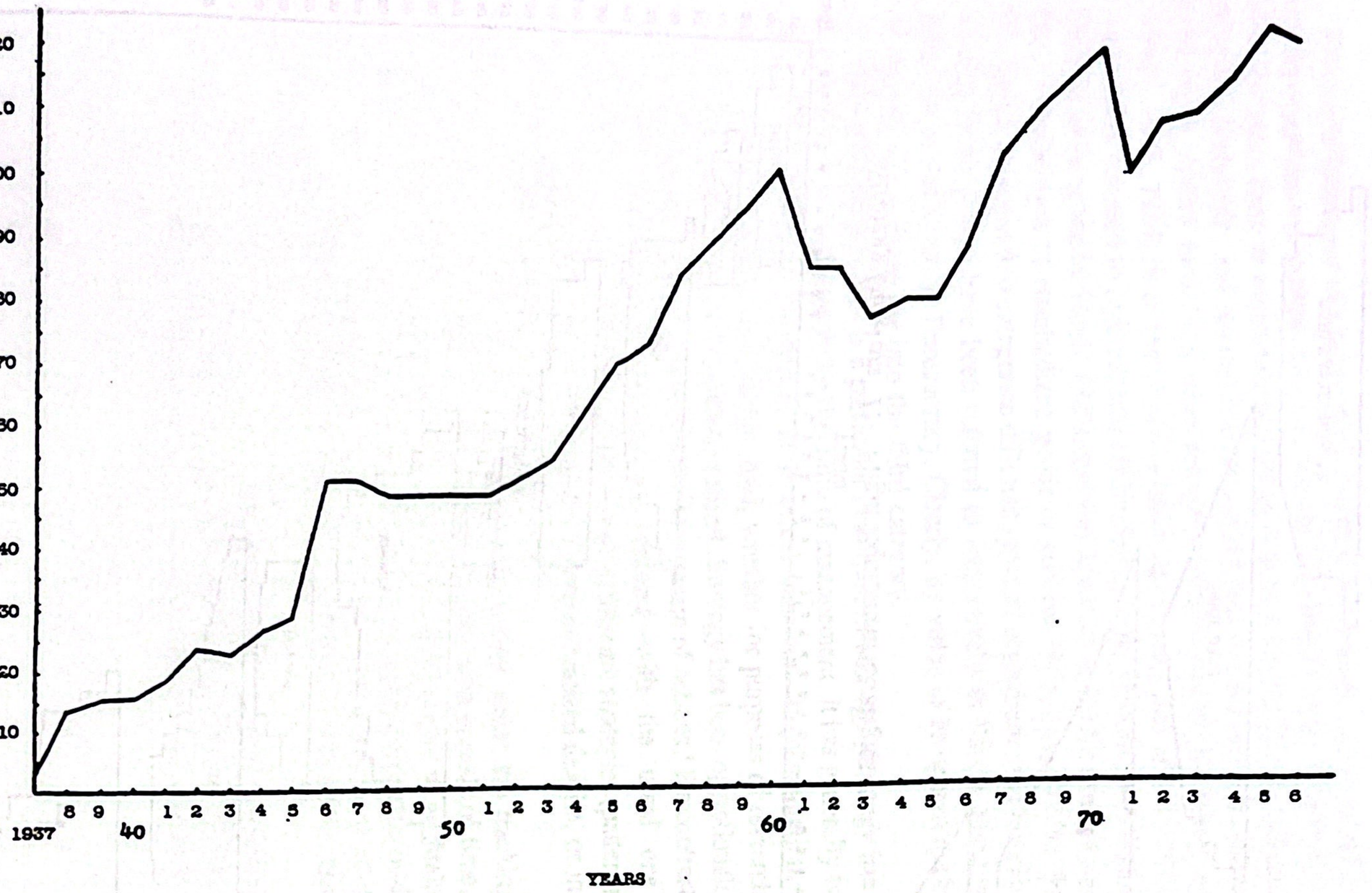


Figure 3 Total Aircraft in the Fleet

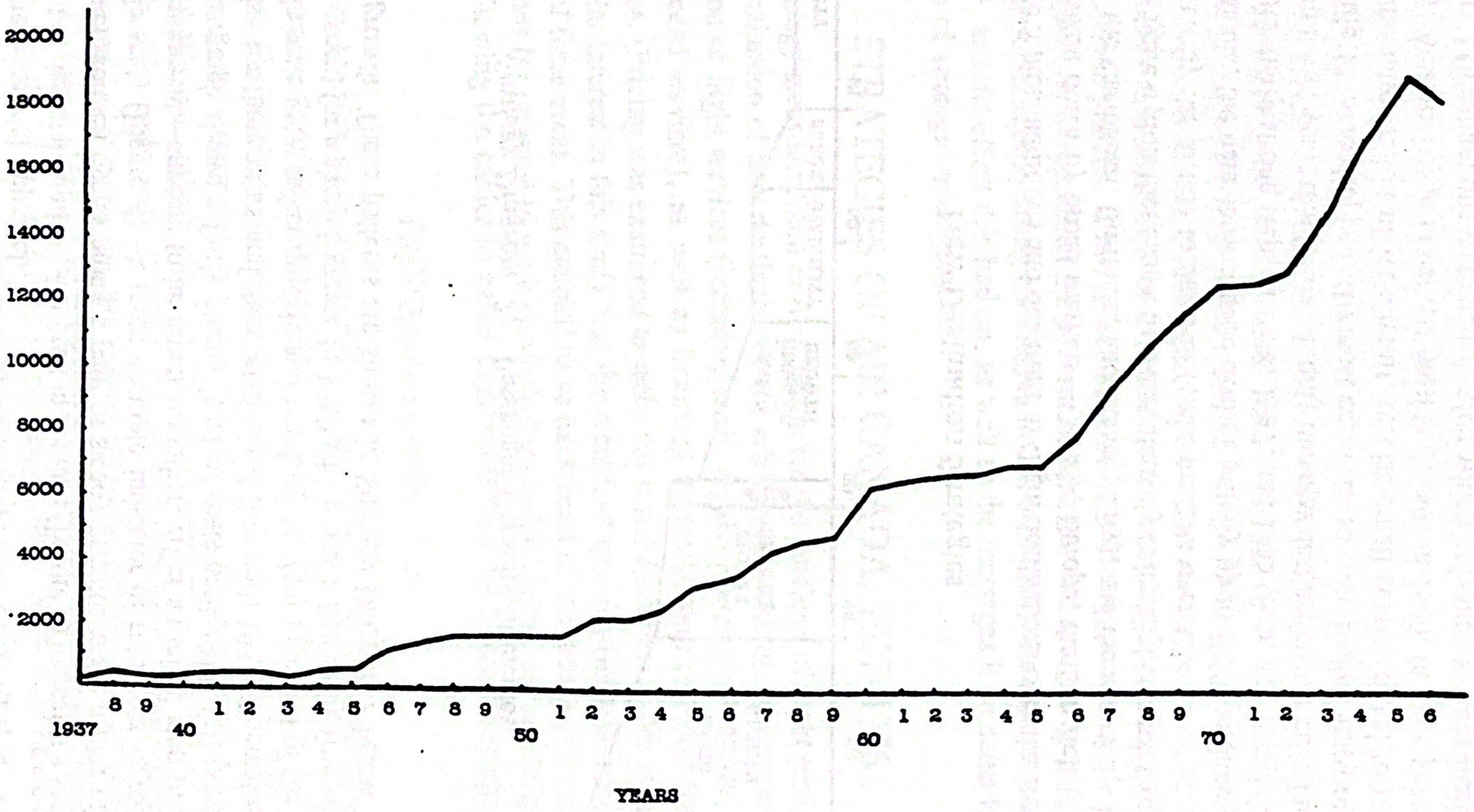
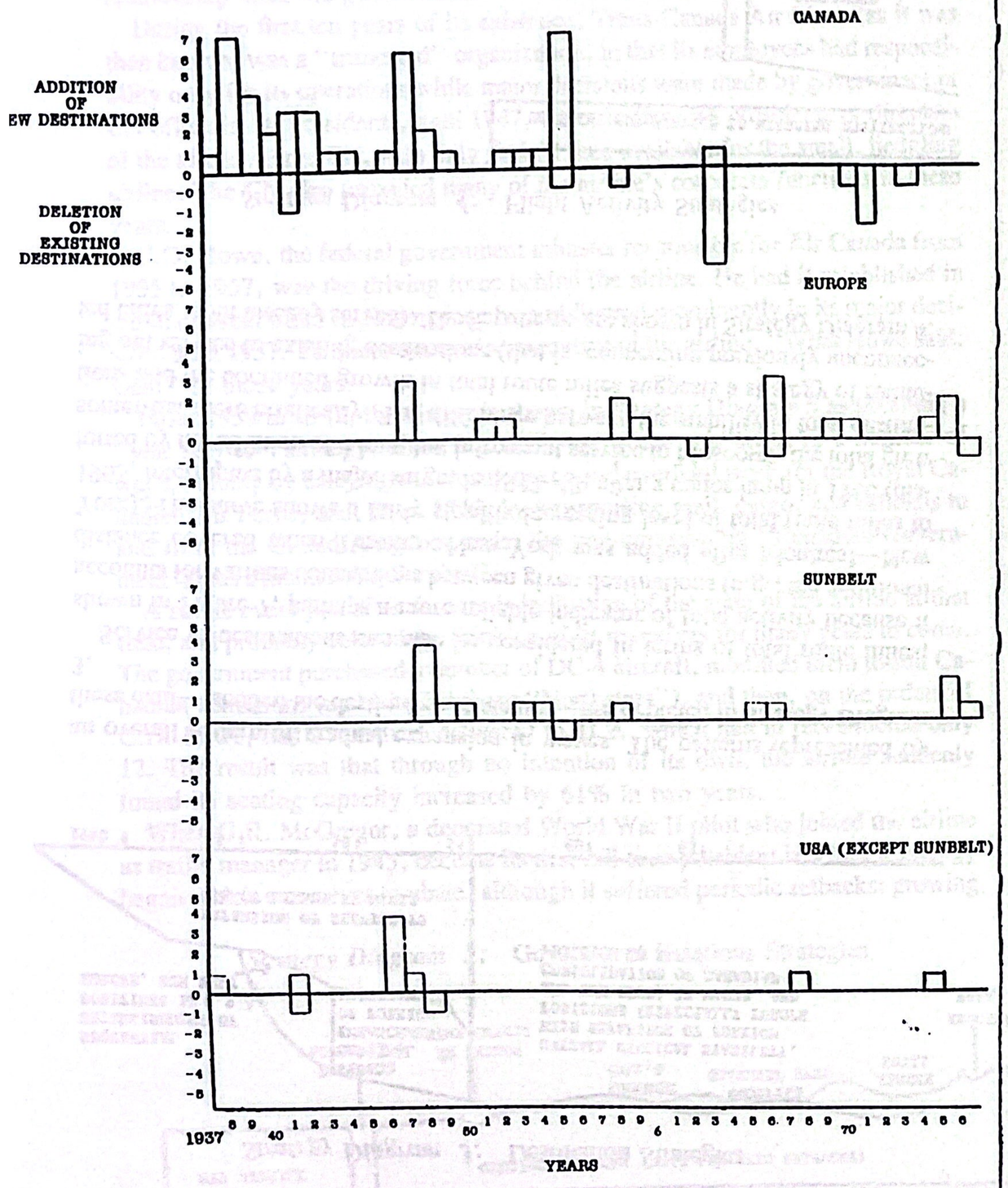


Figure 4 Total Capacity of the Fleet

Figure 5. New Destinations by Region



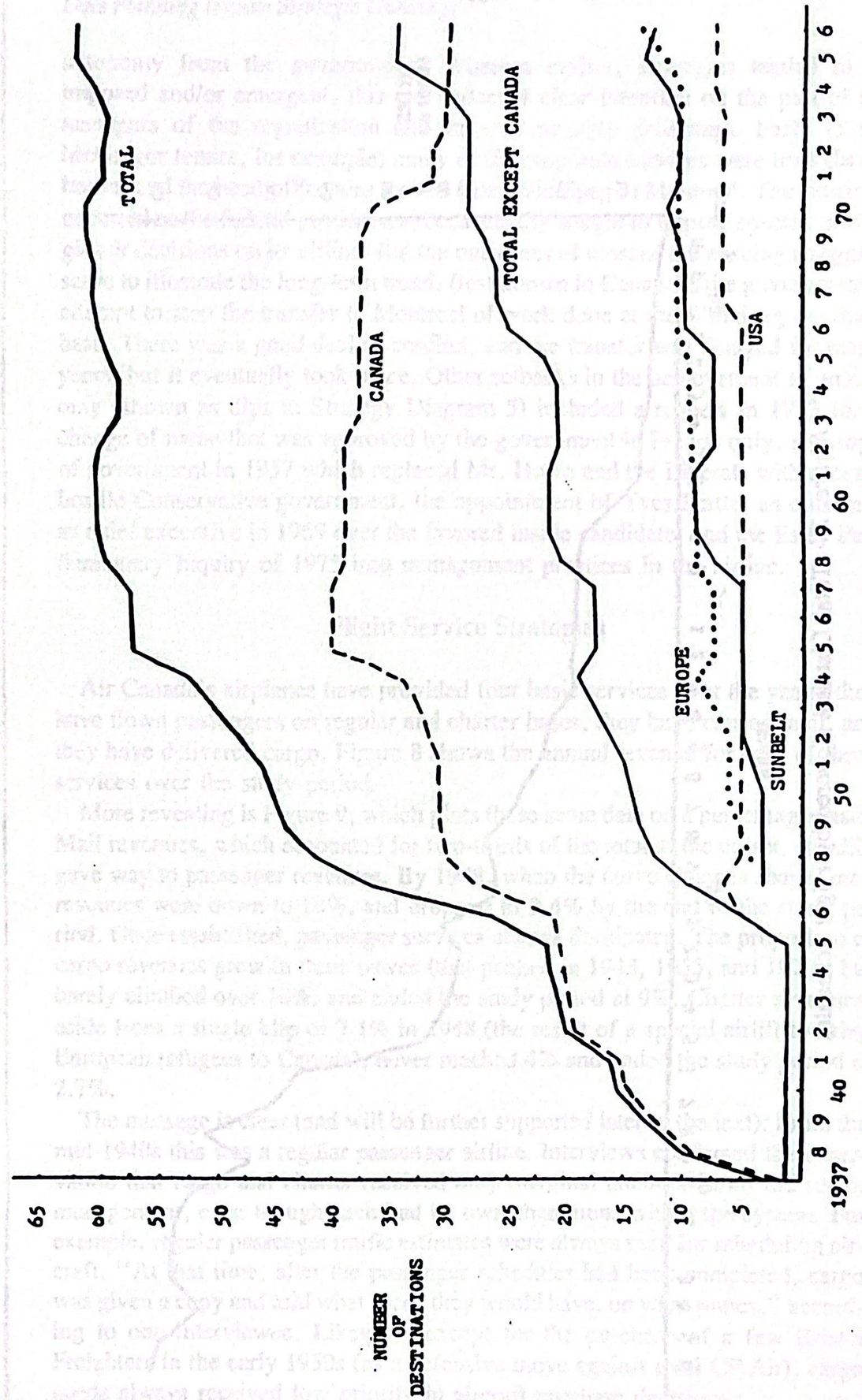
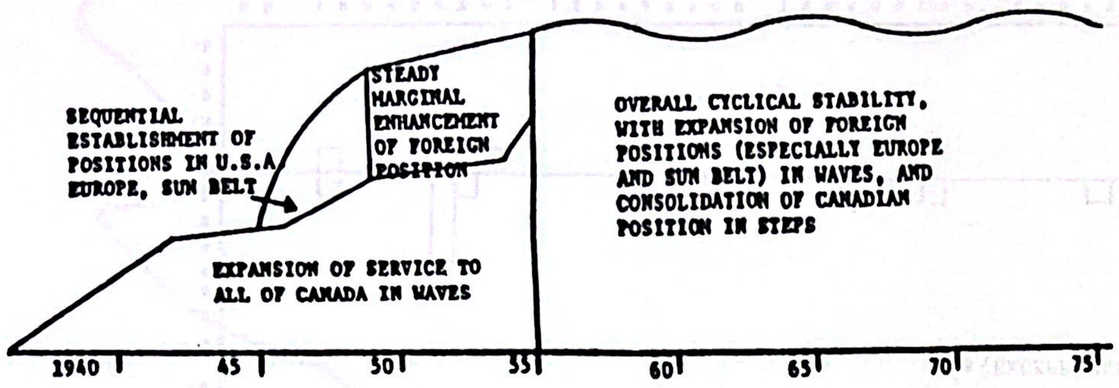


Figure 6. Cumulative Destinations Served

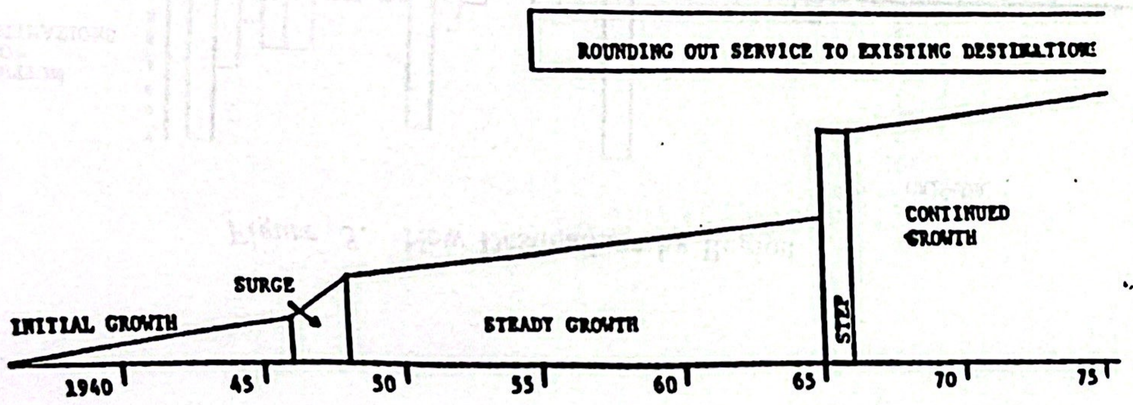
Strategy Diagram 3: Destination Strategies



an overall pattern of gradual expansion in waves. The patterns represented by these data—labelled the destination strategies—are depicted in Strategy Diagram 3.

Service to destinations can also be considered in terms of total route miles, shown in Figure 7, perhaps a more reliable indicator of total activity because it accounts for various connections between given destinations (e.g., the additional distance covered when Toronto—New York was added after Montreal—New York). The curve shows a fairly steadily increasing level of total route miles to 1965, interrupted by a major surge, in 1947–48; after a major jump in 1966 (distorted by the addition of a long but infrequent service to Moscow), the total grew somewhat more erratically. The difference between the stability in total destinations and the continued growth in total route miles suggests a strategy of rounding out service to existing destinations (that is, connecting previously unconnected cities, both already served). Those patterns are shown in Strategy Diagram 4.

Strategy Diagram 4: Flight Activity Strategies



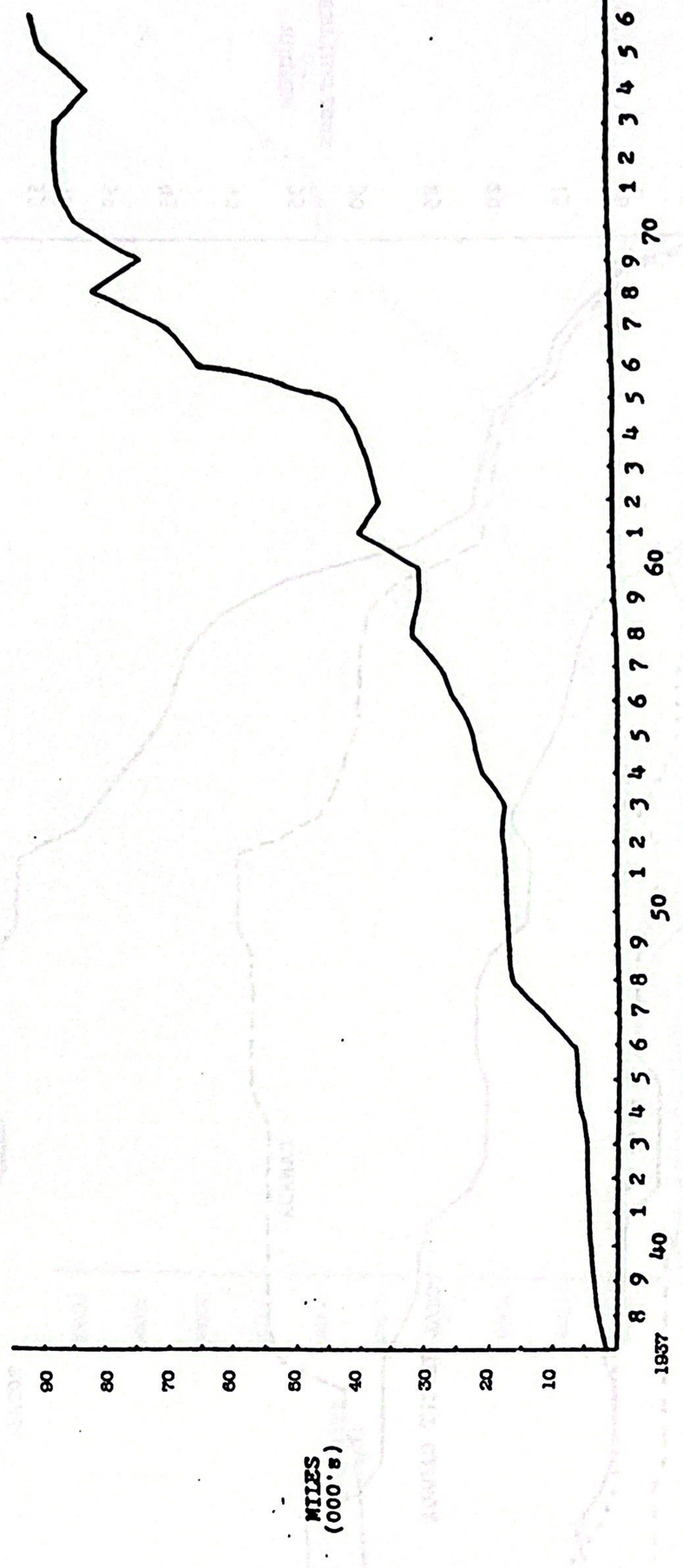


Figure 7. Total Distance Covered by Flight Schedules

Government Relations Strategies

Since its inception Air Canada has been a government "crown corporation," technically a wholly-owned subsidiary of Canadian National (CN), the government railway. The history of the corporation suggests three overall patterns of relationship with the government.

During the first ten years of its existence, Trans-Canada Air Lines (as it was then known) was a "truncated" organization, in that its employees had responsibility only for its operations while major decisions were made by government or CN officials. Its presidents, until 1947, were, in fact, the presidents or directors of the already large CN, with only limited time available for the small, fledgling airline. The CN also provided many of the airline's corporate functions in these years.

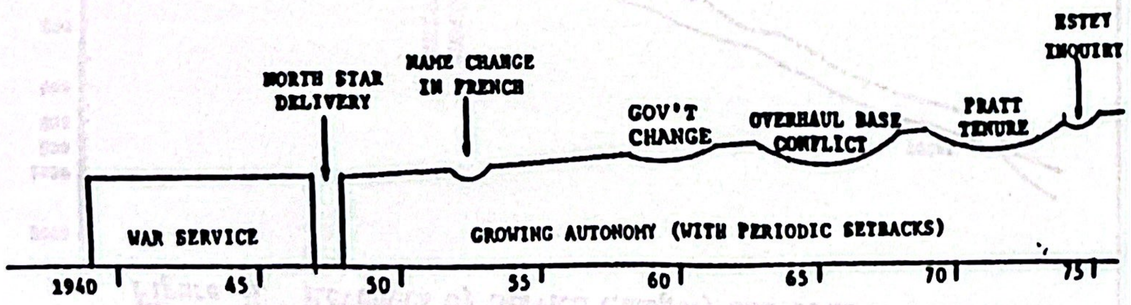
C.D. Howe, the federal government minister responsible for Air Canada from 1935 to 1957, was the driving force behind the airline. He had it established in the first place, hired its first managers, and figured prominently in its major decisions until 1957. To quote one senior executive of the airline, "What Howe said, went" in those years.

From 1939 to 1947, the airline is shown in Strategy Diagram 5 as pursuing a "war service" strategy, since it contributed to the war effort in a number of ways, notably by carrying out maintenance and overhaul work for the Royal Canadian Air Force, and, from 1943, by transporting mail, cargo, and officials to and from the United Kingdom under the non-commercial "Canadian Government Trans Atlantic Air Service".

A single event just after the war is indicative of the state of the airline at that time, and probably colored the thinking of its managers for many years to come. The government purchased a number of DC-4 aircraft, modified them to suit Canadian conditions (and labelled them "Northstars"), and then, on the orders of C.D. Howe, had 23 of them delivered to TCA, which had in fact ordered only 12. The result was that through no intention of its own, the airline suddenly found its seating capacity increased by 61% in two years.

When G.R. McGregor, a decorated World War II pilot who joined the airline as traffic manager in 1945, became its first full-time president in 1948, a strategy began which was never to abate, although it suffered periodic setbacks: growing

Strategy Diagram 5: Government Relations Strategies



autonomy from the government.[4] Whereas earlier, strategies tended to be imposed and/or emergent, this one reflected clear intention on the part of the managers of the organization and so was strongly deliberate. Early in the McGregor tenure, for example, many of the corporate services were brought in-house, and the head office was moved from Winnipeg to Montreal. The setbacks occurred as the federal government occasionally sought to impose specific strategies or decisions on its airline. But the outcomes of most of the ensuing struggles serve to illustrate the long-term trend. Best known in Canada is the government's attempt to stop the transfer to Montreal of work done at the Winnipeg overhaul base. There was a good deal of conflict, and the transfer was delayed for many years, but it eventually took place. Other setbacks in the achievement of autonomy (shown as dips in Strategy Diagram 5) included a request in 1953 for a change of name that was approved by the government in French only, a change of government in 1957 which replaced Mr. Howe and the Liberals with a more hostile Conservative government, the appointment of Yves Pratte, an outsider, as chief executive in 1969 over the favored inside candidate, and the Estey Parliamentary Inquiry of 1975 into management practices in the airline.

Flight Service Strategies

Air Canada's airplanes have provided four basic services over the years: they have flown passengers on regular and charter bases, they have carried mail, and they have delivered cargo. Figure 8 shows the annual revenue for each of these services over the study period.

More revealing is Figure 9, which plots these same data on a percentage basis. Mail revenues, which accounted for two-thirds of the total at the outset, steadily gave way to passenger revenues. By 1948, when the curve changes shape, mail revenues were down to 18%, and dropped to 2.4% by the end of the study period. Once established, passenger services always dominated. The proportion of cargo revenues grew in three waves (that peaked in 1943, 1955, and 1970), but barely climbed over 10%, and ended the study period at 9%. Charter revenues, aside from a single blip of 7.1% in 1948 (the result of a special airlift to bring European refugees to Canada), never reached 4% and ended the study period at 2.7%.

The message is clear (and will be further supported later in the text): From the mid-1940s this was a regular passenger airline. Interviews confirmed the observation that cargo and charter received only marginal attention from the senior management, even though each had its own champions within the system. For example, regular passenger traffic estimates were always used for scheduling aircraft. "At that time, after the passenger schedules had been completed, cargo was given a copy and told what space they would have, on what routes," according to one interviewee. Likewise, except for the purchase of a few Bristol Freighters in the early 1950s (as a defensive move against rival CP Air), cargo needs always received low priority in aircraft purchase decisions.

Figure 8. Revenues by Service Category and Total

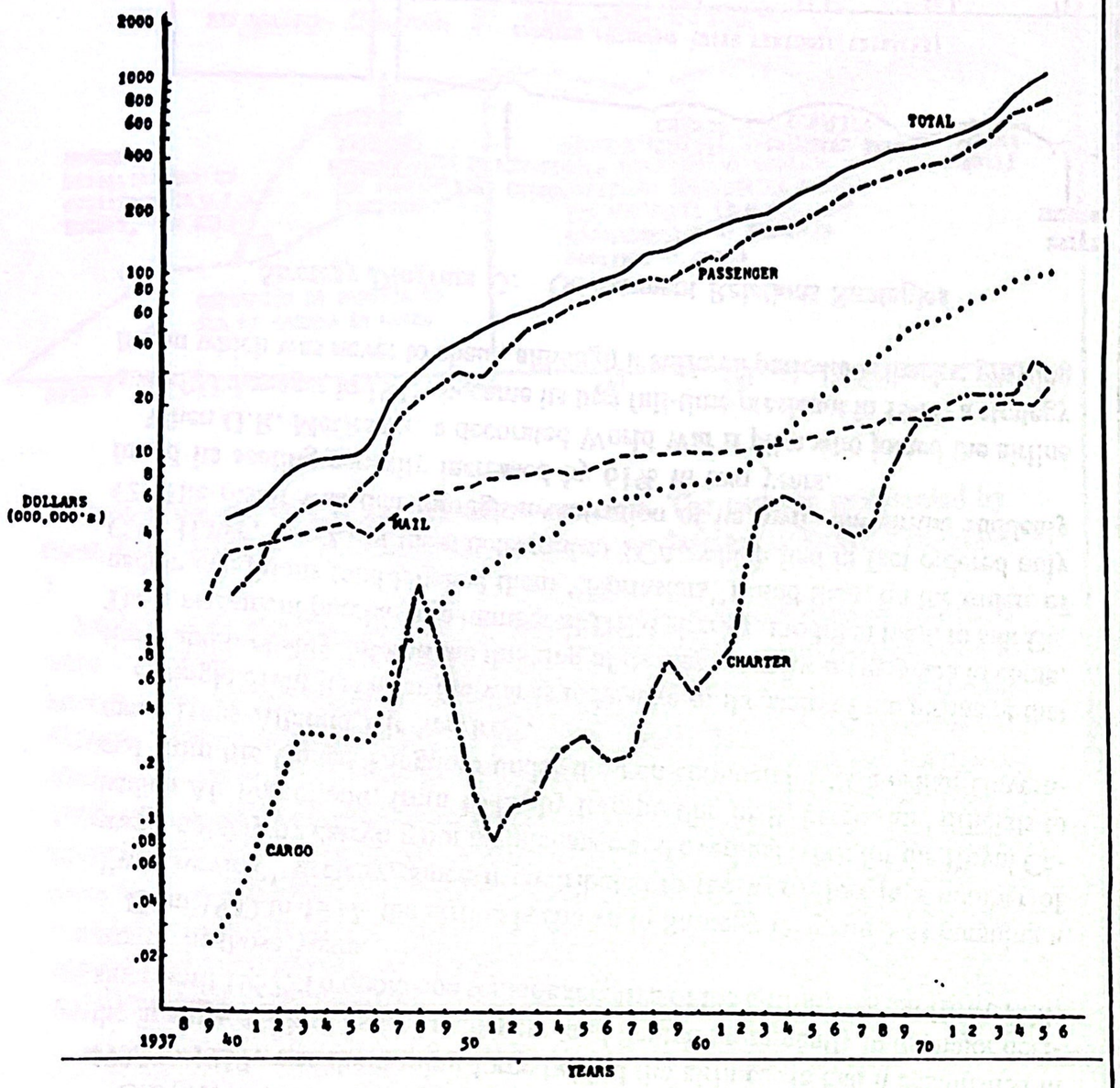
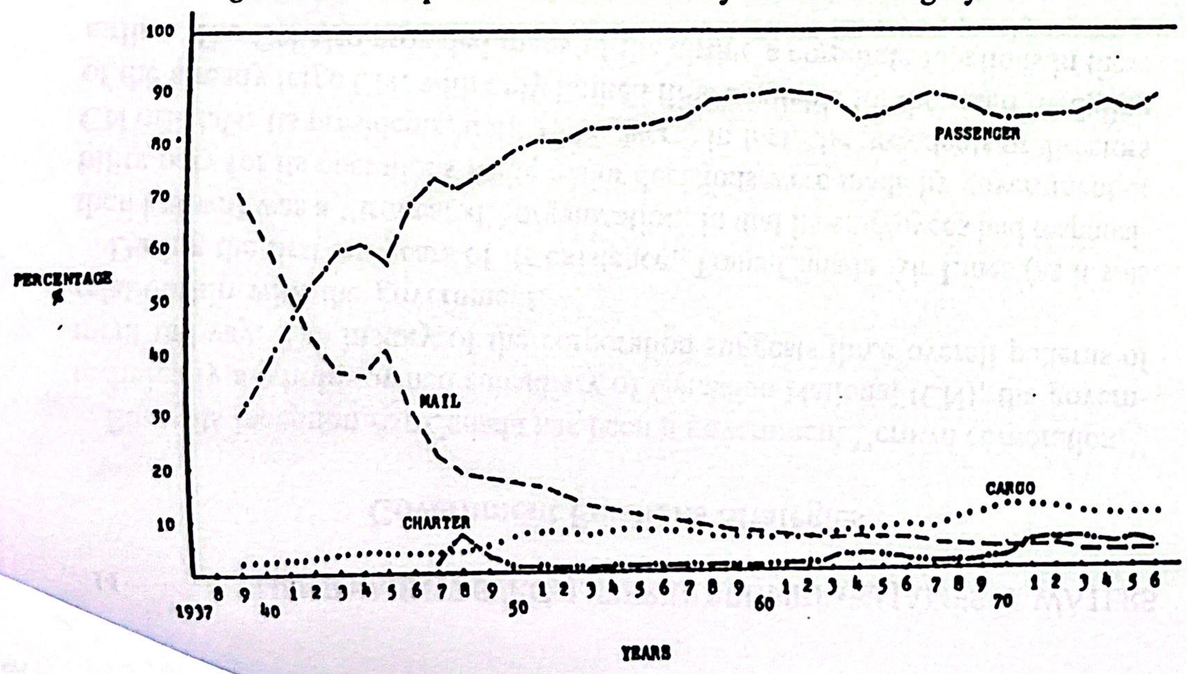
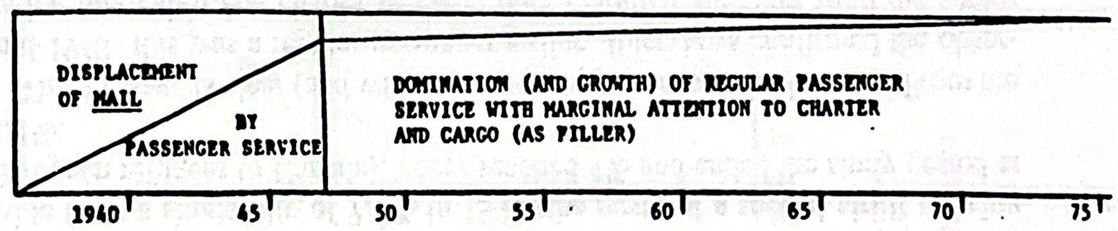


Figure 9. Proportion of Revenue by Service Category



The performance data of Figure 8 and 9 suggest, therefore, two clear patterns in the actions of the system, which are depicted as strategies in Strategy Diagram 6: displacement of mail by passenger revenue before 1948, and domination of passenger revenue with marginal attention to cargo and charter thereafter.

Strategy Diagram 6: Flight Service Strategies

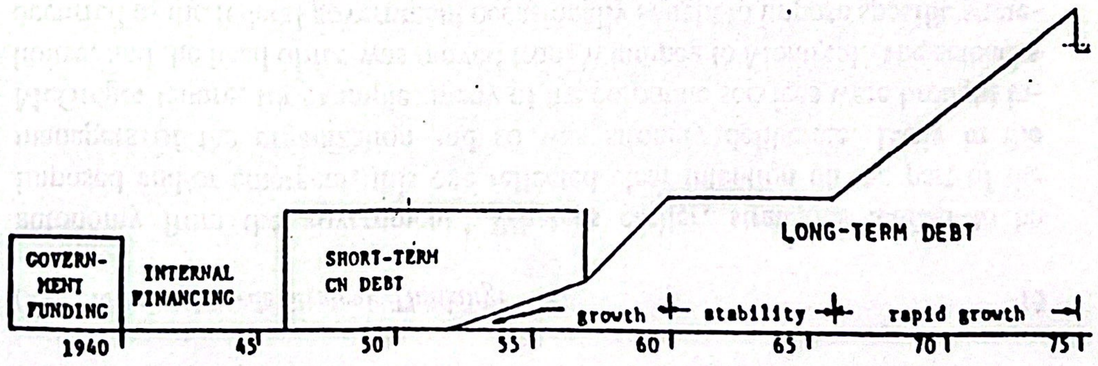


Two other intended strategies can be mentioned, although they are not shown on Strategy Diagram 6 because we view one as unrealized, the other as incidental. In 1972, Air Canada initiated a "Rapidair" service between Montreal and Toronto. Intended as a kind of commuter or shuttle service modeled after American ones, Rapidair ended up, after only a few days, being little more than a convenient form of check-in. And in 1974, Air Canada provided the manpower and management for a federal government sponsored short take off and landing (STOL) service between downtown Montreal and Ottawa. The service was only experimental, however, and was terminated in 1978.

Financing Strategies

Figure 10 depicts the annual total of outstanding long-term debt as well as the total equipment investment. Strategy Diagram 7 depicts the inferred financing strategies over the study period. From 1937–1940, the airline received direct government funding in the form of an initial capitalization of $5,000,000 and subsidization of losses. From 1940–1945, the airline was able to finance itself internally from its profits (net income is shown in Figure 11). Losses beginning in 1946 forced it to borrow from CN in the form of short-term renewable notes, and despite profitable operations from 1949–1959, this borrowing continued until 1957. Long-term debt began in 1953 and grew slowly until 1958 after which it increased rapidly (due to commitments for prop-jets and DC-8's). Debt then re-

Strategy Diagram 7: Financing Strategies



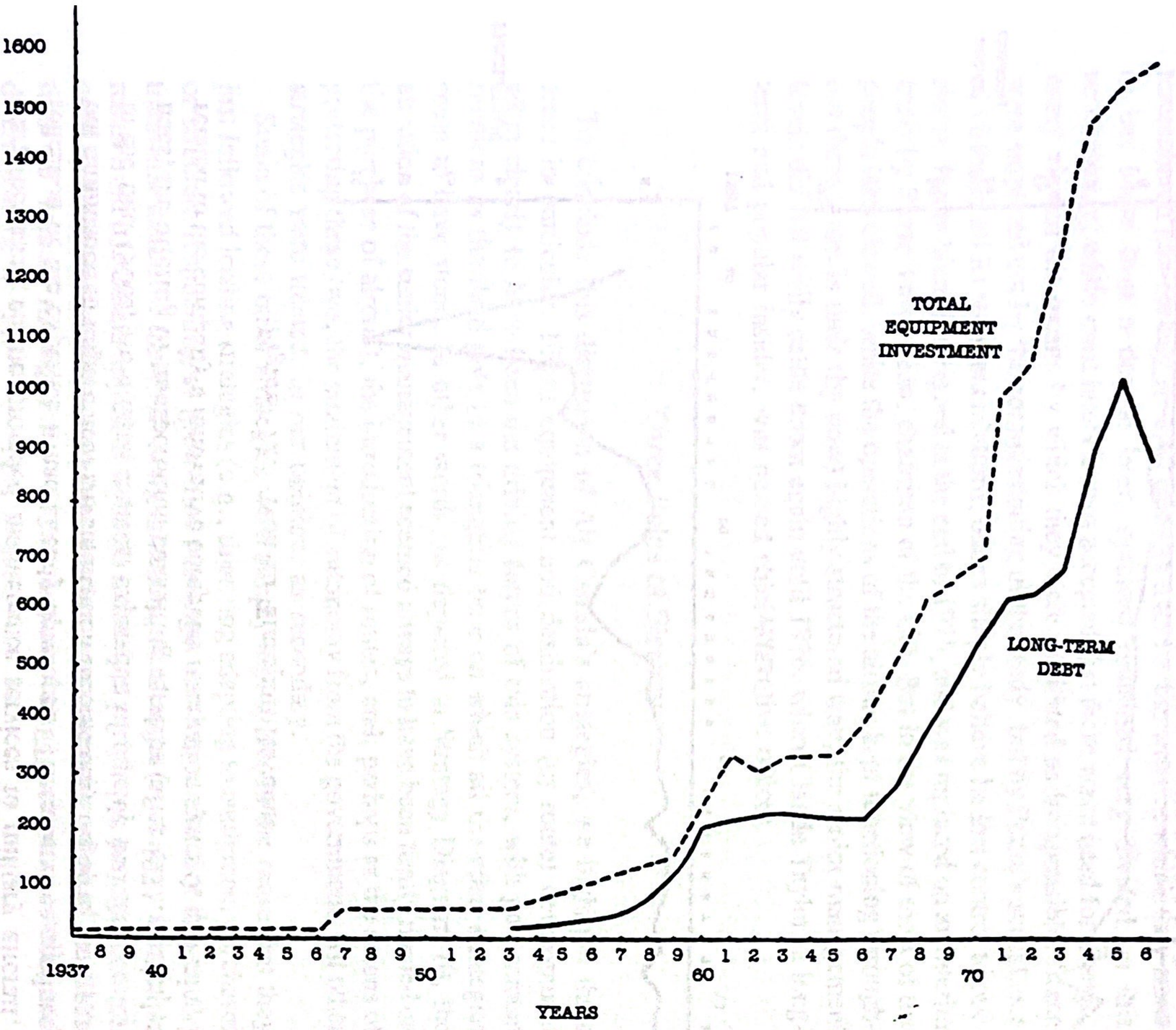


Figure 10. Outstanding Long-term Debt and Total Equipment Investment

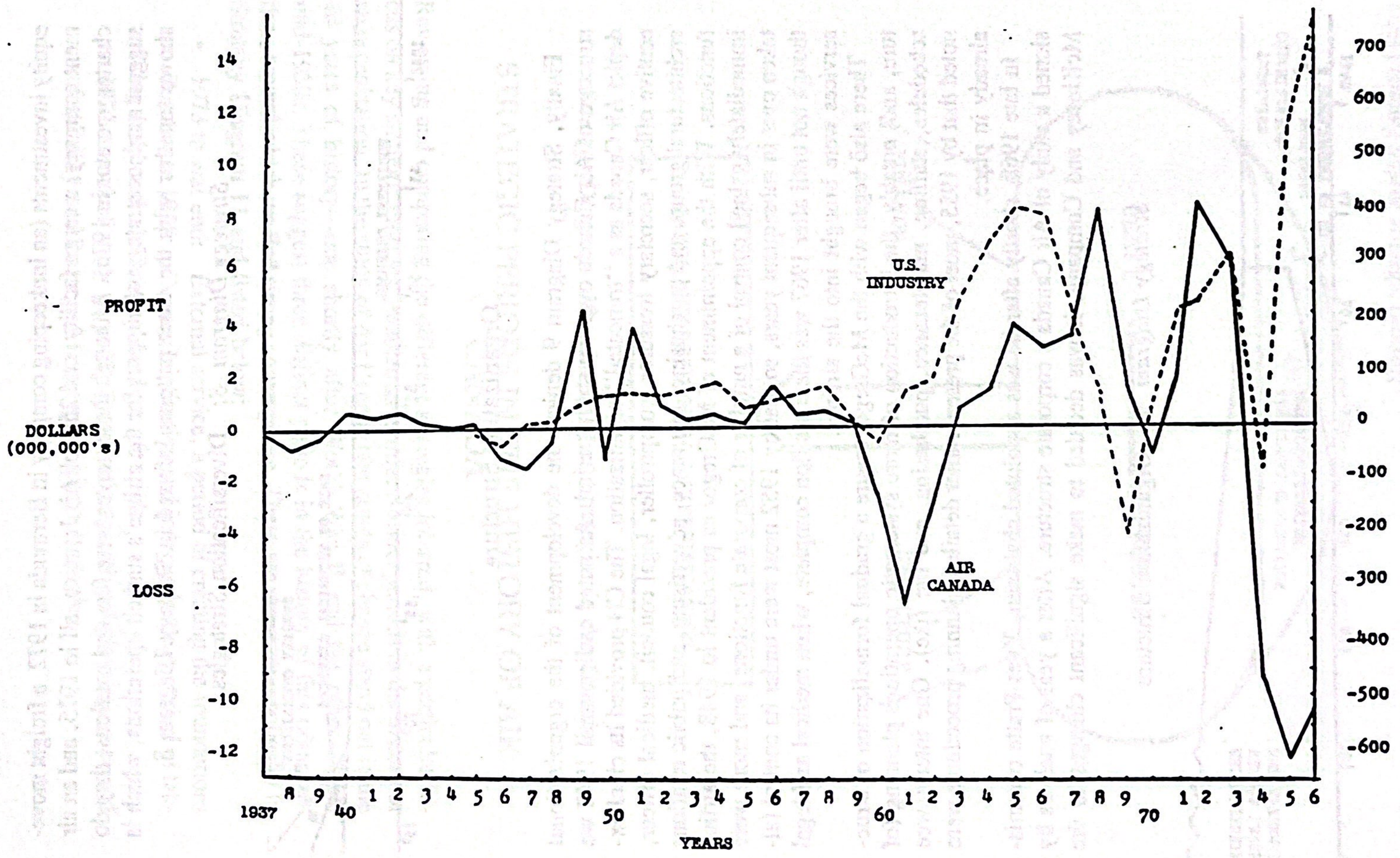


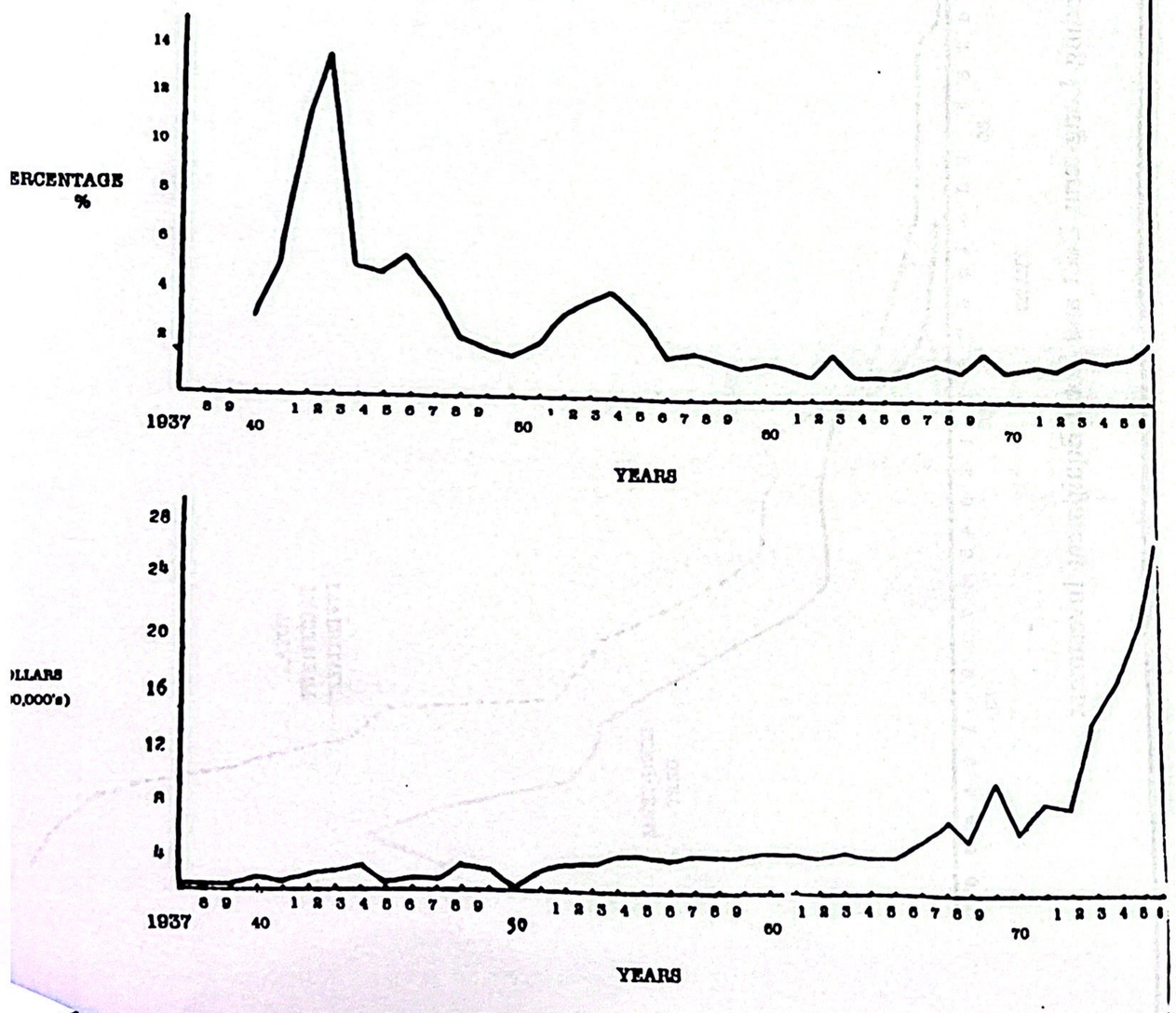
Figure 11. Net Income

mained relatively steady until 1967, from which point it grew rapidly as investments in the jet fleet increased significantly.

Diversification Strategies

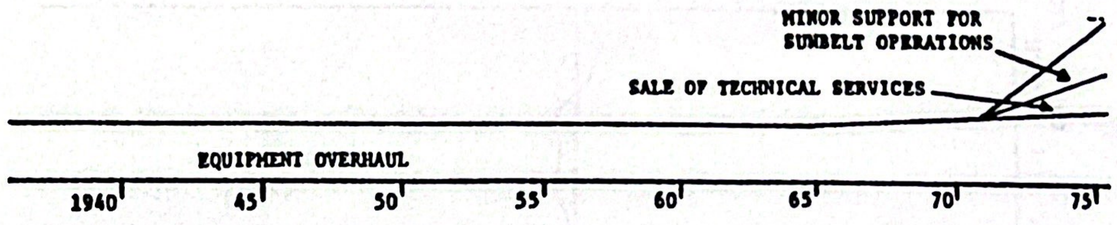
Figure 12 shows Air Canada's annual non-air transport revenue both in absolute dollars and as a percentage of total revenue. Clearly, after the war years, this revenue remained a minor part of the total, typically less than 3%. During the war, the small airline provided maintenance services to military aircraft, a reflection of the expertise it had already developed. These services continued, but diminished in importance. Diversification income only began to grow again in the mid-1960s, from three sources: expansion of outside maintenance revenues, the offering of transportation consulting services (after 1971, particularly related to the company's innovative computer reservation system), and minority

Figure 12. Non-air Transport Revenue



equity investments (an innkeeping company in Bermuda in 1972, a freight movement company, a cargo facility, and 25% of Air Jamaica, all in 1975, and an air charter operator in 1976). Although these moves were few and cautious, they do suggest a minor strategy of support for the airline's sunbelt operations, which is shown together with the other patterns inferred in Strategy Diagram 8.

Strategy Diagram 8: Diversification Strategies



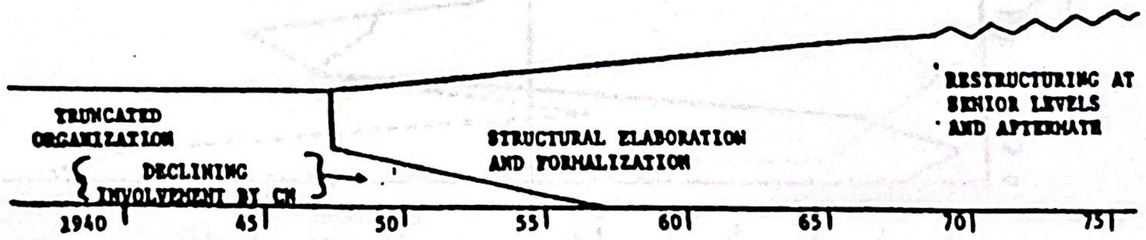
Organization Structure

Finally, Strategy Diagram 9 depicts the development of the organizational structure of Air Canada over the study period. As noted earlier, until 1948 we depict Air Canada as a "truncated" organization. The CN provided its chief executive officer, secretary treasurer, comptroller, legal council, medical officer, architectural group, and purchasing, insurance, advertising, and public relations functions. With the appointment of McGregor as president in 1948, the airline immediately gained control of a number of corporate functions, and more were taken over in subsequent years, so that by 1952 most were under its control (although not until after 1967 was the transition complete, when medical and legal services were brought into the airline).

There also began with the McGregor tenure a gradual formalization of structure, and, notably, the introduction of more systematic operations planning (of schedules, staffing, maintenance, purchasing, and the like). One interviewee noted that by 1955, most of the present rather detailed planning procedures were already in place.

In late 1968, shortly after he was appointed chairman, Yves Pratte commissioned a study of Air Canada's corporate structure. After a year of analysis by McKinsey and Company, it was decided to make significant changes to the

Strategy Diagram 9: Organization Structure



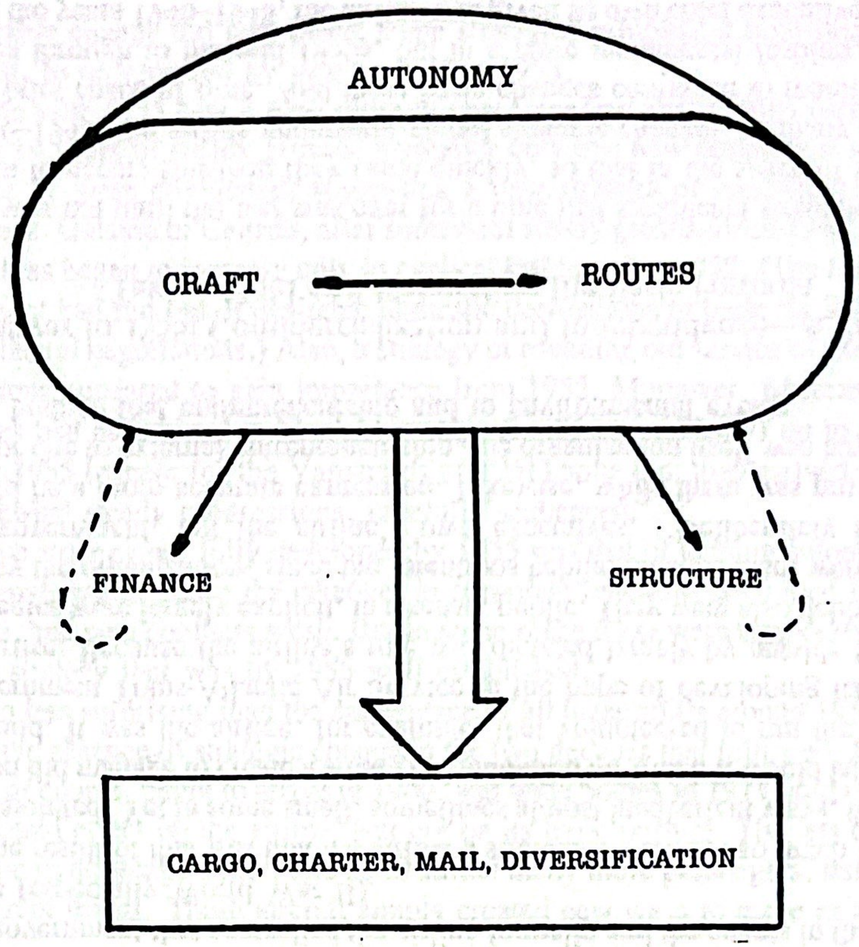
airline's management structure. Substantive changes particularly involved marketing and the institution of regional operating groups. But the reorganization is remembered less for any specific changes than for the ways in which they came to be. More than a decade later, opinions remained very divided on this restructuring; while most interviewees accepted that there was a need for change, many viewed the means by which they were instituted as irresponsible. Some were surprised not by the commissioning of the study, but by Pratte's acceptance of virtually all its recommendations; others simply believe he lost control to outsiders. Pratte himself resigned at the end of 1975, and was replaced on an interim basis by Pierre Taschereau, chairman of the CN. But in the view of most of the people interviewed, while the operations of the airline kept functioning throughout these years in their (by now) highly structured way, the senior management levels did not really settle down again until 1976, when Claude Taylor, a long-term and popular insider, was named chief executive officer.

Three Poles of Strategy

To conclude this discussion of Air Canada's strategies, we highlight three areas in particular. Flight equipment and destination (or route) development seem clearly to have been the driving forces of this system, with government relations as the third pole of a triangular base on which all the other strategies seem to have stood. In other words, as depicted in Strategy Diagram 10, the attention of the senior management seemed always to have been firmly riveted on the purchase of aircraft, the introduction of routes, and, perhaps as the means of protecting these two, the attainment of autonomy from the government. All other strategies were treated, in our opinion, as secondary.

Some of these other strategies were simply derivative, in the sense that they just followed leading strategies (e.g., financing adapting to equipment purchases or structure responding to growth of passenger services—note that despite the traumatic nature of the 1970 reorganization, no changes in strategy seemed to result from it). Others appeared to be no more than peripheral, perhaps championed by some unit within the organization but never receiving much of the attention of senior management. These include cargo, charter, mail, and diversification.

Essentially, this organization focused on the mission of moving people on a scheduled basis—specifically of transporting Canadians through their country and to key centers in the United States, Europe, and the Atlantic sunbelt. The airline's most important concerns were, therefore, first to establish these services and second to provide them on a reliable and efficient basis, with a minimum of governmental interference and at the lowest fares and rates consistent with the maintenance of a sound financial position.



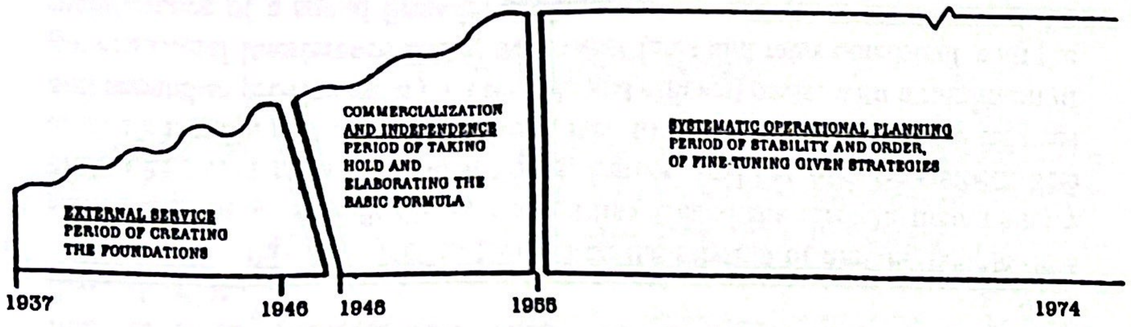
Strategy Diagram 10: Interplay of Strategies in Air Canada

STRATEGIC PERIODS IN THE HISTORY OF AIR CANADA

Reviewing and comparing the different strategies inferred, with a particular focus on key strategic changes, enables us to infer distinct periods in the history of an organization. In the study of Air Canada two points of change stand out in the 40 years of history—one shortly after World War II and the other in the mid-1950s. These suggest three distinct periods in the history of this organization, around which we find strong convergence. These are shown symbolically in Strategy Diagram 11 and listed below:

- 1973 to war end: External service, a period of creating the foundations
- Postwar to 1955: Commercialization and independence, a period of taking hold and elaborating the basic formula
- 1955 to end of study period: Systematic operational planning, a period of stability and order, of fine tuning given strategies

Strategy Diagram 11: Periods in the History of Air Canada



In delineating these periods, we find convergence not only around the two main points of change, but also in the progression of the periods themselves. From loosely organized beginnings, Air Canada matured into a highly stable organization in two basic steps, the first of which created the essential foundations and the second of which enabled it to break free of direct external control and consolidate its basic strategic direction.

In describing these periods below, following our discussion of the strategies themselves, we continue to build up the necessary arguments that will underlie the conclusions drawn about strategy formation and strategic thinking in the final section of the paper.

1937 to War End: External Service—a Period of Creating the Foundations

From its founding in 1937 until the end of the Second World War, the airline was a small organization seeking to get on its feet through the addition of new destinations within Canada. The war interrupted that process early, and diverted attention to war service, notably in the strategies of providing equipment overhaul services and in running the Canadian Government Trans-Atlantic Air Service (CGTAS). But in a sense, these strategies served to continue, indeed to accelerate, the process of organization development.

Air Canada remained a truncated organization throughout this period, lacking a full-fledged management structure, let alone a full-time chief executive. It was controlled externally, especially by C.D. Howe in the federal cabinet. The company flew small, passenger aircraft, whose unpressurized cabins forced it to make its way through mountain passes to reach Canada's west coast. Stories circulated of pilots having to land at emergency fields and accepting the hospitality of local farmers for days on end because of bad weather. But perhaps this did not make so much difference, since Air Canada remained largely a mail carrier in this period (passenger revenue only surpassing that of mail in 1945).

The flavor one gets in this regard is of an incomplete organization, an appendage of a larger system, that responded to external needs rather than its own needs

as a system. In a sense, TCA was a a function of the federal government—its flying arm—rather than an organization in its own right. Yet by serving in this capacity, it took the steps that allowed it to emerge eventually as a complete organization. Most organizations appear to be founded by entrepreneurial initiative or at least to exhibit it in their formative years through the strong leaders that are attracted to their helms. A curiosity of this one is that such initiative was not contained within its structure, but rather emanated from the federal cabinet. That might have had an influence on the airline's willingness to take risks in the future. Indeed, the final major event of this period, C.D. Howe's imposition of the Northstars on the airline, was perhaps the only real shock in the whole study period, and perhaps the last really high risk strategic initiative.

Thus we call this period "external service," one of "creating the foundations." These foundations included the skills the airline would need throughout its history as well as the essential skeleton of its domestic route structure. This was, therefore, a period of learning: about aircraft maintenance, new ports of call, and dealing with the problems of Canada's weather and its geography, not to mention its government. This was not, however, a period of learning how to make strategy. During this period the airline was driven by external forces, the weather being the most literal but not the most important of these: they included the government that controlled the airline formally and the events in the world at large (especially World War II).

The result of this was that the airline's strategies were not so much integrated as disjointed. Yet in some small, sometimes almost inadvertent ways, the organization did manage to create a strategic foundation on which it would later be able to build. It was the airline, for example, that volunteered to run the Canadian Government Trans-Atlantic Air Service in the hope of developing its overseas expertise. Because the airline's role was dictated largely by outside forces, its strategies were largely explicit, in a sense, public. They were also deliberate, but not by the organization, since the intentions behind most of them were those of the government, not the airline's own executives. "Deliberately imposed" would be a more accurate expression. Likewise, while there was proactive behavior due to external entrepreneurship, the organization itself was largely reactive, both to that entrepreneurship and to environmental events.

Postwar to 1955: Commercialization and Independence—A Period of Taking Hold and Elaborating the Basic Formula

It was not until the war was over for a time that significant strategic changes began to occur. But then they came quickly, so that in the space of two years (1946–1948) the airline underwent *global* strategic change—of many strategies in a brief space of time. And these basic changes continued to manifest themselves through to the mid-1950s, but in a more incremental fashion.

In the years 1946–1948, the airline was given its own chief executive; it began

to take over its own corporate functions and to gain autonomy from the government; it underwent its second surge of expansion in Canadian destinations and moved in a significant way into the United States, then Europe (beginning with the takeover of the transatlantic service), and then the Caribbean; its available seats increased dramatically (as the early workhorses arrived in large numbers) as did its total route miles; and it began to establish (and later, in the 1950s, to elaborate and formalize) its planning systems. After 1948, many of these trends continued, but at a slower pace, until 1955.

The flavor of the organization was now totally different. Coming out of years of response to external influence, culminating in Howe's imposition of the additional Northstars, the corporation was now taking hold of its own destiny and settling down, commercializing itself, and shaping its structures accordingly. The war had ended, domestic demand for passenger services was developing,and the organization was staffed with "young Turks," eager to provide these services (and to challenge any federal officials who impeded these efforts).

Whereas earlier, mail delivery and service to the war effort (which included a form of diversification—the selling of maintenance services), figured prominently in its strategies, now the organization focused on one task: the comprehensive provision of regular passenger services to Canadians. That became, and was to remain, the dominant element of the strategy. Hence, in contrast to the earlier disjointed strategies, in this period we find tightly integrated ones, built on the three poles discussed earlier—the elaboration of routes, the purchase of passenger aircraft, and the steady gain of autonomy from the government. C.D. Howe accordingly became less a controller, more a protector. As he told McGregor soon after he became the airline's first president, "Keep your hands out of the taxpayer's pocket, and I'll keep the politicians off your back."

In contrast to the last, this period finds the system manager driven, within a rather benign environment. Except perhaps for the move into the Caribbean (to make use of the unexpected Northstars), the strategies again seemed largely deliberate, but this time in response to the initiatives of the corporation's own management, although increasingly influenced by industry forces. The organization's moves can be called expansionary and proactive without being labelled bold. After global change at the outset of the period, which established the basic formula, the airline settled down to pursue rather steady incremental change in response to steadily developing market demand.

1955 to End of Study Period: Systematic Operational Planning—A Period of Stability and Order, of Fine Tuning Given Strategies

Since we are describing Air Canada as being on a convergent path to a stable, systematic mode of operating, it may seem arbitrary to pinpoint one year for a change of period. The fact is that 1955 stands out strongly as the year when considerable change did take place; some strategies exhibited a final surge; others ended, to be replaced by new ones after 1955.

The year 1955 saw a final surge in new Canadian destinations (seven in all) after 19 years of steady growth; thereafter only one new destination was added while 11 were eliminated, suggesting a new strategy of consolidation within Canada. Outside of Canada, after somewhat steady growth since 1946, new destinations began to increase only in cyclical fashion after 1955. (The federal government had run out of desirable domestic destinations to trade for foreign ones in bilateral negotiations.) Also, a strategy of rounding out service to existing destinations appeared to gain importance from 1955. Moreover, whereas new airplanes had all arrived in blocks, or steps (in effect, suddenly) up to this time, after 1955 (except for the Vanguards of 1961) none did; they arrived instead in somewhat steady progressions, carefully sequenced.

One strategy not fully developed by 1955 was that of gaining autonomy from the government, since the takeover in corporate functions continued for several years, and new conflicts arose. But in some sense these were temporary setbacks in a strategy that was by 1955 well established.

No less surprising than the appearance of all these shifts around 1955 was the relative absence of strategic change in the two decades that followed. Jet aircraft did, of course, begin to arrive in 1960, and wide bodies in 1971, and these had a profound effect on the airline. But not on its basic posture. The jets caused the airline to do things better, and so to attract many more passengers, but not to do different things. These aircraft simply created new ways to serve existing markets.

The areas of organizational strategy can be described in generic terms as follows:

Mission (products and services as well as markets)
Means to perform the mission (facilities, machinery, etc.)
Supplying the mission (raw materials, finance, manpower, etc.)
Marketing the mission (pricing, promotion, distribution)
Supporting the mission (external relations, etc.)
Extending the mission (vertical integration and diversification)

In Air Canada from 1955 to 1976, the only really significant change appeared to be in the means to perform the mission (that is, in-flight equipment). Strategies associated with all of the others remained remarkably stable for the 21 years. Equally surprising, a number of the means of extending the mission that some U.S. airlines were pursuing vigorously—such as charter, cargo, and diversification into tourist ventures—received scant attention in Air Canada. To the extent that these strategies were pursued at all, Air Canada followed broad industry patterns.

The arrival of Yves Pratte as chief executive officer in 1969—an outsider ap-

pointed over McGregor's hand-picked successor—is most interesting in this regard.

Pratte and Yves Ménard, his associate, conceived an intended strategy of diversification for the airline, to serve customers through minority interests in travel agencies, hotels, and so on. But the energy invested in pursuing those intentions declined significantly after Ménard left the airline so that the strategy actually realized was only a shadow of what was intended. (One senior executive, asked if the company had diversified, responded that it "tried to".)

Of a greater impact was the McKinsey reorganization initiated by Pratte. Shake up the management structure the McKinsey reorganization certainly did. But, as noted earlier, it seemed to lead to no major change in strategy. Indeed, it may have impeded or delayed rather than encouraged strategic change. After the reorganization, the senior executives apparently consumed so much energy adapting to the shifts in structure and personnel, and protecting themselves politically, that they seemed to lack the time to initiate any significant change in the basic direction of the airline. As one executive commented, this was "a time when everybody looked after themselves." Moreover, the McKinsey reorganization may simply have reinforced at the executive levels the analytic mode of operating that had long since pervaded the operating levels. And this mode, we shall argue, may have discouraged strategic change. Perhaps most indicative of this period was the comment of one planning executive, that "during the McKinsey crisis, the detailed plans, implemented faithfully by the operations people, saved the day. Management did not know which way to turn for a time but the planes kept on flying."

It is in these comments that we find the characteristics of this final period. This was a period driven by the desire for stability and order, the airline having already gained control of its political destiny as well as its technical and market operations. Its strategies appeared to be deliberate, yet, paradoxically, they also seemed implicit—so deeply established that they were internalized in the system. These strategies were also tightly integrated, the result of the orientation to planning and the focus on regular passenger operations. Thus, we have a period dominated by systematic operational planning, in other words, refining or fine tuning a given and successful set of strategies.

The planning process itself solidified at the start of this period. Although there had been budgets from the beginning (and one-year operating plans after World War II), development of the process reached its final stage in 1955 when J.J. Smith, a member of the finance group, developed the "blackboard exercise." Used prior to the introduction of summer and winter schedules, this process divided the airline into five operating sectors, called "five little airlines"—transcontinental routes, transatlantic routes, "thin" southern routes, short-haul routes, and other small North American routes. A pro forma income statement was used by the executives to establish fares and schedules, and also to try to control the level of profitability, at least during the years when costs and revenues could more easily be managed. This planning system, with modifications made in 1965 to separate the long range plans, was used to the end of the study period.

Whether long-range or short, however, the system was clearly focused on operations, not strategy—the object was to program what was, not to create what hadn't been. Indeed, the very definition of the "five little airlines" implied a stable route strategy, or at least encouraged the stabilization of it (e.g., thin southern routes). Also significant was the time and attention operational planning received from the very top levels of management.

Thus the dominant culture was oriented to the highly managed operations, specifically to moving regular passengers on established routes (and, when necessary, engaging in marketing to attract sufficient numbers of those passengers). While it would perhaps not be accurate to describe Air Canada as reactive—since it was responding more to its own needs for planning and order than to external pressures—it could not be characterized as highly proactive either. The major exception to this was, of course, the continuing strategy of gaining autonomy from the government. But, interestingly enough, that strategy seemed to have been designed to protect the planning process—to seal the organization off from unexpected demands of the environment so that the operations could be managed tightly from within. Pratte tried to be proactive in other spheres, notably with respect to diversification, but a combination of factors—some, but not all, beyond the control of the organization itself—stopped him. His proactive, intended strategies never became organizational, and thus were never really realized.

In another sense, however, Air Canada was reactive. It followed industry trends. It had become a large, world-class airline, in many ways undifferentiated from the others, especially some of its American counterparts. Once the Vickers airplanes were phased out, Air Canada flew the same airplanes as they did; it attended to demands for charter services in accordance with changes in IATA rules and the corresponding moves of its competitors; it supplied cargo services in accordance with its available aircraft and industry trends; and it flew mostly to large, established urban centers in Canada and abroad. Even its diversification strategies, such as they were, were not for the most part unusual. Where Air Canada did excel, in computer systems and maintenance, for example, was a reflection of its orientation to operating efficiency, not strategic innovation.

In a sense then, the more Air Canada was drawn into the mainstream of its industry, the less control it had over its own strategies. How could a world-class airline, for example, refuse to fly wide-bodied jets or to offer charter services across the Atlantic? Ironically, Air Canada traded the imposition of strategies by the government for that by the industry.

This "nesting" within the industry is perhaps best indicated by a comparison of Air Canada's results with those of the U.S. airline industry. As shown in Figure 13, the smooth exponential growth of Air Canada's revenue since the late 1940s follows closely that of the U.S. airlines. Air Canada's passenger load fac-

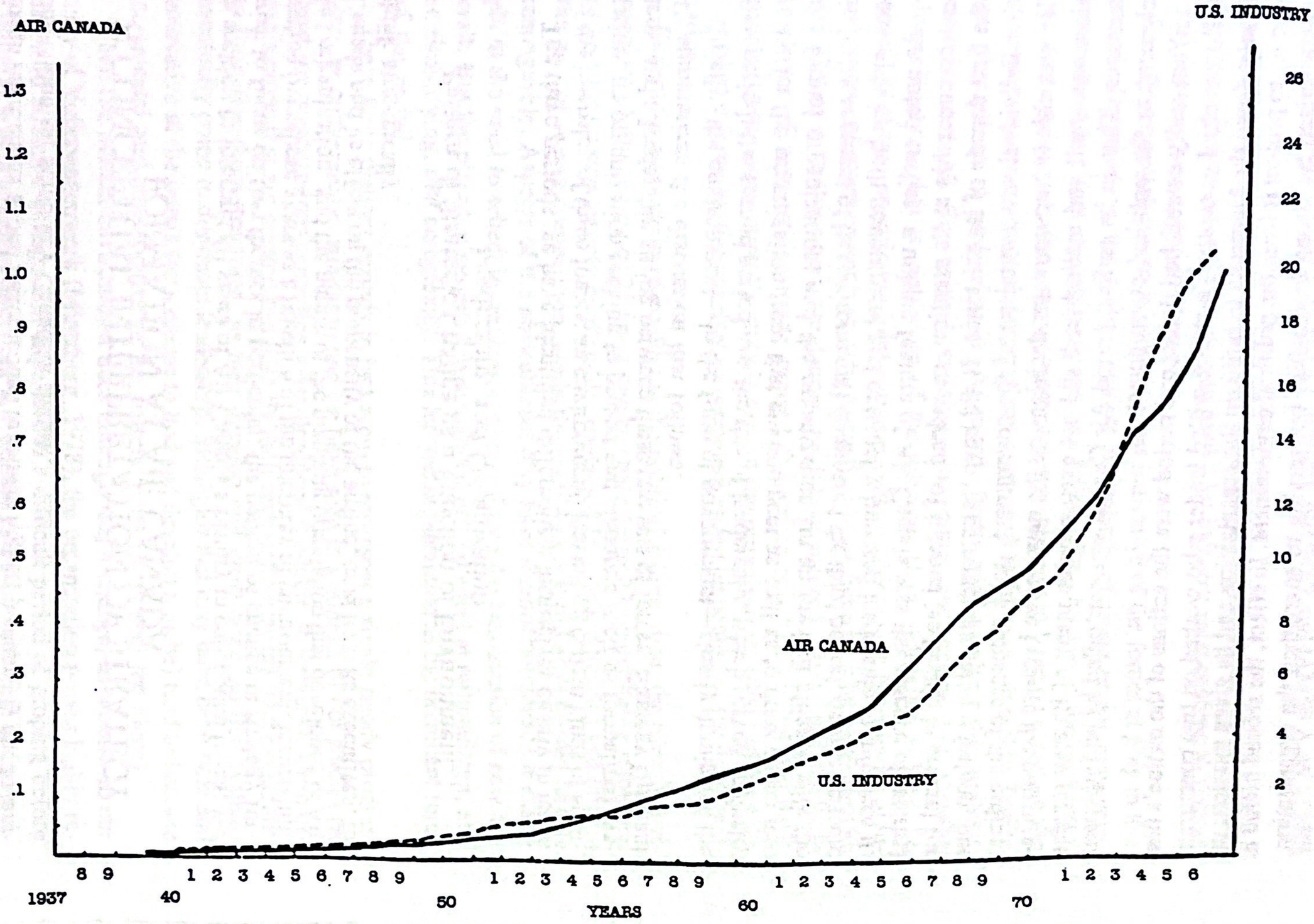


Figure 13. Total Revenue

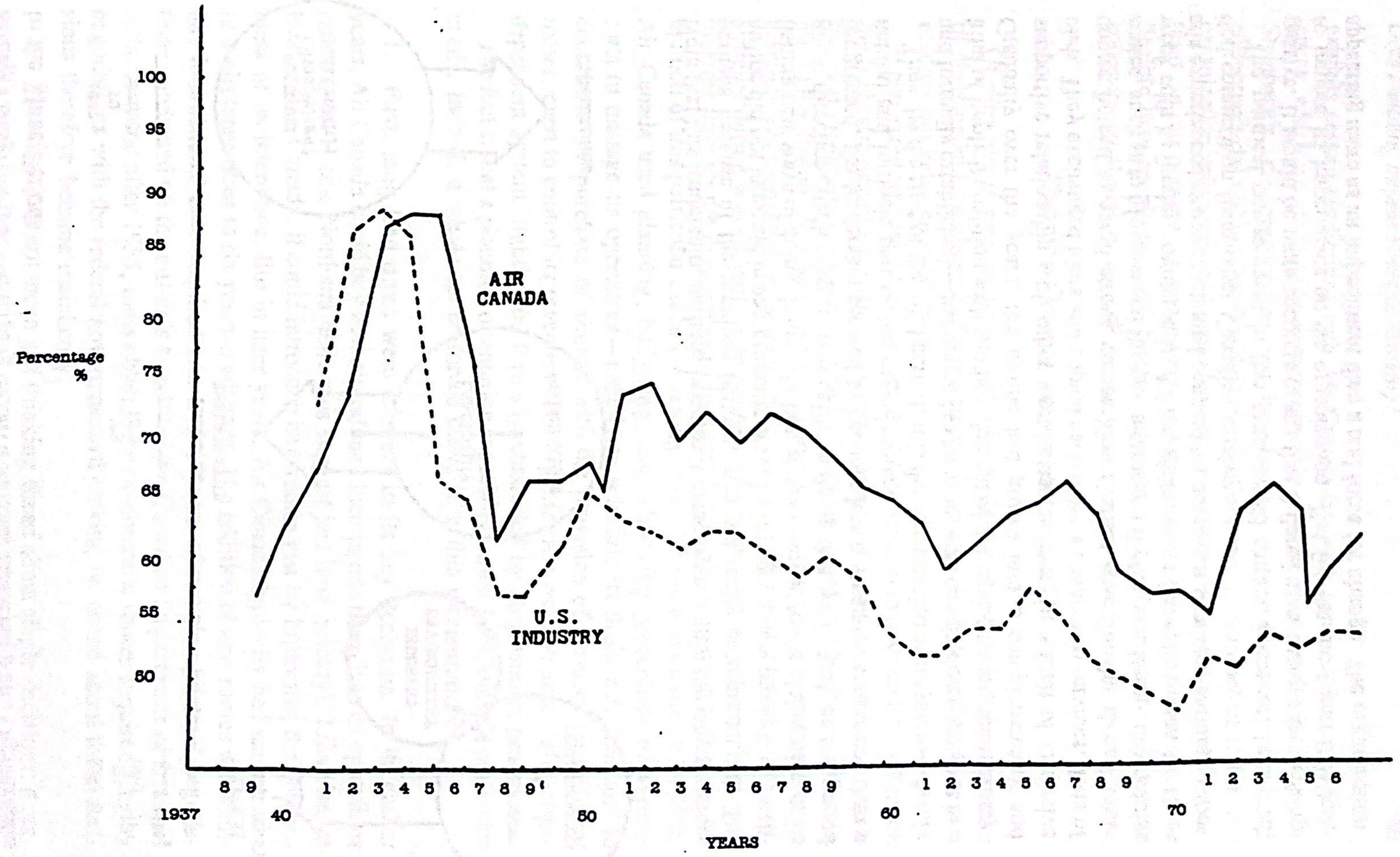


Figure 14. Passenger Load Factor

tor changes much more erratically over the years with swings of ten percentage points from one year to the next. Yet when these figures are compared with those of the U.S. industry, as can be seen in Figure 14, the similarity is striking (even though Air Canada's load factor tended to remain higher, presumably due to less competition on some key Canadian routes).

A CONCEPTUAL INTERPRETATION OF STRATEGY FORMATION AT AIR CANADA

In seeking to interpret 40 years of Air Canada's history in conceptual terms, we wish to focus on two themes in particular: the pattern of change in strategy formation over these years as a function of the interplay of environment, leadership, and organization, and the nature of the planning orientation that developed in Air Canada and its effect on the propensity of the airline, or at least its executives, to think strategically.

Pattern of Strategic Change as a Function of Environment, Leadership, and Organization

The three periods we have identified differentiate themselves clearly in terms of the interplay of three forces: an environment demanding certain kinds of adaptation, an organization seeking to protect and elaborate itself as formalized system, and a leadership sitting between these two sets of forces. Strategy Diagram 12 summarizes the discussion that follows.

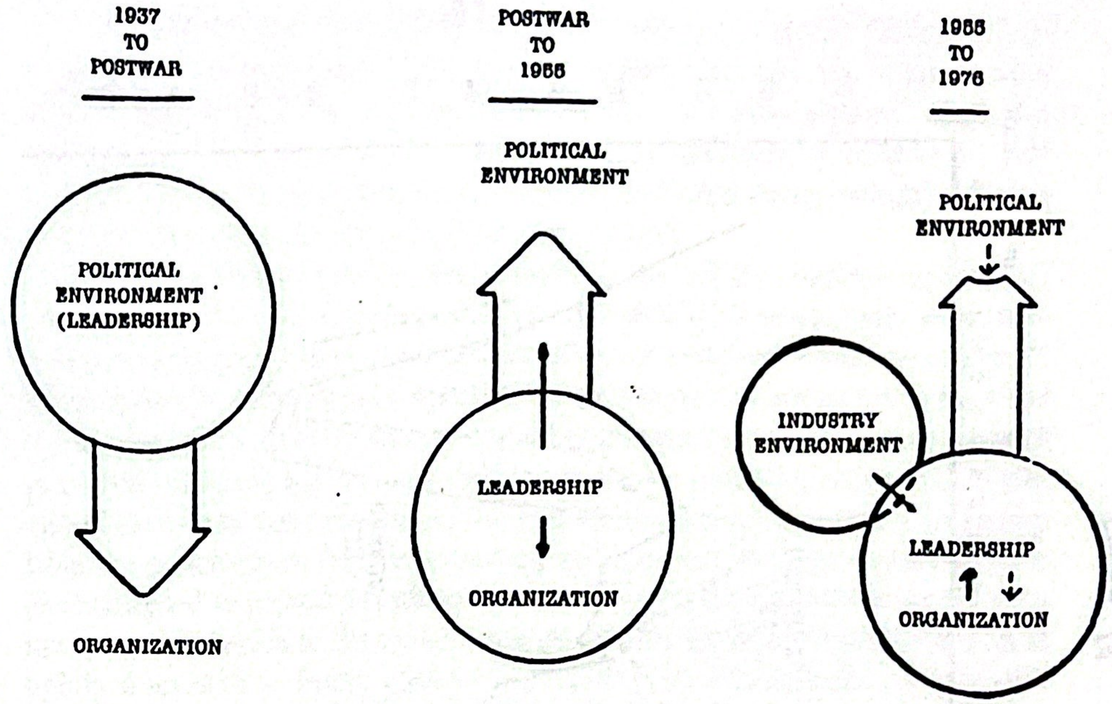
Briefly, the environment—in the form of government—clearly dominated the first period; the second period saw the rise of leadership, which served gradually to buffer the organization from that environment as well as to draw power into the formal organization; and the organization (in an implicit alliance with the industry segment of its environment) dominated the third period, despite periodic attempts by both government and externally imposed leadership to influence it.

As noted earlier, a unique feature of Air Canada was the absence of internal entrepreneurship at its creation, or indeed, of internal leadership in general for the first decade of its existence. It did have its entrepreneur, after a fashion, but that individual was a minister of the government, not a manager of the airline. He was able to impose major decisions on the new airline because the organization was small and malleable; it did not even provide many of its own regular services. Thus in its earliest period Air Canada was controlled by an important element in the political environment.

What really established the second period were the actions of the airline's first full-time chief executive, a strong-willed leader who worked on two concurrent fronts: down the hierarchy to build up the organization and its given mission, up above, to protect it from the political environment. In effect, the second period is characterized by strong leadership, but serving to strengthen the organization.

was

Strategy Diagram 12: Interplay of Environment, Leadership and Organization in the Three Periods



Note that this leadership, perhaps because it came from within the organization, perhaps because of the previous history, was not really entrepreneurial. The airline did not innovate in any dramatic way, by inventing new markets or establishing new ways of doing things. Rather, it was oriented to the elaboration of its given direction, dedicating its real skills to doing that well. And, as the period progressed, the leadership seemed to become less a separate component than a natural and intrinsic part of the organization.

Thus, by the start of the third period, it is the organization as a system—firmly and formally established—that seemed to have become clearly dominant, but in a kind of implicit coalition with another element of the environment, the industry. Gradually over the years, the airline had grown into a complementary and supportive relationship with other world-class airlines, in a kind of exclusive club. They exchanged ideas and copied each other's changes in services. This of course helped to avoid strong competition (indeed, Air Canada shared some routes, such as to Moscow and Prague, alternating flights on different days of the week with its foreign counterpart). All the while, on its domestic routes Air Canada experienced strong, sustained demand for passenger services, and faced limited competition from other Canadian carriers.

The political environment in this third period cannot, however, be called passive. It would be more accurate to say that it flared up occasionally, seeking to impose its imperatives on the organization. But for the most part it failed, appearing more as an impediment than a real force for change. The organization

was simply too strong and established, too set in its procedures (Hafsi, 1981). Moreover, it was sometimes able to evoke its industry relationships to protect itself from government influence.

The Pratte appointment is perhaps most indicative of the forces at play in this period. Imposed on the airline against the wishes of some senior managers, Pratte tried to effect strategic change and failed. Even his use of the McKinsey people to reorganize the management structure seemed to have no effect on the strategies pursued, since the operations continued to function smoothly despite the disruptions at senior levels. As noted, Pratte tried to effect this strategic change, not in the central mission—in routes and crafts—but through diversification, that is, extension of the mission. Here, ostensibly at least, he could act alone, negotiating joint ventures with outsiders with a minimum of involvement of other executives, who knew the airline industry a lot better than he did. But even in these peripheral areas, he did not succeed. Then surprisingly, in his letter of resignation, Pratte praised the airline and its staff but had harsh words for the government's attitude toward the organization: what had been designed as a force for the political environment ended up being one for the organization!

Except for an occasional conflict in the political sphere, then, the overall environment of this period of 21 years can be characterized as remarkably stable and supportive. It was largely predictable, contained few discontinuities and little in the way of severe competition, while the hostilities that did arise proved largely manageable. Aspects of the environment may have seemed complex, for example in the need to schedule services or to coordinate the introduction of new aircraft. But the planning system that developed proved adept at rationalizing, and so simplifying, that complexity. This left the organization as the dominant force of the period.

These three distinct periods in fact seem to represent a single steady progression, or convergence, similar to one we have seen in a number of our studies (at least for organizations providing mass-produced products or services). Even organizations that are created and built by their own entrepreneurs tend eventually to formalize their structures, as they develop and grow large, so that systems eventually come to dominate leadership. Strategies that may have been bold and innovative at the outset (as a means to find and develop a niche) tend to become incremental and conservative in the mature years (to protect the niche).

When the market environment does undergo major change, as we saw in our study of Volkswagenwerk (Mintzberg, 1978), the organization proves highly resistant to strategic change and experiences a difficult period of groping before settling in a new strategic direction. Air Canada faced no such shift in its environment (deregulation started much later in Canada) and so continued to pursue its given and successful strategies to the end of the study period.

Our study of Steinberg Inc. (Mintzberg and Waters, 1982), a supermarket chain that grew large over the course of almost 60 years under its entrepreneur,

exhibits certain similarities with Air Canada but with some interesting differences, which we attribute to entrepreneurship and the nature of the business. In Steinberg's, the organization and its planning system eventually displaced entrepreneurial vision. But that shift took half a century. And before it did, the organization voluntarily and proactively undertook two major strategic reorientations, in our opinion for two reasons: a supermarket chain is intrinsically more flexible than an airline, and this one was led by an owner with considerable entrepreneurial vision, as well as the power to act unilaterally.

Planning Orientation and Strategic Thinking

Of particular interest in the last half of the Air Canada study is the prevalance of planning and the absence of strategic reorientation. We believe that there is a relationship between these two.

When asked why the McKinsey reorientation seemed to have so little effect on the basic strategy of the airline, one senior executive commented with an expletive that management means nothing in the operation of this business. What he must have had in mind was strategic management, or perhaps senior managers, certainly not management systems, because this airline was dependent on such systems during a good part of its history. (As noted, it was sustained by such systems through the management crisis that followed the reorganization, in the opinion of this particular executive among others.) From at least the mid-1950s, Air Canada used planning, budgeting, and scheduling procedures of various sorts to manage its operations—notably to schedule its flight activities and to coordinate the purchase of aircraft with the provision of services on different routes, even to control its revenues. The organization was run as a highly interdependent system, tightly and formally controlled by its planning procedures.

The fact is that a planning orientation especially suited Air Canada's particular needs. Indeed, a whole set of forces drove it to this reorientation:

1. First, long lead times were inherent in its key decisions. In its earlier years, Air Canada could buy new aircraft and incorporate them into its operations rather quickly (the Northstar deliveries suggest just how quickly). Likewise, at least within Canada, it could introduce new routes just by informing the government of its intentions. But in later years, Air Canada typically had to order its new airplanes three to six years in advance. The addition of new routes was similar. International ones required two to five years of complex bilateral negotiations conducted on the airline's behalf by the Canadian Department of External Affairs, while after 1955, even obtaining new domestic routes required lengthy negotiations with the federal government. Thinking far ahead about these decisions therefore became mandatory.
2. Planning does not mean just thinking ahead about single decisions; it presumably also implies some kind of attempt to interrelate different decisions

(Mintzberg, 1981). Thus, perhaps an even stronger force for planning was the need to coordinate the different activities of this organization—the aircraft available, not only the routes but also the specific timetable to be flown, the scheduling of maintenance and flight crews, and so on. All of these activities had to be coordinated in one tightly integrated system with machine-like precision. And that system stretches beyond a single airline. As Newman, Summer, and Warren note, "Preparation of tickets in Vienna that will be understood in Nairobi and Seattle, that can be reissued in Baghdad and cancelled in Tahiti, and that provide the basis for allocating the fare, collected among a dozen different airlines requires an impressive use of standard operating procedures (1972, p.693).

Likewise the arrival of new aircraft had to be tightly coordinated with the introduction of new routes or the expansion of existing ones. One need only imagine a conversation in a hanger: "Hey Fred, there's a guy here who says he has three 747's for us; who ordered them?" While the introduction of new routes may have driven the acquisition of new aircraft in the early years when aircraft were small and few and the airline was rounding out its Canadian services (except for the Northstar deliveries, when the opposite happened), in later years the two were tightly coordinated through planning.

3. Of course, the story of Fred is amusing because of the cost of modern jet airplanes. If Air Canada could have bought its equipment the way Steinberg's bought its produce, there would not have been the same need for planning. The coupling of activities could have been loosened by the purchase of redundant equipment. Thus, a third factor that encouraged planning was the capital intensity of the decisions the airline had to make (at the limit, $36 million for a single Boeing 747 aircraft in 1976). This encouraged a third element of the planning process, beyond future thinking and integration—the reliance on an analytic mode of decision making. Costs and benefits had to be carefully analyzed before new aircraft were bought, also before new routes were introduced. And the data to do so, as we found out in our archival investigation, were abundant.

4. Size was also a factor. As the airline grew, it moved into the mainstream of its industry. Unlike a small airline, which might be able to find a few aircraft quickly to satisfy its needs (say from a bankrupt competitor[5]), a large airline requires many aircraft (and, to keep maintenance expenses in line, of limited variety). And to maintain its world-class status, Air Canada had no choice but to follow certain industry trends (such as flying 747's). Thus, to acquire aircraft, it was forced into the long industry queues, and therefore had to plan.

5. Safety is another factor which cannot be underestimated. Steinberg's could afford a few weak stores, Volkswagen even some weak automobile models. But Air Canada was an organization that could not afford mistakes, at least in the air. And the mentality that dominates an organization's operations tends to pervade its administration. Safety in the operations meant, among other things, the careful programming of contingencies (what to do in the event of a snow

storm, or an engine failure, or a hijacking); in the administration, this doubtlessly encouraged the planning orientation, to avoid surprises in the broader sense—with regard to basic strategic direction.

6. Another contributing factor was the airline's status as a government organization. When C.D. Howe asked the airline to stay out of the taxpayers' pocket, he meant "stay out of the politicians' minds." A secret to success within the government—one Air Canada learned the hard way—is to avoid the attention of the politicians. And one way to do this is to avoid surprises and bad publicity, which encourages the planning of things as carefully as possible. Moreover, there is evidence that the effect of any form of direct external control is to drive an organization to a highly analytic mode of functioning—never to act impulsively, to justify all of its moves with hard data, in general to be systematic and orderly (Mintzberg, 1979b, pp. 288–91).

7. Last and not the least of the factors was the airline's influence in its own markets. As Canada's flag carrier, Air Canada had at least until the end of the study period a favored competitive position in many of its key markets. For example, it always dominated the Montreal–Toronto corridor, the heaviest by far in the country. Moreover, demand for air passenger services grew steadily throughout the study period. Air Canada was, in other words, usually in a demand-driven situation (except for brief periods after the arrival of new aircraft), and so seldom had to scramble for markets. As one executive commented, "We could forecast the future very accurately." Predictability and control are, of course, prime prerequisites for successful planning.

All of these factors point in one direction—to systematic, formalized planning. They formed a consistent "gestalt" which would drive any organization toward a highly systematic, precise mode of administration. Air Canada was so drawn. And it executed that orientation effectively: Air Canada was a well run, highly efficient airline. But the price of its planning orientation, in our view, was lack of attention to strategic thinking.

What do we mean by strategic thinking? In some sense, we mean conceptual thinking, about the organization as a whole—about its basic missions—new ways to conceive them, elaborate them, extend them. Strategic thinking is to operational thinking what the first derivative in calculus is to the given formula, a step up, if you like, from the basic relationship. IBM exhibited such thinking for example, when it voluntarily undertook development of the System 360 (Wise, 1966).

The lack of attention to strategic thinking in the last half of our study period is indicated by a number of factors. One was specific evidence, not just of the absence of significant strategic change, but of the repeated discouragement of such change. The Rapidair experience is perhaps most indicative, especially when we compare it with IBM's leap into the 360 system. If anything, the latter was an act of faith; the executives decided to redesign their company's entire product line

with no idea of what would eventually emerge. In contrast, Air Canada embarked on a shuttle experiment already proven on certain American routes, and withdrew (in all but name) after only a few days during which the executives saw no change in reservation patterns. The attitude was not one of "let's make this thing work," but rather, "oh, well, we gave it a try." The former change was sustained by inspiration, the latter subverted by calculation.

This is not to argue that the airline housed no individuals who thought about broad strategic changes. Cargo, charter, presumably even Rapidair had their champions, people who may have thought they would help to remake the airline. Indeed, Pratte showed indications of this in his intentions for diversification. But the *organization* did not exhibit these intentions. In other words, strategic thinking seems not to have been part of the dominant culture, notwithstanding the wishes even of the organization's formal leader. As one executive noted, "We weren't too preoccupied with strategies. We just did the job as we saw it."

In our opinion, all the forces that encouraged planning in Air Canada discouraged strategic thinking. The long lead times, the size of the organization and of its capital expenditures,[7] and above all, the interrelatedness of its activities focused attention on operational planning and drew attention away from major change. The concern for safety, the fact of government ownership, perhaps also the absence of entrepreneurial origins, made the airline sensitive to what the statistician calls "type two errors." In other words, Air Canada seemed to prefer avoiding risks, even when that meant foregoing opportunities. As time went on, most of these factors increased in importance, gradually locking the organization into a tighter and tighter set of constraints, locking it, in effect, into its existing strategies. The domestic route system became saturated; foreign routes became increasingly difficult to secure; lead times on the ordering of new aircraft increased significantly; the organization became larger and its capital expenditures grew exponentially; the increasing size of aircraft made safety more of a concern; and occasional conflicts with the government drove home the desire for more autonomy.

Ironically, as it grew more independent of its government owner, and while it seemed to develop enviable control of its own markets, Air Canada became increasingly locked into its industry structure as well. That was the price of its growth, its market influence, and it success. Joining the "club" of world-class airlines provided it with both protection and limitations: it became the "defender" of its own territory within that club.

In our view, not only did a common set of forces both encourage planning and discourage strategic thinking, but planning itself reinforced this latter tendency. The more the organization relied on detailed, systematic, routine specification of its existing procedures, the less its people were encouraged to think beyond those procedures to new orientations (as perhaps best indicated by the example used earlier of "thin" southern routes). Moreover, as one of the authors has argued elsewhere (Mintzberg, 1979a), the analytical orientation inherent in formal planning is more conducive to marginal change or adaptation than to significant reorientation. In essence, then, planning meant the programming of a given orientation, and that focused attention on elements of what was, rather than on images of what could be.

The argument could, of course, be made that Air Canada had little need for strategic thinking. It was highly successful as it was; with steady market growth and new aircraft coming on stream periodically, its executives had plenty to think about.[8] Two main factors seem to stimulate strategic change. One is external shock, as we noted in our studies of Volkswagen and U.S. strategy in Vietnam (Mintzberg, 1978). Another is slack resources, as well as boredom in traditional markets, which seems to evoke additions to existing strategies (e.g., diversification) rather than shifts in these per se. But a growing Air Canada in relatively stable and protected markets may have experienced neither. So long as there was much to worry about in running an airline and little in the way of excess resources, and so long as the economic environment underwent no major change—such as a significant shift in customer demand or deregulation—concentrating on excellence in operations, within a given strategic context, seemed to be perfectly appropriate. But, as we saw in the case of Volkswagenwerk, the danger of this is that such a change can catch the organization off-guard, unable to respond, and so ultimately vulnerable. Moreover, we have also seen examples of organizations (e.g., Steinberg's, or IBM in the case of the 360 System) that undertook strategic change as a result of managerial initiative—not often, but at critical moments in their history—and so enhanced their market positions and sustained their performance.

As noted earlier, the one internal shock—the McKinsey reorganization—although perhaps intended to encourage strategic change, in fact, probably discouraged it, by creating a political situation that depleted the energies of the senior management, and that made it more rather than less risk averse. Moreover, the effect of the reorganization was to increase the organization's analytical orientation (for example, by moving a number of operations research people into positions of senior management; Davidson [1981] discusses the particular influence these people have had in Air Canada in recent years). Strategic thinking would, however, seem to require a good deal of intuition and inspiration, at least in advance of formal analysis. An overemphasis on analysis or at least premature analysis, may have had the effect of impeding inspirational type change.[9]

Thus we conclude that the very forces that encourage formal planning, as well as such planning itself, tend to drive out strategic thinking. More precisely, the more an organization relies on planning in the formal sense, the less likely its people are to think strategically and the less inclined it will be to undergo strategic change (as opposed to elaboration or extrapolation of given strategic direction). We argued a related conclusion in the Steinberg study, for the company's later years—that planning is essentially the programming of a given strategy rather than the creation of a new one—and we believe it is reinforced in this

study. Formal planning, and the associated forces that encourage it, may discourage the very mental state required to conceive new strategies—a state of openness and easy flexibility that encourages people to step back from operating reality and question accepted beliefs. In short, formal strategic management may prove incompatible with real strategic thinking.

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NOTES

1. The earlier papers defined strategy in terms of streams of decisions rather than actions. This has been changed for reasons specified in a note available from the authors.
2. See Mintzberg and Waters (1985) for an elaboration of these forms of strategy.
3. See the discussion of gradual immersion vs. the sudden plunge in Mintzberg and Waters (1982).
4. See Hafsi (1981) for a detailed discussion of Air Canada's autonomy strategy, and Sexty (1980) for a discussion of the autonomy strategies of Canadian government-owned business corporations in general.
5. For an example of this, in the case of a small Canadian airline that suddenly found two jet aircraft to satisfy its needs from a bankrupt British line, see Mintzberg, Raisinghani, and Théorêt (1976), Decision No.7.
6. In his study of Fortune 500 manufacturing firms, Runelt (1974) notes the relative absence of diversification in what he calls the "heavies" of American industry, the large, capital intensive mass-producers such as steel and aluminum firms.
7. Besides, flying airplanes, like running steam engines a few decades earlier, was fun; the technology was enticing even to the senior executives (most of whom had been pilots), riveting their attention on the existing operations. In 1970, the executive vice president of the airline, at the age of 58, took off six months to learn to fly the new 747!
8. See Mintzberg (1979a: 133–39, 147–148) for an elaboration of this point.

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