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DEPENDENCY, NATIONALISM, AND IMPERIALISM
IN THE CANADIAN PETROCHEMICAL INDUSTRY:
A CASE STUDY OF POLYMER CORPORATION OF
SARNIA ONTARIO

by

James Patrick Mulvale

A thesis
submitted to the
Faculty of Graduate Studies and Research
through the Department of Sociology and Anthropology
in Partial Fulfillment of the requirements for
the Degree of Master of Arts at the
University of Windsor

Windsor, Ontario, Canada
1985

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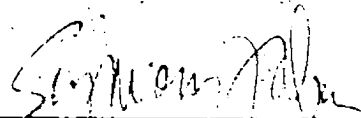
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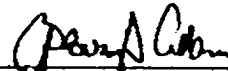
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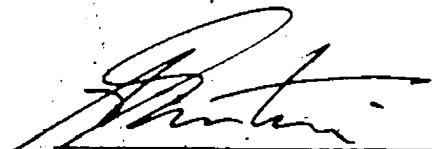
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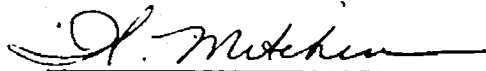
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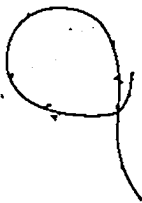


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ABSTRACT

This study examines the history of a Crown corporation in the Canadian petrochemical industry. It traces how Polymer Corporation, based in Sarnia Ontario, underwent a transformation in its activity and character as an economic enterprise. It began as an emergency wartime program of the Canadian government, and as an adjunct to economic mobilization for war in the United States. In peacetime Polymer began to chart an independent course, marketing its products abroad, especially in war-ravaged Europe. As the company advanced in technical sophistication and commercial success, it became a Canadian multinational corporation in its own right, with subsidiary companies and marketing arms around the globe.

This case study lends credence to the notion of Canada as an "advanced dependency" of U.S. capital. It also supports the argument that Canada has become an imperialist power in certain types of economic activity which have reached maturity in a national context. In this latter regard, the role of the state has been vital in fostering and legitimizing Polymer's pre-eminent position in the indigenous Canadian petrochemical industry. Under the umbrella of state ownership, it was possible to prevent dominance and absorption by foreign and especially American multinational corporations. At the same time, Polymer as a Crown corporation was kept free of bureaucratic restriction and political interference, and was expected by government to respond to the discipline of the capitalist marketplace.

As Polymer established its position as a viable and indeed highly profitable corporation, its ties to the state became ones of legal formality, and its linkages to the Canadian capitalist class became multiple and explicit. The corporation's behaviour generally contradicts the social-democratic concept of government enterprise as an instrument of economic policy and social betterment. The history of Polymer more closely embodies the Marxist notion of the bourgeois state acting in the interests of the capitalist class. The modern Canadian state seems firmly

committed to capital accumulation and legitimation of the existing economic order at home and abroad. It seems prepared to use government enterprise as an instrument of the Canadian bourgeoisie in the domestic and foreign quest for profits.

-VI-
DEDICATION

For Susannah, and for Diane

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I wish to thank the members of my committee for providing me with encouragement and practical assistance in bringing this thesis to completion. Dr. Seymour Faber was my mentor during my familiarization with Marxist theory and Canadian political economy. His friendship, knowledge, and personal commitment to transformation in economic and social reality spurred me on throughout this project. Dr. Barry Adam also helped me to widen my personal perspective, through his extensive and deep knowledge of social theory. His commitment to student learning, and his involvement in the struggle for progressive social change, is apparent to all who work with him. To Dr. Adolf Ehrentraut I am indebted for his usually sardonic, always trenchant, and consistently supportive criticism. He was instrumental in preventing my enthusiasm for macro-theory from running away with the need for methodological rigour and balanced consideration of empirical evidence. Dr. Wendy Mitchinson from the History Department was most encouraging, and always very prompt and helpful with her feedback to drafts of the text.

Much of the research for this thesis was carried out at Polysar corporate headquarters, and through personal interviews, in Sarnia Ontario. Bob Adams and Louise Parisotto were most gracious and helpful in tracking down company documents for me. Russ Gillespie shared much written and oral information with me, as resident historian of Local 914 of the Energy and Chemical Workers Union. To all the individuals who consented to be interviewed, I am most grateful. Whether or not any one person's remarks are directly quoted in the thesis, all those interviewed contributed to my understanding of the story of Polymer.

It is also recognized that many of those who assisted me do not share my theoretical vantage point. Hopefully this study is a small contribution to the overall study and interpretation of Canadian economic history, which encompasses a variety of views which often conflict. For any errors in the compilation and organization of evidence, of course, the responsibility is entirely mine.

Ellen and Ed Unterschute helped us a great deal with child care and domestic work, and contributed substantially to the completion of this thesis. Diane Delaney lent me considerable practical assistance and unstinting moral support.

As with everything I do, I drew my overall inspiration from Rosalee, Shane, Susannah, and especially from Diane.

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CHAPTER I

INTRODUCTION

The Resurgence of Canadian Political Economy

This study can be situated within the school of "new" Canadian political economy that has emerged since the late 1960's. This body of work has been a scholastic enterprise of immense importance in this country. It has followed in the footsteps of the "old" Canadian political economy shaped by Harold Innis and others in the period between the two world wars (Innis, 1923, 1930, 1933, 1940; Innis and Lower, 1929; Innis and Plumptre, 1934). The old school took a very holistic view of Canadian society, linking political and social development to economic history. The inherent theoretical assumptions in this work were based on neo-classical liberal political economy, as descended from Adam Smith. The new school, in contrast, has developed Marxist and neo-Marxist perspectives on the Canadian economy and polity. It has explored such questions as the nature of Canadian dependence as a French and British colony, and later as an investment ground for American capital; the formation, relations, struggles, and culture of social classes in Canada; the structure and dynamics of regional underdevelopment and centralization of economic power; the relationship of economic factors and social class to the national question in Quebec, the survival of ethaicity, and the entitlements of aboriginal peoples; and, most recently, the intersection of class and gender in shaping the material conditions and social roles of women in Canada (Clement and Drache, 1978).

All of these topics have been approached in Canadian political economy with great attention paid to history. By examining Canadian history, it is possible to trace how contemporary economic and political contradictions have emerged. Canada is one of the most affluent countries in the world, although it has been economically dominated by powerful foreign interests. It is a liberal democracy riddled with inequality; a constitutionally unitary state which is an amalgam of at least three (native, French, English) and arguably more national identities; and a capitalist economy with extensive state involvement in and regulation of market and labour relations. In order to understand these curious paradoxes of late twentieth century Canada, and to combat economic and political injustices in practical life, historical research and analysis is indispensable.

The new body of scholarship in Canadian political economy is full of disagreements and debates. For instance, among those who analyse the Canadian capitalist class, there are cleavages between the "nationalists" (Levitt, 1970; Lumsden, 1970) and the "internationalists" (Moore and Wells, 1975; Schmidt, 1981); the "centralizers" (Creighton, 1956) and the "decentralizers" (Fowke, 1946, 1957); and those who stress the importance of mercantile capital (Naylor, 1972) as opposed to those who emphasize the role of industrial development (Ryerson, 1973). Other debates revolve around Quebecois nationalism, working class culture, oppression based on gender, the development of aboriginal peoples, and the role of the state.

This study draws on three theoretical strands in political economy: dependency, nationalism, and imperialism. It examines these notions in a particular context, that is government involvement in the Canadian petrochemical industry during the thirty year period

beginning in 1942. The theoretical and substantive work upon which this study draws, as well as the specific focus of inquiry, are outlined below.

Relevant Theoretical and Substantive Literature

This investigation is based upon Marxist and neo-Marxist theoretical work which addresses change in the economy of nations and regions, that has culminated in the current world system of advanced monopoly capitalism. In the transition from competitive to corporate to monopoly capitalism in the late nineteenth and early twentieth centuries, the structure and dynamics of western industrial society were radically transformed. These changes extended beyond national boundaries, and shaped relations of production and patterns of trade and investment around the world. In this global transition, nation-states played key roles in the molding of indigenous class structure and relations, and in the determination of geopolitical patterns of hegemony and wealth (Skocpol, 1979).

One can view these grand changes in global political economy in terms of three more specific perspectives. These are dependency theory, left-nationalism, and theories of imperialism. Each of these need to be examined more carefully in order to frame this study.

Dependency theorists (Frank, 1973; Wallerstein, 1979; Amin, 1974) have argued that a few hegemonic capitalist nations have dominated the global economy. Britain was the first nation to industrialize, and by the mid-nineteenth century had become the "workshop of the world". She extended her commercial nexus and overseas colonial empire to such an extent that, quite literally, the sun never set

on her territories. Other European nations followed suit, and although their empires were less extensive than Britain's, they also expanded their respective economic orbits through gaining control over land, resources, and labour forces.

Political decolonization in the mid-twentieth century altered, but did not fundamentally transform, international relations of domination and subordination. After 1945, the United States was the ascendent global economic power. Advanced western and state socialist countries occupied a second tier. More recently, Japan has challenged American and European hegemony in industry, trade and commerce, and other rapidly industrialising countries such as Brazil and Korea have achieved some prominence in the world economy. However, according to dependency theory there is still a global pecking order, with nations and regions at the bottom dependent on and dominated by more powerful countries. Metropolises of capital extract raw materials and cash crops from their dependencies, add value to them in processing and manufacturing, and shape global patterns of demand for and consumption of their finished goods. The end result of the process is the realization of immense profits in metropolitan countries, and the underdevelopment, impoverishment, and oppression of masses of people in Latin America, Africa, and Asia.

Capitalist nations at the "metropole" or "core" nurture subordinate "comprador" elites in nations on the economic periphery. These comprador elites in turn enrich themselves at the expense of their economically marginal fellow citizens. The comprador elite in any specific underdeveloped nation may include a landed aristocracy overseeing quasi-feudal commercial agriculture; mercantilists who are agents in the lopsided commodity and financial exchange with the metropole; and indigenous

capitalists who own and/or manage the truncated industrial sector of the dependent nation, which may encompass resource extraction, transportation, primary processing, or the manufacture of luxury goods. In the political sphere, the comprador elite constitutes and supports a government which maintains this dependent economic structure, usually through a combination of authoritarian rule, repression of political freedom and alternative economic organization, and extension of privileges to those who belong to the elite.

Some critics such as Glenday (1983) argue that theoretical work on dependency has become fixated on social structure and empirical data, and has lost its relevance to practical political struggle and change. But others such as Drache (1983) argue that dependency theory can develop into a more sophisticated and subtle theoretical approach. In relation to Canada and some other nations, many scholars point to a condition of "advanced dependency". Some countries enjoy a high standard of living and have a fairly well developed industrial sector and economic infrastructure. However these advanced dependent nations also receive high levels of foreign investment and credit, and it is argued that economic control over them rests offshore in corporate headquarters in metropolitan countries.

The left-nationalist theoretical school (Levitt, 1970; Lumsden, 1970; R. Laxer, 1973; Resnick, 1977) often holds up Canada as an example of a country in this intermediate "advanced dependent" or "semi-peripheral" category. Heavy American ownership of manufacturing, the export of unprocessed resources and import of sophisticated technology, and the eagerness of Canada's financial, transportation, and service sectors to meet the needs of foreign industrial capital are all identified as symptoms of Canada's economic subjugation and vulnerability. The oil,

gas, and petrochemical industry is often pointed to as a striking example of such Canadian dependency. In 1974, the "mineral fuel" sector of Canadian industry was 74% foreign controlled, compared to 32% foreign control for all non-financial industry (Shaffer, 1983:228).

Dependency and left-nationalist perspectives are in a sense opposite sides of the same coin. The dependency view conceptualizes and describes a world order characterized by relations of domination and subordination. Left-nationalism envisions and prescribes a different set of economic ground rules, in which individual countries set their own course for material betterment and political self-determination, as a corrective to traditional patterns of dependency. Canadian academics have followed the lead of many Latin American scholars, turning dependency theory upside down, in a sense, in order to fashion an indigenous version of left-nationalism.

Aside from the dependency/nationalist perspective, the other (and generally perceived as somewhat contrary) view of the global economy is that of imperialism. In summarizing this perspective and contrasting it with dependency theory, Carroll (1983:45-6) states that

(a) part from the capital-labour relation itself, the dominant focus (in the theory of imperialism) is not on bilateral relations between the "core" and "periphery" but on the internationalized process of accumulation and the relations it engenders among capitalist ruling classes (interimperialist rivalry/cooperation), between advanced capitalist ruling classes and ruling classes in backward countries (the articulation of modes of production) and between ruling classes and oppressed peoples (national oppression/liberation).

Emphasis is placed on "modern imperialism (as) the historical culmination of the tendencies of capitalist concentration, centralization, and internationalization identified by Marx" (ibid) (1).

According to this framework, capital has no national allegiance. The primary adhesion in advanced capitalism is between the financial and industrial bourgeoisie, who form an effective monopoly. Capital in this integrated form searches out the most profitable outlets for investment, in whatever parts of the globe and whatever types of enterprise they can be found. There is a growing interpenetration among segments of the world-wide capitalist class. The mechanisms for global economic exploitation and accumulation of profit by this class include the multinational corporation and subsidiary company, investment incentives, tariff structures, trade concessions, and segmentation of the labour market. These mechanisms are established, adapted, and legitimated by the state in its various political and bureaucratic manifestations. Key roles are also played on the world economic stage by such institutions as the World Bank, International Monetary Fund, Organization for Economic Cooperation and Development, and agencies for "foreign aid" (Hayter, 1971).

In the last few decades there has also evolved an increasingly elaborate international division of labour. This is tied to the development of industry in the Third World, and its relative decline in advanced countries. In the newly industrializing areas, decolonization was achieved by the emergence of new class structures and patterns of class conflict, that have shaped and been shaped by national liberation movements. However since the decline of old forms of mercantile colonialism, new forms of hegemony of capital over labour have been constructed. Nations that have nominal political independence, whether it is recently

achieved or long-standing, have their affairs of state guided and their indigenous class structure shaped by the exigencies of global monopoly capitalism.

From this point of view, Canada's metamorphosis from a British resource hinterland and imperial dominion, to an economic vassal of American industrial capital, to a secondary imperialist power in its own right (Moore and Wells, 1975; Resnick, 1982) is not surprising. The forces of production and the configuration of merchant, industrial, and financial capital have undergone fundamental changes since North America was first occupied by Europeans. As one site of the multifarious conjunctures of world capitalism, Canada has seen different (and often mixed and disjunctive) articulations of modes of production and class relations. These articulations have not only changed over time, but have varied across different regions of the country.

The Canadian oil, gas and petrochemical industry was pointed to above as a good example of dependency. However it can also be viewed as an illustration of the imperialist perspective. Despite recent increases in the level of Canadian ownership, the industry remains thoroughly dominated by the most internationalized of multinational firms, the large oil companies (Sampson, 1975). It is very significant that national oil, gas and petrochemical firms, in both the private and public sectors, do not act in an antithetical manner toward these large transnational corporations. Quite the contrary, they collaborate with them in the maximization of profits for all. To the extent that there is competition among firms, it is contained and shaped by patterns of global supply and demand, and the overriding imperative of capital accumulation. In its brief history to date, state-owned PetroCanada has exemplified these tendencies (Globe and Mail, 30 Dec. 1983:B1).

This thesis will attempt, in part, to ascertain whether or not there has been this sort of congruence of behaviour between Canadian and international capital in one particular case, that of Polymer Corporation of Sarnia, Ontario. Polymer was established during World War Two under the government of Mackenzie King, with the direct leadership of the Minister of Munitions and Supply, C.D. Howe. It was set up to produce synthetic rubber from oil refinery by-products. Polymer was the first direct involvement of the Canadian state in the manufacture and marketing of petroleum-based products. This venture was granted letters patent as a Crown corporation, although the design, construction, and early operation of the plant were carried out under the direction of private American capital. In the postwar period, Polymer became a large exporter and later a multinational investor.

On face value, dependency and imperialist theories seem to represent differing perspectives. This thesis will explore the extent to which both vantage points are useful in explaining the behaviour of one corporation, which operated in a complex and changing environment. For instance, both dependency and imperialist theories conceptualize a relationship between dominant and subordinate groups. In dependency theory, this relationship is between metropolitan economic interests and hinterland peoples. In imperialist theory, it is between the capitalist class (with its various formations and fractions) and the producing classes (in agriculture, resource extraction, manufacturing, service, etc.). In the case of Polymer and in other instances, perhaps an overall understanding of political economy is impossible without examining both the metropole/hinterland relationship and the capital/labour dialectic.

It is often charged that the dependency theorists, Marxist or neo-Marxist though they may be, neglect the dialectical relationships and struggles among classes in both the endogenous and exogenous spheres of any given social formation. Critics from the imperialist school claim that the 'dependentistas' conceptualize economic development as a rather mechanistic and predetermined set of stages, and portray the global economy as a rigid structure of commodity exchange relations which has a life of its own, over and above the social relations of production and effects of human agency (Brenner, 1977; Panitch, 1981:8; McNally, 1981:41).

In taking these criticisms into account, this study will examine the individual backgrounds and particular vested interests of directors and executives of Polymer. However only passing reference will be made to the capital-labour dialectic. The history of labour relations and class conflict at Polymer, not to mention its subsidiaries around the world, would be a topic well worth exploring in depth. However such investigation would go beyond the parameters of this particular piece of research. The analysis here is of the "commanding heights" of economic power, as conceptualised in terms of theories of dependency, nationalism, and imperialism.

As well as drawing on the theoretical work mentioned above, this study will be modelled to some extent after existing case studies of corporations (Clement, 1981; McKay, 1983) and analyses of elites (Porter, 1965; Clement, 1975 and 1977). This thesis will also draw upon existing substantive literature on Crown corporations (Ashley and Smalls, 1965; Niosi, 1981:69-117; Pritchard, 1983); on the political economy of the oil industry (Sampson, 1975; Debanne, 1978; Bertrand, 1981; Pratt, 1982; J-Laxer, 1983; Shaffer, 1983); and on historical writing on the Polymer

Corporation (Kennedy, 1950:394-403; Shell Chemical Division, 1956:1-30; Ashley and Smalls, 1965:228-257; Bertin, 1967; Drimie, n.d.:22-30).

All of these references, and especially those on theory, are representative rather than exhaustive of the literature in that particular field. There is one exception to this general rule. The writer is unaware of any histories of Polymer Corporation other than the five references cited in the preceding paragraph. These works are descriptive rather than analytical. All except the Bertin work are quite limited in their scope. Kennedy focusses on the founding of Polymer during the war. The piece by the Shell Chemical Division is mostly a technical account of production processes. Ashley and Smalls are concerned with political reporting relationships and accounting practices of the Crown corporation, and their discussion ends in 1963. Drimie's work describes union organization and activity among Polymer employees.

The Bertin reference is a manuscript that was commissioned by Polymer as a corporate history, but was never published or distributed. It is quite broad in scope, covering the first twenty-five year span of the company. It is written in a very uncritical and congratulatory vein, as one might expect of any history commissioned by its subject.

This study draws on these other five histories of Polymer, while attempting to do something significantly different. Of interest here is an economic and political analysis of Polymer Corporation, through the application of social theory to empirical data. The more specific objectives of this piece of research are discussed in the following section.

Purpose of the Research

The central issue to be analysed in this thesis is whether or not Polymer Corporation has, in a sequential fashion, gone through the following stages of development:

- 1) an enterprise that has operated at the behest, and in concert with the interests and exigencies, of large American capital in the oil, rubber, and petrochemical industries;
- 2) a corporation that has conducted its affairs as a nationalist economic enterprise and countervailing force to large American capital;
- 3) an imperialist venture of a segment of the Canadian capitalist class, which has successfully operated in and extracted profits from other countries, in harmony with the transnational process of capitalist accumulation through class exploitation.

These characterizations will be referred to respectively as "dependent", "nationalist", and "imperialist" postures of the corporation. They correspond to the three broad theoretical perspectives (dependency, left-nationalism, imperialism) discussed in the preceding section.

This investigation will be carried out (or the "hypothesis" as stated above will be tested) through the examination of specific individuals and incidents in the history of Polymer. This examination may confirm, partially validate, or disprove that Polymer passed through the

sequence of dependent, nationalist, and imperialist phases. The study incorporates three levels. There is the level of general theory, which frames the hypothesis. There is a middle level to do with the three stages of corporate development, which are capsulized in the hypothesis. Finally, there is a specific, concrete level of description and analysis, which is the content of Chapters III and IV.

When Polymer was first established, it seemed to be very dependent on the American capitalist class in a variety of ways. However the corporation also seemed to have the potential, at its inception, to be directed in a fashion that would enhance the industrial development and economic independence of Canada. This potential began to be realized, as Polymer grew within the international nexus of the petrochemical industry, into an obviously multinational and apparently imperialist entity.

This hypothesized movement from dependent to imperialist stages would entail, in all likelihood, gradual changes in Polymer's corporate behaviour. In this regard, the increasingly prominent nationalist posture of the company would be both a prerequisite and a concomitant of the diminution of dependency and the ascendance of imperialism. As with any conceptualization of stages in a process of development, there may not be rapid transformation or readily identifiable lines of demarcation between one stage and another. However if one takes a longer historical view, changes over time can be seen as corresponding in an approximate fashion to distinct stages.

If indeed there is congruence among theoretical paradigms, sequential stages of corporate development, and exposition of specific historical data in this analysis of Polymer, the validity of the theories of dependency, left-nationalism, and imperialism would be supported. This is not to say that there cannot be historical incidents that

partially contradict, or fall outside the explanatory power, of one particular theory. There is an implicit assumption in this study that differing theories can provide one with equally illuminating ways of looking at material and social reality. Theories need not be "true" in an absolute sense or universally applicable in order to be useful. Any particular theoretical vantage point can be employed as a heuristic and analytic tool, which may be more or less useful than another theory in a particular context, and which may increase or decrease in explanatory power as empirical evidence accumulates. Mel Watkins, a founder of the new Canadian political economy, contends that "theoretical agnosticism is not necessarily a vice". On the other hand, theoretical myopia or orthodoxy can be counterproductive.

The hypothesis outlined above will be examined for the period of 1942-1972. The first years of Polymer coincided with World War Two, and were characterized by total economic mobilization in response to military exigencies. The postwar years were a period of economic and political adjustment to a changed world. This study ends in 1972, partly because the ensuing years have been ones of tremendous instability in the oil, gas, and petrochemical industries, as well as in the general state of advanced monopoly capitalism around the world. The late 1970's and first years of the 1980's were marked by fluctuation and overall increases in crude oil prices, a global economic crisis consisting of "stagflation" and massive unemployment, and the apparent decline of U.S. hegemony in the world capitalist system. It would be difficult to discuss the years since 1972, due to both their recency in time, and the high degree of complexity and change in economic conditions.

There is another reason to end this study in 1972 that relates specifically to Polymer. This was the year in which

ownership of the company passed from the government of Canada to the Canada Development Corporation. The background and significance of this event will be discussed in Chapter IV.

Methodology

This research project takes a qualitative approach to the investigation of Polymer's activity and situation in the international petrochemical industry. Although some quantitative data culled from Annual Reports and other sources will be presented, the empirical content of the study will consist primarily of data derived from transcription of interviews with former chief executive officers; biographical data on directors and executives; government documents and records concerning the corporation; and information gathered from newspapers and the business press.

A qualitative methodological approach seems appropriate to this case study of the structure and dynamics of capital in mid-twentieth century Canada. Polymer represents an interesting example of how the often drawn dichotomies of private and public sectors, and Canadian and foreign fractions of capital, are declining in significance. In order to ascertain such qualitative changes in the nature of bourgeois hegemony, it is necessary to have an understanding of the predilections, motives, choices, actions, and interactions of individual human beings who belong to the capitalist class. These are the people who, as a collectivity, control the material means of production, enter into relationship with those who do the actual producing, and generally shape and reshape the face of capital in our modern global political economy.

An efficient method to obtain such understanding of human agency, both in its intention and effect, is to garner the personal testimony of those who were actors or observers in the events and processes under study. Of course the observations, assumptions, and conclusions of any particular individual cannot be taken as valid on face value. The data offered by an informant must be tested out and weighed against other sources of evidence, in order to reach valid conclusions. This thesis attempts to find patterns of mutual reinforcement and confirmation among data gathered from personal interviews with executives, corporate documents, legislative debates, testimony to parliamentary committees, and accounts of journalists.

In its own modest way, this study attempts to examine the nature and workings of the capitalist class at the junction of private and state capital, in a country caught between dependency and imperialism. Studying one corporation, using the methods and sources cited above, seems to be a useful way in which to conduct such an examination.

Reference Note

1. The classic formulation of imperialism by Lenin incorporates five "essential features":

- i) The concentration of production and capital, developed to such a high stage that it has created monopolies which play a decisive role in economic life.
- ii) The merging of bank capital with industrial capital and the creation, on the basis of this "finance capital", of a financial oligarchy.

- iii) The export of capital, as distinguished from the export of commodities, becomes of particularly great importance.
- iv) International monopoly combines of capitalists are formed which divide up the world.
- v) The territorial division of the world by the greatest capitalist powers is completed.

Cf. Lenin, 1933:81.

CHAPTER II

HISTORICAL AND STRUCTURAL CONTEXT

An Historical Overview of Economy and Polity in Canada

The development of the capitalist mode of production in Canada has been shaped by a unique set of forces. The physical environment, the resource base, the mercantile colonialism of France and Britain, truncated industrialization, economic and cultural domination by the modern American empire, and struggles of producing classes against exploitation have all contributed to the formation of modern Canadian political economy. Another essential factor in this historical evolution has been the role of the state, and its relationship with the emerging capitalist class.

Before the British conquest, New France was a quasi-feudal society in which the ruling aristocratic and ecclesiastical elite was an extension of the absolute monarchical regime of the mother country. After 1763 colonial administration was in the hands of British elites, such as the Family Compact in Upper Canada, and the Chateau Clique in Lower Canada. These social, economic, and political networks were transplanted versions of the old Tory landed aristocracy of Britain, which was declining in significance back at home as industrialization proceeded. As Canada achieved responsible government, political unity through Confederation, and the beginnings of industrialization, the state played a very large part in laying the groundwork for indigenous capitalism.

The union government of Canada East and West which was established in 1840, and the new federal state created by the British North America Act of 1867, were dominated by

proto-industrialist elites. These governments were fundamentally different from the tory colonial executive bodies which preceded them. The state became a conduit through which British financial houses poured huge amounts of portfolio investment into Canada, in order to finance the construction of roads, canals, and railroads in the middle and late nineteenth century (Clement, 1975). The scandal involving the government of Sir John A. Macdonald and the backers of the C.P.R., during the construction of the first transcontinental railroad, was the best publicized instance but only one example of a multitude of economic linkages between the Canadian government and finance capital.

In the twentieth century, the state took a more direct proprietarial role in the economy. It became owner and operator of utilities, transportation lines, and communication facilities in order to ensure adequate infrastructure for industry. Such measures as the consolidation of private electric generation companies under government auspices, the merging of bankrupt railways into the Canadian National Railroad, and the creation of Trans Canada Airlines and the Canadian Radio Broadcasting Commission, enabled the state to provide a greater degree of national economic integration. A capitalist economy cannot survive and prosper without a large contiguous labour force and marketplace.

It can be argued that contemporary right-wing critics of government "interference" in the economy have political and economic blinders on, in that they are frequently arguing against the best interests of the capitalist class. Their objections are usually to government intervention to assist working people, and to ensure minimal levels of social welfare, education, health, and housing for the general population. When such measures have been enacted, they have not in the final analysis been due to the largesse of

politicians. Rather, their purpose has been to maintain minimally harmonious class relations and thereby facilitate capital accumulation (Moscovitch and Drover, 1981; Cuneo, 1980; Finkel, 1977). Welfare measures in Canada have been late in coming, limited in scope, and lacking in imagination. On the other hand, links between the Canadian state and the capitalist class have been long standing, significant in degree, and varied in form.

The entry of the state into resource extraction (Nelles, 1974) and industrial production represents a further outgrowth of the organic link between capital and state. The incursion of government enterprise into these sectors of the economy was vastly accelerated during World War Two. Polymer was one of many Crown corporations established to deal with supply and production needs during the war. (1) Military mobilization created a great demand for tires and other rubber products. The Allies' largest source of natural rubber, Southeast Asia, was conquered by Japan in 1941-42 and supplies were cut off. In response to this emergency shortage of an essential commodity, the Canadian government used its wide-ranging wartime powers to take what at that time was an uncharacteristically bold initiative in the capitalist marketplace. It established Polymer as a government-owned corporation that would manufacture synthetic rubber from petroleum refinery by-products.

Even though the government was the direct proprietor and sole financial backer of Polymer, it would seem that this Crown corporation was in no way intended to challenge the legitimacy or preeminence of private sector firms, nor was it meant to jeopardize the dynamics of the so-called free marketplace. In fact, it is possible that the state (especially at the behest of C.D. Howe) went out of its way to bolster American hegemony and to ensure healthy profits

in the oil, chemical, and rubber industries, of which Polymer was a small but significant part.

This early linkage between capital and the Canadian state in petroleum-based industries is of utmost importance, given later historical developments. The twin oil shocks of 1973 and 1979 brought about high prices and short supply in the world petroleum market, and thrust the industry into the limelight of public attention. Canada was particularly vulnerable to these upheavals, since its oil and petrochemical sector has been heavily dominated, virtually from its inception, by a few very large and powerful multinational companies (Sampson, 1975; Shaffer, 1983).

In response to this foreign domination, the federal Liberal government undertook during the mid-1970's to wrest control of a significant part of the industry and place it in Canadian hands. The National Energy Program (NEP) announced in October 1980 had three specific objectives (Laxer, 1983:76):

- at least 50 per cent Canadian ownership of oil and gas production by 1990;
- Canadian control of a significant number of the larger oil and gas firms; and
- an early increase in the share of the oil and gas sector owned by the Canadian government.

As a key vehicle for carrying out this federal policy, the state-owned oil company PetroCanada grew beyond its initial role as consort to private capital in high risk frontier oil exploration. It ventured into the other aspects of the vertically integrated oil business: crude oil production, transportation, refining, and marketing. Governments of

various provinces also became major investors and entrepreneurs in the oil patch. This group included political regimes of widely differing ideological stripes, such as the NDP government of Blakeney in Saskatchewan (where SaskOil was set up as a provincial Crown corporation) and the Conservative government of Davis in Ontario (where the province became a major shareholder in SunCor).

The economic convulsions that the oil industry has undergone since 1972 take us beyond the time frame of this particular study. What is relevant to this research is the enormously expanded and diversified presence of the state in the oil, gas, and petrochemical sector. Polymer broke ground in this regard in Canada. This would seem to make the corporation a very topical and useful subject for historical analysis. At its founding and even today, Polysar (as Polymer was renamed in 1972) is at a crucial intersection of foreign and domestic capital, and private and governmental sectors of the economy.

As a corporation based in Canada and owned by the state, Polymer developed the capacity for amassing profit in a highly capitalized and often risky industry. Over the last four decades, Polymer/Polysar has grown into a multinational corporation in its own right, with extensive investment in the United States, Latin America, Europe, and Australia, as well as a world-wide system of sales and distribution (Polysar Annual Report, 1982:16). It has operated under different regimes of government ownership and management, and in 1972 was partially and indirectly "privatized" through its sale to the Canada Development Corporation. Although Canadian owned, Polymer/Polysar has struck partnerships with such bastions of American capitalism as Standard Oil of New Jersey (now Exxon), Goodyear, and Union Carbide. The "multinationalization" of Polymer will be examined in more detail in Chapter IV.

State Capitalism and the Crown Corporation

The most elaborate treatment in classical Marxist theory of the role of the state in the capitalist economy is found in the essay by Engels entitled "Socialism: Utopian and Scientific". (2) Engels argues that under capitalism "means of production, means of subsistence, available labourers, all the elements of production and of general wealth, are present in abundance." However because of "the contradiction between socialised production and capitalist appropriation...abundance becomes the source of distress and want". He explains that

in capitalistic society the means of production can only function when they have undergone a preliminary transformation into capital, into the means of exploiting human labour power. The necessity of this transformation into capital of the means of production and subsistence stands like a ghost between these and the workers. It alone prevents the coming together of the material and personal levers of production; it alone forbids the means of production to function, the workers to work and live. On the one hand, therefore, the capitalistic mode of production stands convicted of its own incapacity to further direct these productive forces. On the other, these productive forces themselves, with increasing energy, press forward to the removal of the existing contradiction to the abolition of their quality as capital, to the practical recognition of their character as social productive forces.

Capitalism is able to overcome this contradiction and, in a limited and temporary way, to recognize the social character of productive forces. This occurs with "the collapse of [some] great capitalist establishments" and the formation of joint stock companies, trusts, and monopolies. Engels argues that

this is so far still to the benefit and advantage of the capitalists. But in this case the exploitation is so palpable that it must break down. No nation will put up with production conducted by trusts, with so barefaced an exploitation of the community by a small band of dividend-mongers.

In the final phase of capitalism, "the official representative of capitalist society - the state - will ultimately have to undertake the direction of production".

In modern societies, the state may assume control of the capitalist economy in a variety of ways. In the Soviet Union, the government vests ownership of all means of production and responsibility for economic planning in its own bureaucracy. In the United States, government ownership and central planning are not the normal or preferred means of control over the economy. Instead, the state becomes the "invisible hand" guiding capitalism by means of economic regulation, fiscal policy, labour codes, government expenditure, trade agreements, and other means. In a large number of countries, including Canada, a "mixed economy" develops that includes a large private sector, a significant degree of government ownership, and other regulatory and legislative levers on economic activity. According to Engels, state capitalism is the modality that emerges from and incorporates the contradiction between socialised forces

of production and capitalist relations of production. The specific configuration of state capitalism may vary greatly from one particular national context to another.

One of the most important and obvious manifestations of Engels' insight into the capital-state dialectic has been the proliferation, in most countries of the modern world, of state-owned corporations. Government enterprises are important actors in various economic sectors: transportation, communication, utilities, resource extraction and processing, industrial production, financial services, commodity marketing, and trade development. In Canada, state enterprise has been embodied in the Crown corporation.

For both federal and provincial governments, the Crown corporation has proven to be a durable, adaptable, and frequently utilized device. At the federal level, the Financial Administration Act of 1951 "attempts to classify 'Crown corporations' into three categories on the basis of general purpose and degree of financial independence" (Musolf, 1956:406). Departmental corporations are "responsible for administrative, supervisory, or regulatory services of a government nature"(3). Agency corporations are "engaged in trading, service, procurement, construction, or disposal activities"(4). Proprietary corporations are "engaged in lending, financial, commercial, or industrial operations"(5). From the departmental, to the agency, to the proprietary corporate form, there is an increasing degree of fiscal and administrative autonomy for the Crown corporation. Proprietary corporations, one of which was Polymer, were "to conduct their operations without [government] appropriations" (ibid: 406-07). Beginning in 1952, proprietary corporations also "had to pay federal income tax at the same rate as private corporations", and to

pay grants to municipalities in lieu of property tax (ibid:419).

The structure and activity of Polymer indicate that, even for a proprietary Crown corporation, it has had maximal independence from political interference and bureaucratic restriction. Ashley and Smalls (1965: 20-22) point out that all but one of Polymer's directors were business executives from the private sector (the exception being a representative of organized labour). This is in contrast to other Crown corporations, in which public servants would occupy one half or more of the Board positions. Although the responsible Cabinet minister had the legal authority to remove any director at any time, the Polymer Board in fact appointed its own members and became self-perpetuating. Ministerial approval was required for major capital expenditures, and Board minutes and annual reports had to be submitted to Ottawa. However it would seem that such procedures were largely 'pro forma' in the case of Polymer, and did not compromise in any practical way the operational autonomy of the corporation (Rowzee, 1984 and Rush, 1984, *passim*).

This loose relationship appears to have been the doing of the Cabinet Minister who established and presided over the first years of Polymer, Clarence Decatur Howe. The class allegiance and economic ideology of "C.D." were congruent with those of the Directors to whom he entrusted responsibility for Polymer. Moreover, Howe believed in a high degree of delegation of authority as a management strategy. These matters will be discussed more fully in Chapter III. A structural issue of interest here is the formal accountability mechanisms which are intended to hold Crown corporations answerable for their policies and activities. This accountability is directly to the

government of Canada. In ideal terms, at least, it is ultimately to the people of Canada.

Legislatively, Crown corporations are responsible through a Cabinet minister to the Parliament of Canada. However this is less accountability than meets the eye. When issues to do with Crown corporations come up in Cabinet, and this presumably happens only if the matter is unusually crucial or contentious, any discussions, policy options, and rationales for decisions are shrouded in Cabinet secrecy. Queries about Crown corporations can be put to the government by the Opposition on the floor of the House of Commons during the daily Question Period. However the point of this exercise is often to publically embarrass the party in power. Question Period does not readily lend itself to cool analysis of complex detail, which is necessary in any effective process of accountability. Finally, the House of Commons and Senate maintain some capacity to probe and examine the operation of Crown corporations through their special and standing committees. However this approach can be somewhat cumbersome, and its effectiveness can be hampered by overcrowded agenda, underbriefed members, and partisan 'axe-grinding.

It has been a matter of pride to Polymer executives and directors that they have had the highest degree of independence, in relation to ministerial direction, that is possible within the legislative regime of a Crown corporation (Rowzee, 1984:passim). The degree of managerial freedom and economic authority that has been accorded to Polymer by successive Liberal and Conservative Ministers has indeed been remarkable. This has had not a little to do with Polymer's commercial success, and government's desire to "leave well enough alone". On the other hand, Polymer has been referred to fairly frequently in the House of Commons. (6) The corporation has also been scrutinized at

least twice during the 1950's and 1960's, in quite an intense and thorough manner, by Committees of the House of Commons. (7)

It is important to bear in mind the extraordinary circumstances of Polymer's birth in World War Two. The federal government saw itself as a "proprietor by default", due to inability of existing industry to meet the emergency rubber shortage. The Canadian state was playing a small part in a program that was chiefly a collaborative effort between the American government and rubber industry. In fact, when the planning and construction of Polymer were underway in 1942-43, the Canadian government determined that the actual operation of the plant would be placed in the hands of subsidiary companies of large U.S. firms. Operating agreements were drawn up between Polymer and seven partners. These were Standard Oil of New Jersey, through its Canadian arm Imperial Oil; Dow Chemical of Midland, Michigan; and a consortium of the Goodyear, Goodrich, Firestone, and U.S. Rubber companies. These firms created three operating companies to run Polymer, known respectively as St. Clair Processing, Dow Chemical of Canada, and Canadian Synthetic Rubber. These entities received from Polymer a management fee which was tied to units of production. Thus from its very beginning, Polymer was a peculiar hybrid of Canadian public ownership and management by large American capital.

The Canadian government was apparently quite content that the accountability of Polymer itself, and the operating companies which ran its plant, was loose and sporadic rather tight and ongoing. Early directors and executives of Polymer were in many cases members of the "C.D. Howe fraternity", a network of professional and business men recruited to orchestrate war production through the Department of Munitions and Supply. The operating companies

were progeny of prestigious American multinational corporations. It was no accident that Polymer constituted itself in this way, since it was answerable to the Mackenzie King government which was fundamentally committed to economic continentalism and free-wheeling capitalism.

The instruments of government enterprise, such as Crown corporations, are often misunderstood by democratic socialists as having tendencies which are qualitatively different from the machinations of capital in the marketplace. Polymer seems to represent a definite contradiction to this belief. The history of the corporation illustrates, in a microcosmic way, both the view of Poulantzas (1978) that the state reflects the balance of class structure and relations in society as a whole, and the view of Miliband (1969) that the state is an instrument for the capitalist class to ensure adequate conditions for capital accumulation and legitimation of the existing social order. Polymer was constituted out of and reflected extant social relations of production, both among classes in Canada, and between American multinational capital and its Canadian surrogate. Polymer was also a device for the bourgeois class to diversify wartime production, in order to meet the very real need for rubber after the natural supply of the substance in southeast Asia was seized by Japan. At stake in the war was nothing less than the survival of the economic and political system of the capitalist liberal democracies.

The class identity and economic interests of Polymer's leadership will be examined in Chapter III. Their instrumental actions and reactions in relation to broader economic forces will be discussed in Chapter IV. In this way, we will attempt to establish if the organic composition and objective history of this group of individuals, in dialectical relation with the organizational structure of

the Crown corporation, have steered Polymer from dependency, to success as an independent Canadian enterprise, and on to imperialist activity within the world capitalist system.

Reference Notes

1. On a speculative note, perhaps state enterprise is being eclipsed as a device to achieve bourgeois hegemony in the late twentieth century. There seems to be a widening gulf between the capitalist class and the state apparatus, with the former attempting to bring the latter "into line", while simultaneously imposing sterner discipline and lower expectations on the various segments of the working class. These tendencies are almost certainly linked in different ways to the adoption of information technology; the export of traditional manufacturing capacity to low wage regions; huge and perhaps unrecallable debts of developing countries; the ballooning of government deficits in advanced industrial nations; abatement of environmental protection; militarization of national struggles for economic development and political democratization, such as in Central America; and acceleration of the development and deployment of weapon systems for nuclear warfare by military-industrial elites of the superpowers.

2. The reference cited here is Friedrich Engels, "Socialism: Utopian and Scientific", in Robert C. Tucker, 1978:683-717. The specific quotations cited are found on pp. 709-11.

3. Examples of departmental Crown corporations are the Unemployment Insurance Commission, the National Art Gallery,

and the National Research Council. Cf. Trebilcock and Pritchard, 1983:99.

4. Examples of agency Crown corporations are the Crown Assets Disposal Corporation, Canadian Patents and Development Ltd., and Atomic Energy of Canada Ltd. Cf. Trebilcock and Pritchard, 1983:111.

5. Examples of proprietary Crown corporations include such visible entities as the Canadian Broadcasting Corporation, Canadian National, and Air Canada. Other less visible organizations in this category include the Farm Credit Corporation and the St. Lawrence Seaway Authority. Cf. Pritchard, 1983:126. There is also an "unclassified" category of Crown corporation, of which institutions such as the Bank of Canada, Canadian Wheat Board, and Industrial Development Bank are examples. Cf. Trebilcock and Pritchard, 1983:161.

6. Polymer has been the topic of parliamentary debate no fewer than 140 times in the years 1950-1972. Cf. Index to House of Commons Debates for these years.

7. On 22 July 1958 the President of Polymer, E. R. Rowzee, testified and answered questions for the Standing Committee on Estimates of the House of Commons. Cf. Proceedings of same, 1958:502-516. On 9-10 May 1961, Rowzee appeared with R. W. Todgham (a director) and S. Wilk (Vice-President, Finance) before the Commons Standing Committee on Public Accounts. Cf. Proceedings of same, 1961:319-364.

CHAPTER III

THE IDENTITY AND INTERESTS OF THE
CORPORATION'S LEADERSHIP

The Personal Stamp of C.D. Howe

The pervasive influence of Clarence Decatur Howe on the politics and economy of mid-twentieth century Canada is well recognized (1). He was born and raised in the Boston area, was trained as an engineer at the Massachusetts Institute of Technology, and came to Canada as a young man in 1908 to teach civil engineering at Dalhousie University in Halifax. He moved to Port Arthur/Fort William (now Thunder Bay) Ontario in 1913, where he set up his own engineering firm. He became widely known and respected throughout the West and the Great Lakes for the design and construction of grain storage and handling facilities.

Howe ran successfully for the Liberals in Port Arthur in the 1935 federal election. Prime Minister Mackenzie King immediately brought him into the Cabinet as Minister of Transport. In this portfolio he established Trans-Canada Airlines (now Air Canada), a Crown corporation that pioneered scheduled air service across the country. During the war years Howe filled the crucial post of Minister of Munitions and Supply, in which he created and directed the immense government machinery that regulated the economy and orchestrated industrial production. Howe's powerful presence continued into the postwar years of the St. Laurent government, when he was Minister of Reconstruction and later of Trade and Commerce.

It was not without cause that Howe was sometimes characterized as "the Minister of Everything". He maintained a low profile, but he wielded great influence.

His many critics contended that in the latter years of his political career he developed an arrogant manner and refused to be accountable to the House of Commons. (2) - Howe's implacable desire to ram legislation through the Commons, during the 1957 debate over construction of the Trans Canada gas pipeline, precipitated a parliamentary crisis. To the Conservatives, led by the electric oratory of John Diefenbaker, Howe had come to epitomize the insensitivity and corruption of Liberal rule. The ensuing general election brought about the defeat of the Mackenzie King-St. Laurent dynasty of twenty two years, and personal repudiation for Howe at the polls. He returned to the private sector, where he acted as a corporate Director and wide-ranging advisor and confidante to businessmen, until his death in 1960.

Howe believed that, if government power over the economy was to be used effectively, then responsibility and authority should be delegated. He did not care to become mired in the detail of management. (Given the tremendous scope of his Ministry's wartime activity, this would have been administratively impossible in any case.) Once Howe had determined the rationale, parameters, and plan for a given project, and had recruited trusted subordinates to carry it out, he extricated himself from ongoing decision-making.

To be sure, Howe would often make direct contact with his subordinates, in order to pose questions or obtain information. Through this style of management that combined great trust, high expectation, and no-nonsense accountability, Howe fostered loyalty and an inclination for hard work in those who were his chief lieutenants. Bothwell and Kilbourn (1979:160) describe Howe's approach to leadership in this way:

Howe had been conducting a school for managers----, training men to think for themselves, decide for themselves, and create for themselves, without referring to a distant head office or waiting for orders from a telephone....Once a good managerial team was in place, Howe believed, it was up to him to back it up, not to badger it or undermine it by allowing appeals to his authority. Howe's controllers and directors-general could rely upon their minister to support them, even when what they did was exceedingly unpopular.

The amount of confidence that C.D. Howe invested in his subordinates at Munitions and Supply was, to a large degree, a function of their membership in the same class. The men whom Howe appointed to be his wartime bureaucrats were drawn from the business elite of Canada. They were recruited through Howe's large network of contacts and acquaintances, which he had developed in his extensive work and travel as both an engineer and Cabinet Minister. C.D.'s "dollar-a-year men", on loan from industry for the duration of the war, were seen as a great patriotic commitment of the capitalist class to the national struggle.

Howe's business orientation and experience shaped other aspects of his political behaviour. He prided himself on his pragmatism. He had great faith in the marketplace ethos of supply and demand and the survival of the capable and hardworking. He had a thinly veiled disdain for highly intellectual approaches to the affairs of business or government. He was not an advocate of erecting a welfare state, or any kind of centrally planned economy. To Howe such "socialistic" measures were anathema to prosperity. Bothwell and Kilbourn (1979:262) give this description of Howe's role in government:

To Canadian business, Howe was synonymous with "Ottawa". If Ottawa wanted something done, as likely as not it was Howe who was stirring things up, and if Howe lifted his finger it was axiomatic that he must have a good reason. Howe was, in short, the leader of a national business community as well as a party leader and a minister of the crown.

Yet Howe was much more than the Canadian business representative in government. His real function was, perhaps, the other way around: he was the government's emissary to the board rooms, the watchdog of business as well as its patron and prophet. Howe saw no contradiction in the role; it was his job to enforce the public interest, and the public interest was, ultimately, business's interest.

It thus could be expected that Howe's implicit and thorough devotion to the interests of capital in Canada would be reflected in his choice of individuals to direct the various Crown corporations in his jurisdiction. If Howe appointed like-minded members of the capitalist class, bourgeois hegemony would be bolstered in the Board Room as well as at the point of production. If on the other hand working class or other constituencies were involved in running a government enterprise, this could be an indication of a mission that went beyond or ran counter to capital accumulation. The next section examines the class background (based on biographical data) of the individuals who comprised the Board of Directors of Polymer Corporation.

Profile of Polymer's Corporate Leadership

The question of who actually runs a corporation can be a subject of debate among those who study work, business, and organizations. Power may be vested in, gravitate towards, or seized by any of a large number of players: chief executive personnel, members of the Board of Directors, major or minor shareholders, labour union leaders, working class militants, or informal coteries of workers.

For purposes of this study, the focus will be on the leadership group formally charged and legally empowered to manage the affairs of Polymer Corporation. This is the Board of Directors, which includes senior executive personnel in the full-time employ of the firm. This is not to say that other constituencies, especially the unionized workforce, does not have an impact on day-to-day decisions taken by the company. However Polymer has had a history of generally peaceful labour-management relations (3), and has also enjoyed a large degree of freedom from political or bureaucratic interference from the federal government. This would seem to indicate that the Board of Directors of Polymer has indeed been in firm control of the corporation.

The analysis of corporate leadership in this study is based upon data compiled on the following individuals:

- all Directors of the corporation from 1952 to 1972
- all executive officers listed in Annual Reports of the corporation from 1952-1959
- all Presidents and full-time employees at the head of the corporation, from its inception in 1942 until 1972

The Directors are listed for the twenty-year period between Polymer's assumption of ownership of its own assets, until its takeover by the Canada Development Corporation. Prior to 1952 the assets of Polymer were property of the Crown rather than of the corporation itself, and Polymer's facilities were operated for it by other companies.

Senior executives not at the head of the corporation are listed only for the period of 1952-59. The reason for this is that Polymer began to expand its operations beyond Sarnia and around the globe in the 1960's. In this regard the circumscription of the category of "senior executive" becomes problematic. Should top personnel from subsidiary companies be included? If so, down to what level within any particular subsidiary? In contrast, during the 1950's Polymer's manufacturing facilities were localised in Sarnia. In this less complex environment, it could be reasonably assumed that second- and third-tier executives had more personal influence on the overall management of the corporation.

The importance of Presidents and head staff people is obvious. While one must be wary of simplistic "great man" explanations, there has been strength and continuity of leadership among incumbent head men at Polymer. Until 1951, the Presidency was a part-time position and the chief executive officer (Nicholson) was given the titles, in sequential order, of General Manager and Secretary, Managing Director, and Executive Vice-President. After 1951 the Presidency of the corporation was a full-time position. The part-time position of Chairman of the Board was on two occasions filled by retiring Presidents (Rowzee in 1972 and Rush in 1981). Low turnover and orderly succession among Polymer executives indicate the great influence of those who have occupied the role of chief executive down through the years.

A complete listing of data gathered on the Directors and senior executives of Polymer is given in Appendix I. Of the thirty-four individuals in the group, data was found for thirty-one of them. (4) For each of these men (women are conspicuously but perhaps not surprisingly absent), the "chief occupational category" of each has been identified. This category represents the position or job which would appear to be a particular person's major investment of working time and principal source of income. The designation in this category corresponds to the apex of each individual's career. In the case of part-time Directors, this career apex may or may not correspond in time to that person's service on Polymer's Board. For instance, if a vice-president from another corporation sat on Polymer's Board, and after his term with Polymer expired he was promoted to President of his own company, his occupation would be identified as that of chief executive officer. This procedure is intended to make this analysis more straightforward, by simplifying often complicated career trajectories, and by ignoring extraneous factors that affect the pattern and timing of intra- and inter-corporate executive mobility.

The chief occupational category of full-time Polymer executives is, of course, that of corporate executive. For this reason, they are not included in the listing of chief occupational categories of Polymer Directors, as contained in Table 1. The directors responsible for the affairs of Polymer during the fifties and sixties were a very homogenous group. In regard to chief occupational category, the overwhelming majority of these individuals were chief executives drawn from the ranks of various corporations.

Table 1

Occupation of Directors of Polymer: 1952-1972

chief executive officers of corporations	16
labour union leaders	2
stockbroker	1
academic	1
civic politician	1
undetermined	2

There were five other Polymer Directors for whom data was found who do not easily fit into the category of chief executive officer. However three of these five men had strong ties to the capitalist class. J.A. Hodgson was a stockbroker who headed up a family firm. Pierre R. Gendron was for several years an academic in chemistry, but he also was President of the Pulp and Paper Research Institute, and served for four years as President of a Canadian brewery. Pierre Lorange was identified as a civic politician from Montreal, but he also served as an executive member of the East Montreal Businessmen's Association.

There were two representatives of organized labour on the Board of Polymer during the period from 1952 to 1972. John W. Bruce came from the United Association of Plumbers and Steamfitters, and served as a Polymer Director from 1952 to

1960. His career also encompassed membership on labour regulation bodies under the aegis of government. These included the Appeal Board for the Industrial Disputes Investigation Act during World War One; the Royal Commission on Industrial Relations in 1919; and the National War Labour Board during World War Two. Such government machinery serves the purpose, especially during wartime and other periods of social upheaval, of quelling the militancy, trimming the demands, and co-opting the leadership of the working class (Miliband, 1969:73-4; Panitch, 1977:19; Poulantzas, 1978:184-5).

The other labour representative on Polymer's Board was William Ladyman from the International Brotherhood of Electrical Workers. He was a Polymer Director from 1966 to 1972. He was also a member of the Economic Council of Canada, and a consultant to a major life insurance company, which would seem to indicate his acceptance by and support for the Canadian business establishment. As a member of the Liberal Party, Ladyman had ties to the incumbent political regime which were overt.

Both of these individual Directors of Polymer who came from the trade union movement could be characterized as belonging to the "lib-lab" wing of labour (5), as opposed to the democratic-socialist or radical-left wings. This is probably no coincidence, as all Directors of a Crown corporation have to meet with the approval of the responsible Minister of the federal Cabinet.

At no time during the period under study was there direction provided to Polymer by a representative of any constituency which questioned the legitimacy of prevailing socio-economic arrangements under the capitalist mode of production. In fact, the corporation's directorate was drawn almost exclusively from the Canadian bourgeoisie. These directors were trusted by their one shareholder, the

federal government, to conduct Polymer's affairs as they would those of any profit-oriented business. In return, the Directors were insulated from interference from politicians or bureaucrats (Rowzee, 1984:8-9; Rush, 1984:22-23).

The men who collaborated in the governance of Polymer were responsible for its record as a commercial success in the capitalist marketplace. The Liberal and Conservative governments that succeeded each other as Polymer's owner provided the political and economic framework that facilitated the success of this and other government corporations. Together, Polymer's directors and political overseers were contributing to the articulation of state-monopoly capitalism in mid-twentieth century Canada. It is doubtful whether individual directors and politicians would conceptualize their role in these terms. Like most other members of privileged classes, they were probably caught up in immediate activities related to amassing wealth, advancing a career, and deriving enjoyment from personal life. Nonetheless the broader social effect of their action, especially in relation to Polymer, was the perpetuation of bourgeois hegemony and class inequality.

Reference Notes

1. The discussion in this section draws extensively on Robert Bothwell and William Kilbourn, C.D. Howe: A Biography, Toronto: ~~McClelland and Stewart~~, 1979.
2. A young John Diefenbaker took liberties in attributing quotes to the Minister, in order to dub him "what's a million Howe", for his allegedly reckless expenditure of public monies (cf. Bothwell and Kilbourn, 1979:240).

Howe's political foes also made the most of his offhand characterization of a Commons debate as "the children's hour". By the time Howe was defeated in 1957, "he was being pilloried as the Canadian version of a megalomaniac" (ibid:7).

3. In the period of 1942-72, the one major work stoppage by unionized employees of Polymer Corporation was a strike in 1959 by Local 16-14 of the Oil, Chemical and Atomic Workers. At issue were wage rates, as well as management's desire to hire tradesmen not in Local 16-14 to do plant maintenance. The strike lasted 101 days, and resulted in a "measured success" for the workers. Cf. Drimmie, n.d.:27-30.

4. Of the three individuals for whom data was not found, one was a director between 1946 and 1951 (H.J. Mero), one was a director for five years in the early 1960's (Joseph Connolly), and one held the position of Secretary and Chief Legal Officer between 1952 and 1972 (W.J. Dyke). Mero and Connolly are counted in the "undetermined" category of the Table 1.

5. The term "lib-lab" or "liberal-labour" is sometimes used to describe trade union leaders who believe that labour's interests are most effectively advanced through individual membership, work, and candidacy within mainstream political parties, such as the Liberals and Conservatives in Canada. In contrast, social democratic parties such as the NDP have formalized organic links with labour unions, councils, and federations. On the far left, radical organizations of working class and other subordinated constituencies may eschew electoral politics, in favour of broader political education and direct activism in regard to specific issues.

CHAPTER IV

HISTORICAL TURNING POINTS

Polymer grew from one of C.D. Howe's "war babies", hastily conceived and born in the midst of military emergency, into a highly successful and profitable multinational enterprise. Three crucial junctures can be identified in the company's history. The first was its move beyond production for North American needs into the worldwide export market, in the years immediately following the Second World War. The second turning point was Polymer's decision, taken in 1959, to construct manufacturing facilities in Europe. Both of these "crossroads" were identified as such by company President E.R. Rowzee (Proceedings, H.C. Public Accounts Committee, 1961:322,325). Both new phases in corporate activity were accompanied by ongoing and intense efforts in research and development, product diversification, and technical assistance to customers.

The third turning point in Polymer's history was precipitated by the federal government. It was a decision that was deliberated and acted upon by public officials, in spheres outside of the corporation's control. In 1972 the federal Liberal regime divested itself of direct ownership of Polymer, and sold it to the fledgling Canada Development Corporation.

Ever since Polymer's very early days, the question of who should own it was debated within political and business circles, and was marked by indecision and ambivalence within government. Should Polymer be a public or private sector enterprise? Was it acceptable for foreign interests to own

Polymer? A unique resolution was achieved when Polymer was placed in the investment portfolio of the Canada Development Corporation. Although the CDC was created and largely owned by the federal government, it was to be a means of strengthening the Canadian bourgeoisie through national economic development and promotion of indigenous ownership.

The CDC takeover of Polymer was significant in that it changed the point of formal accountability for the corporation. Instead of reporting to a Minister of the federal Cabinet, Polymer became responsible to the CDC Board of Directors. However in a deeper sense this change had little real impact. It merely recognized and legitimated what in practice had already occurred. Polymer had ceased to be, in any concrete way, an instrument of public policy in the service of the state. It had in fact matured into a thoroughly capitalist and self-directed enterprise in the modern global economy.

Each of these three turning points in the history of Polymer will be situated in their economic and political context, and examined more closely, in the sections that follow.

A. American Domination, Fledgling Independence, and Success in Exports

Wars are fought not only with soldiers and weapons, but also with the materials, processes, and products of industry. At the outbreak of the Second World War, Canada had several strategic weaknesses in regard to its industrial capacity and preparedness. It was essential to conserve commodities in short supply, to develop new sources of raw materials, and to expand industry's volume and scope. To

these ends, the federal government granted to C.D. Howe and the Department of Munitions and Supply sweeping and extraordinary powers to mobilize the capitalist class and orchestrate the capitalist economy for the national war effort.

Modern armies run not just on oil and gas, but also on rubber. Kennedy (1950:394), states that

[e]ven before Pearl Harbour, Canada had become concerned over the rubber supply. Fairly large stock piles had been built up during the summer and fall of 1941. But when the Japanese began their rapid conquest of Malaya and the East Indies, it was soon realized that conservation measures would not be enough, and that Canada must immediately replace in some manner the sources lost to the enemy. On this continent, few knew how to produce man-made rubber, and the only available knowledge was possessed by men in United States rubber processing and oil companies. In co-operation with the United States, steps were taken to develop processes whereby it was hoped that this vitally needed commodity might be produced.

This technological dependence on magnates of American industry seemed to be well recognized and accepted by the Canadians responsible for starting up Polymer. It was certainly reflected in the solicitous and deferential manner of the first General Manager of Polymer, J.R. Nicholson, toward the executives of American oil and rubber companies, the heads of their Canadian subsidiaries, and the U.S. engineering and construction firms that designed and built the Polymer plant. Nicholson's relationship with American

capitalists was consistent with Canada's overall role as junior partner in the North American war effort which took shape after the entry of the U.S. as a combatant.

As evidence of this subservience, it is interesting to examine Nicholson's detailed recollection (1981:3-4) of a crucial meeting held twenty days after Pearl Harbour, in order to deal with the emergency rubber shortage. The meeting was attended by the heads of Canadian subsidiaries of U.S. rubber companies, who were accompanied by technical advisors from their parent firms. The host of the meeting was Jessie Jones, the Secretary of Commerce and head of the Reconstruction Finance Corporation for the U.S. government. Nicholson describes how

[t]he meeting started and an employee of one of the American companies said "I don't think we can handle Canada. We are going to have enough trouble [expanding U.S. production] without having to worry about Canada." I had said "Well, if we can't build a plant, maybe we can supply some raw materials." [One] fellow had actually gone to Germany and worked in an I.G. Farben plant [before the war] to acquire the know-how, and he knew some of the difficulties. He was speaking quite sincerely when he said that it was too much of a load to take on the training of a Canadian group as well. I remember Bill Funston, who was President of Firestone of Canada, pushing his chair back and saying to the Chairman of the meeting (Howard Crossland who was President of the Rubber Reserve Company, a subsidiary of RFC), "Mr. Chairman, I am an American and I served with the American forces in World War One and I am now the President of

Firestone of Canada and I can tell you that anything you can do in the United States, we can do in Canada." Paul Jones, President of Dominion Tire, pushed his chair back and said "I agree entirely with Mr. Funston." So, before the meeting was over, it was basically agreed that we [in Canada] would give consideration to assuming one tenth of the program.

In the course of this meeting there was an implicit assumption that it was the role of U.S. industry to "handle" Canada. In the extraordinary circumstances of the war emergency, this was not possible. Nicholson's first reaction was that Canada should supply raw materials, consistent with its traditional economic function as "hewer of wood and drawer of water". However subsidiary companies of U.S. parents stepped into the breach, and undertook responsibility for production within Canada (1). The presidents of the subsidiary firms did this with technical advisors from their U.S. owners at their sides. One of the presidents even felt impelled to proclaim his American citizenship and patriotism, in the same breath as he commits himself to expanding Canadian industrial capacity.

Polymer was to produce not only general purpose synthetic rubber (styrene-butadiene rubber or SBR) for use in tire casings, belting, and other products. It was also to manufacture butyl rubber, used to make inner tubes and other items which require a high degree of airtightness. Polymer's butyl plant was also put on the drawing board by big American capital, and in a manner which was quite abrupt. Nicholson (1981:7) describes another one of these crucial early meetings:

I had never heard of butyl rubber until our meetings with the Standard Oil of New Jersey. They said that, if we were going to make butadiene for a copolymer, we would have to extract the isobutylene so should give consideration to a butyl rubber plant. This fitted into the picture.

Canadian officials seemed ready to modify plans at a moment's notice in order to fit into the American program. Nicholson recollects (1981:8) that

[w]e talked with Colonel Dewey ----- and Almy, who was at that time deputy czar of rubber. They reported that the Americans were going to build bigger butyl reactors and were going to set their program. And I said "Well, we can use an extra reactor at Sarnia." Dewey smiled and said "Well, there's somebody who knows what he wants - we will give him the reactor." -----
(I) t was in operation before the Americans and was a very successful operation -----

Even though this butyl unit was built and operated in Canada, and was onstream more quickly than its U.S. counterparts, it was made clear from the beginning that it was a "gift" from the Americans.

Kennedy (1950:399) states that "the international border between Canada and the United States was wiped off the map during the war." E.R. Rowzee, who was later President of Polymer, described the inception of the plant to the the House of Commons Standing Committee on Estimates (Proceedings, 1958:502).

In regard to the construction and operation of Canada's synthetic rubber plant, it should be recorded that Polymer had no skills, experience, technical know-how or patent position which would enable it to handle such a responsibility.

Accordingly, it proceeded to enter into agreements with companies who had the appropriate knowledge. The basic technical know-how and patents were owned by a number of leading United States chemical, petroleum, and rubber companies. Based on this information a group of Canadian and United States engineering firms prepared the designs for Polymer's plant which were then used by several leading Canadian construction companies.

On closer examination, most of the "Canadian" engineering and construction firms to which Rowzee refers were based or owned in the United States (Polymer, n.d.:25). Of the eighteen engineering projects which were undertaken in designing Polymer, 14 were awarded to American firms, one to a Canadian subsidiary, and three to a Canadian company. Of the four major contracts let to construct the plant, at least one was to a Canadian subsidiary of a U.S. firm (ibid).

Rowzee also explains (Proceedings, H.C. Standing Committee on Estimates, 1958:502) how

Polymer entered into operating agreements with Canadian Synthetic Rubber Limited, Dow Chemical of Canada Limited and a subsidiary of Imperial Oil Limited, each of which was to operate a particular section of the [Polymer] plant. These three companies, in turn, were heavily dependent on their parent companies such as Dow Chemical

Company, Standard Oil of New Jersey and others in the United States for technical information, staff assistance, and training facilities.

Rowzee himself was recruited from Goodyear Rubber of Akron Ohio, in order to head up the Canadian Synthetic Rubber segment of the Sarnia plant. He stayed with Polymer after the war, was a key figure in the company's growth, and became President in 1957.

The wartime "integration" of the North American synthetic rubber industry was in fact a euphemism for the complete domination of the fledgling Canadian industry by U.S. interests. This began to change with the cessation of hostilities in 1945. Divergence between the two countries was not primarily due to action taken by Canada, but resulted from U.S. government policy concerning rubber supply. Rowzee recalls (1984:2a) that

[a]t the end of the war, the United States took the stance that it would continue production [of synthetic rubber] only to the extent that was needed to bridge the gap before the return of natural rubber. And if there was a demand after the return of natural rubber, that they would operate plants only to the extent necessary to satisfy domestic use in the United States. They quite pointedly adopted the stance of not attempting to export, to sell to the rest of the world. This was partly based on the belief that the natural rubber would take its place, that synthetic rubber would not be needed. But also, the United States was very careful not to do anything that would disrupt the return of the

natural rubber plantation to the production of rubber.

The U.S. government had undertaken to its allies that produced natural rubber, Britain, France, and the Netherlands, that it would not flood the world market with the synthetic substance, and thereby jeopardize their postwar economic recovery (Scott, 1966). However neither did the Americans want to completely dismantle their capacity to produce synthetic rubber, and leave themselves vulnerable to once again being held hostage by foreign producers, as they had been by Japan during the war. Therefore the U.S. government steered a middle course. It retained ownership of synthetic rubber production facilities, and forced the American rubber industry to consume the product. This prevented private industry from either fully developing or completely abandoning synthetic rubber. The President of Polymer after Rowzee, Ian Rush, explains (1984:11) how the U.S. government contracted out operation of the plants to

oil companies and rubber companies, but strictly on a fee basis. So there was no interest on the part of the operators to spend their own money on R&D because there was nowhere to go, the government was calling the shots. So they bureaucratically ran the industry down there. They sold offshore when they had more product than was being consumed. So they weren't interested in developing offshore markets as such.

In Canada, there were doubts raised as to whether Polymer should be continued after the war. It was widely believed

that natural rubber would return to dominate the market as it had before the war, based on its cheaper price, easier availability, and superior qualities. Some politicians compared Polymer to a bomber or ship which had served a purpose in wartime, but had become redundant in peacetime and should be written off (Rowzee, 1984:2).

However the corporate leadership at Polymer consisted of true believers in the potential of synthetic rubber. C.D. Howe, as the Cabinet minister responsible for this Crown corporation, was willing to let it sink or swim on its own merits in the capitalist marketplace. According to Rush (1984:2-3),

Ralph [Rowzee], with the support of his Board, made the case that there was a future for synthetic rubber. Here was a facility that was in Canada, that had a strong group of technical people, and it would be...crime is too strong a word I guess...it would be undesirable to shut it down, and walk away, and just let it rust. There must be some use for it. The case was made to C.D. Howe, who made a typical sort of C.D. Howe private enterprise response to it, of saying: "Fine, we'll give you a shot at it, but you'll get no protection. You'll be subject to all the taxes just the same as any other private industry. If you make a profit you can keep running; if you make a loss we'll shut you down." Perfectly clear communication, it was tremendous.

At a hearing of the House of Commons Standing Committee on Estimates (Proceedings, 1958:503), Rowzee described the immediate postwar situation at Polymer.

During most of this period, the future of Polymer and its 2,000 employees was in the balance because there was serious doubt as to whether the company could operate profitably. The principal features of this period were (1) the development of important export markets for synthetic rubber, (2) the diversification of rubber production, (3) the sale of by-products and co-products such as steam, power, styrene, butane, and isobutylene, (4) the establishment of an effective research and development division, (5) the emergence of Polymer as a direct operator of all facilities by virtue of termination of the operating contracts over the period 1946-1951.

The war had thrust upon Canada the role of manufacturing synthetic rubber. The fact that Polymer was retained as a Crown corporation after the war, instead of being sold off to private interests, was as much an act of omission as commission on the part of the Canadian government. This issue will be discussed in Section C below. What is pertinent here is that the prospect of Polymer's economic survival in the postwar world was fraught with both opportunity and danger.

The fact that the U.S. government had in effect put its synthetic rubber industry on hold for a decade created a window of opportunity for Polymer. The industry and economy of Europe were literally in ruins. There seemed to be good potential to develop new types, better quality, and wider applications of synthetic rubber through research and development. Senior management of Polymer, individuals such as Nicholson, Rowzee, E.J. Buckler (research and development), and Roger Hatch (overseas sales), realized that the best defense of Polymer's operations was a strong offense. The phrase "export or perish" became the

corporation's watchword. Europe became the key target for sales.

In order to be successful in the export market, it was necessary for Polymer to sell not just specific products, but also the very idea that synthetic rubber was a viable substitute for the natural substance. Marketing this concept went hand in hand with heavy emphasis on research and development. The imperfect products which had sufficed in the wartime emergency were unlikely to meet the more demanding standards for peacetime consumer goods. Manufacturers who might consume raw synthetic rubber, such as tire companies, required technical assistance in learning how to use it most efficiently. Sales efforts had to be extensive, intense, and face-to-face. Polymer's situation and strategy for survival in this period is summarized by Scott (1966).

The Sarnia complex was continued, and Rowzee and the rest of management began their European effort. That it succeeded is well known: but the fortunes of Sarnia dipped very low before the first fruits began to show. The worst year was 1947, when the complex barely managed to sell 40,000 tons, and found itself with a razor thin pre-tax profit of only \$25,000..... The following year, however, their fortunes began to improve. Both distributors and agents began to show results, and Sarnia itself made sufficient in-plant and process improvements to constitute a headstart in the world synthetic rubber market: a market that was to grow and improve every year from then on. It is possible, though, that Polymer might not have succeeded, had not the Korean war turned the balance against natural rubber at the same time that it sent the market price of that commodity soaring (cheering

the hearts of natural rubber brokers from Singapore to New York).

By this time, several improvements in synthetic rubber had reached the stage of heavy commercialization: cold rubber, black masterbatching, oil-extended rubber, improved synthetic rubber tires and products generally. When natural rubber began soaring out of sight for non-governmental uses (because of its wild gyrations in the market), synthetic began to come into its own.

Corporate statistics on Polymer (cf. Tables 1 and 2) indicate a slump in production and profit in the late 1940's, during the postwar years of economic readjustment. Polymer's fortunes also sagged in correspondance to the periodic business recessions of short duration which occurred in the ensuing decades. In general, however, Polymer achieved high and sustained levels of production and profit throughout its first thirty years of operation. This would have not been possible without Polymer's expansion beyond the small Canadian market into the export field, and its later construction and acquisition of manufacturing capacity abroad. (This latter phase is discussed in Section B below.)

Polymer's initial success in exports during the immediate postwar years set the stage for corporate reorganization in the early 1950's. J.R. Nicholson left Polymer in 1951 for a position with Brazilian Traction. He was succeeded as chief executive of the Sarnia plant by Jack Barrington, who was Polymer's first full-time and on-site President. Barrington was a newcomer to the petrochemical industry, with a background in mining. His stated mission at Polymer during his six years as President was financial and legal change in the status of the company as an asset of the Crown. If

Polymer was to be a successful long-term venture in the world capitalist system, it needed adequate fiscal and operational autonomy from government. Bertin (1967:10.123) describes how

Barrington persuaded both Board and Government to approve complete reorganization of the Corporation, to bring it more into line with traditional commercial practice. Until then, Polymer had acted purely as a manager; capital assets were vested in the Crown and the Corporation depended on advances for additional capital. Under parliamentary vote No. 654, which received Royal assent on April 1, 1951, title to all these assets, valued at \$53,793,946, passed to the Corporation. In return, the Government received \$8 million worth of 4% debentures, that were to pay richly in years to come and \$3 million in cash. The balance was covered by the issue of two million ordinary shares of no par value, of which the Government received all but the few held, one apiece, by the various directors during their periods of office.

In its structural reincarnation, Polymer began to pay corporate income tax and to contribute to local charities. Barrington argued that the company "should also have some debt, to stop it spending too much money" (Bertin, 1967:10.123). Having become subject to these typical forms of commercial discipline, Polymer bolstered itself against criticism that it was either coddled or restricted by government ownership.

By the mid-1950's, a new stage in the fledgling synthetic rubber industry was beginning. The industrial giant to the south of Canada was emerging as a manufacturer of major importance. Western Europe was rebuilding its economy, and with the advent of the Common Market it achieved commercial integration and renewed industrial vigour. The developing countries around the world were insisting upon and were able to foster indigenous industrial growth.

Polymer had cornered a sizeable share of the global market for synthetic rubber. It had survived the transition from dependency on U.S. leadership, technology, and plant operation, and had achieved success as an independent Canadian supplier of customers at home and abroad. If Polymer were to continue to prosper, it would have to undergo further transformation into a corporation with worldwide production facilities and diversified investments, in a new era of global monopoly capitalism.

B. Multinationalization; Imperialist Growth,

Intercompany Rivalry, and Industrial Integration

The point referred to as "Crossroads No.2" in Polymer's development was reached in 1959. According to President Rowzee (Proceedings, H.C. Standing Committee on Public Accounts, 1961:324-25),

it was management's judgment that important business and marketing opportunities existed for the company, both in Canada and abroad. The question was - should Polymer take aggressive action, which involved certain risks, and expand to take advantage of these

opportunities, or, should it be content with its present profitable operation?

One course would enhance Polymer's and Canada's reputation and position in the industry; would permit Polymer to continue to function as a major world supplier of synthetic rubber, and would provide the opportunity to expand employment, to earn more profits and more foreign exchange. The other would lead to declining profits, and lower value as a capital asset.

The "aggressive, action" that Polymer planned had three components in its first phase (ibid). These were:

1. A speciality rubber plant, to be built in a Common Market country.
2. A butyl rubber plant, to be built in the European area, preferably in England.
3. A solution polymer plant (cis-polybutadiene), to be built in Sarnia.

The speciality rubber plant was completed in Strasbourg, France in 1962. The butyl plant was located in Antwerp, Belgium and came on stream in 1963. (England was not chosen due to the risk of a lawsuit by Standard Oil of New Jersey over patent rights in the United Kingdom (Bush, 1984:15-17)). At Polymer's Sarnia plant, many expansions and improvements were carried out over the years. By the end of 1970, Polymer also had manufacturing facilities in Preston and Lindsay Ontario, West Virginia, Massachusetts, and a plant under construction in Chattanooga, Tennessee. It also owned a 40% interest in a Mexican synthetic rubber company, in partnership with the government of that country (Polymer Annual Report, 1970:28).

These plants manufactured a variety of synthetic rubbers and other petrochemically-based products. In 1970, Polymer invested in computer services and the prefabrication of building construction materials, in order to diversify its holdings. The latter investment turned out to be a bad one. However, Polymer/Polysar continued to extend its worldwide holdings in petrochemicals and plastics. Numerous companies were acquired, manufacturing facilities were expanded, upgraded and diversified, and the global sales and service network was further developed. [Polymer/Polysar Annual Reports, 1970-79]. By the end of decade, Polysar was the sole owner of 22 operating companies and had a minority interest in 10 other firms, in North and South America, Europe, and Australia (cf. Appendix II).

As Polymer embarked upon this process of multinationalization, there were fears among politicians, union members, and others that it would result in an export of jobs from Canada to other countries. This was seen as a particularly inappropriate action for a publically-owned enterprise. On the other hand, Polymer's management felt that the need to locate manufacturing facilities overseas was urgent. Bowzee (1984:18) argues that

we had a very healthy and thriving export market, the bulk of which was in Western Europe. With the formation of the Common Market, with the competition from the U.S. plants that had been sold to private industry, then the handwriting was on the wall that we would have to have facilities within the Common Market, I'll say in Western Europe, or face the very real possibility that our export market would be severely affected and quite drastically reduced in volume.

In fact, Rowzee stated to members of the House of Commons Public Accounts Committee (Proceedings, 9 May 1961:334-5) that the establishment of manufacturing facilities for speciality rubbers in France would free the Sarnia plant to run easier-to-process general purpose rubbers. Thereby it was claimed that productive capacity in Canada would actually be augmented by 50 to 75 per cent.

Rowzee had the support of his Directors and other Polymer executives when he argued that there was consistency between investment overseas and profitability at home. Within the incumbent Diefenbaker government any critics of this approach must have been persuaded, or at least silenced, by the fact that Polymer was a perennial contributor to government coffers. The Crown corporation's plans for foreign expansion were certainly not antithetical to the interests of big Canadian capital, which was just beginning to get out from underneath American economic domination and feel its own wings.

As Polymer became a strong multinational player on the world economic stage, it came into conflict with large American corporations. In 1956, an \$18.5 million lawsuit was launched by Dow Chemical against Polymer over patent rights (Financial Post, 18 Feb. 1956:3). Standard Oil of New Jersey muscled Polymer out of butyl production in the United Kingdom in the early 1960's. During the Korean War, Polymer was under commercial and political pressure to default on export commitments in order to supply domestic producers, most of which were U.S. subsidiaries. (This pressure was successfully resisted by Polymer management.) Polymer had become a constituent part of a fledgling but independent Canadian capitalism, which was no longer simply a junior partner of the American bourgeoisie with complementary interests.

Of course Polymer's relationship with other corporations in the oil, petrochemical, and rubber industries, even American ones, was not entirely antipathetic. As with all capitalist production, competition in the marketplace may have been more or less intense, but all the players were organically connected as members of the bourgeois class. Whether or not individual members share consciousness of it, this class has a vested interest which unites all of its fractions and segments. Solidarity within the capitalist class helps to maintain conditions conducive to capitalist accumulation and reproduction of existing relations of production. (2)

Class solidarity was also reinforced because Polymer, as a continuous-flow process industry, had a complex interdependence with other firms which supplied it with feedstocks and bought its by-products. Polymer was located in Sarnia because the adjacent Imperial oil refinery could supply it with "light ends", essential ingredients in the production of synthetic rubber. During the postwar years, the availability of substances from Polymer was the key to the location of other petrochemical plants in the area. The culmination of this growth is the present day "Chemical Valley", an interdependent industrial complex which is the largest of its type in Canada, and encompasses many different companies, processes, and products. Firms that compete on many fronts are forced to cooperate in the exchange of products which are essential to each other's manufacturing specialities. The capitalist proclivity to compete ruthlessly and eliminate competitors has to be tempered, in order for anyone to survive.

In its transition into a multinational enterprise, Polymer has become a significant force in the world capitalist economy. It has consistently held approximately ten per cent of the global market for synthetic rubber, and

has been (and still is) the largest integrated producer in the world. Other facilities exist which are on a larger scale than Polymer's Sarnia plant. However Sarnia encompasses all stages of processing from basic feedstock to finished rubber, and produces several types of rubber. Polymer's nature as an imperialist enterprise is evident both in its extensive overseas investment (3), and in the Sarnia plant's reliance on exports for two thirds of its sales.

The modern petrochemical industry is transnational in scope, highly capital intensive, and dependent upon interlinkage among various (mostly American) corporate giants. These features of the industry were somewhat out of keeping with the particular situation of Polymer. The fact that the company was owned by the government was seen by many as the state meddling in the free market economy. That this interference came from both Liberal and Conservative regimes that proclaimed their devotion to largely unfettered capitalism seemed contradictory. The Crown corporation as a generic form is often defended as a vehicle for national economic and social development. Yet Polymer was concentrating its new investment overseas. This also seemed to be a contradiction.

Ownership by government, promotion of economic nationalism, and the export of investment capital would become an increasingly problematic set of contradictory forces for Polymer, as the concentration and internationalization of capital proceeded apace in the decades after World War Two. Polymer would have to undergo some kind of corporate metamorphosis, if it was to continue to prosper.

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C. The Question of Ownership: Proprietorship and Purpose

The question of whether or not Polymer should continue in peacetime was resolved within five years of the end of the Second World War. The question of who should own Polymer proved to be more vexing and lingering, and did not reach a definite resolution until thirty years after the Corporation was established.

On a simplistic level, the ownership debate usually centred on whether Polymer should be a Crown corporation, or a private sector company with share capital which is bought and sold by investors. This debate assumed that there was a strict bifurcation between government ownership and private enterprise. The former represented "socialistic" intrusion into the marketplace, which displaced or inhibited activity by the latter.

In fact, the interests and activities of the polity and the capitalist class need not be at loggerheads. The widespread adherence to Keynesian economic policies by Western industrial democracies, in the middle decades of the twentieth century, has blurred the distinction between public and private sectors. In regard to the specific functions of government-owned corporations, Trebilcock and Pritchard (1983:46-74) cite seven "fields of activities" (4). All of these functions bear on catalysing, bolstering, and ordering marketplace forces, in order to maintain a healthy capitalist economy. Polymer is a vivid example of the role of government enterprise in stimulating economic growth and diversification. As an instrument of state policy (whether or not it was consciously and deliberately employed as such), Polymer helped to expand a sector of Canadian industry which was underdeveloped and heavily dominated by offshore (principally American) capital.

The Minister of Munitions and Supply, C.D. Howe, always took special pride in Polymer. It was largely his leadership that got the company off the ground. Once it was established, Howe gave the Board and chief executives of Polymer the political support and managerial independence necessary to ensure success of the enterprise (Bothwell and Kilbourn, 1979:159-60). Howe became angry with attempts to play partisan politics with Polymer. At the same time, he seemed to have a sense of personal proprietorship in relation to the corporation. When it was referred to as a "prize of government", Howe's rejoinder was "Prize? It's a result of my enterprise!" (Rowzee, 1984:9).

There is ambiguous evidence on the question of whether or not C.D. Howe was willing to let Polymer be sold to private interests after the war. He told the House of Commons (H.C. Debates, 1943:3702-03) that

[t]he plant at Sarnia was designed to meet the full war needs of Canada.... [H]owever...when this programme is finished the government's expansion in that direction will be finished also. If any private industry cares to carry on then, we shall have no objection.

Three years later, Howe stated that "we would be glad to sell Polymer Corporation to private industry, if private would buy it" (H.C. Debates, 1946:1517). He went on in his statement to enunciate his pragmatic philosophy concerning public enterprise.

The government has no intention of going into business unnecessarily. Occasions have arisen in the past where it was important and, I suggest, imperative, that the government go into business

on a very large scale. Such occasions may occur again, and if they do I hope the government of that day will be bold enough to meet the situation. This fetish in the minds of some people, that everything is wrong that is private industry, and in the mind of others that everything is wrong that is public industry, is a most ridiculous situation. Fortunately I am a Liberal, and hold no such theories.

Other evidence suggests that, in the specific case of Polymer, Howe very much wanted to maintain government ownership. Bothwell and Kilbourn (1979:159-60) describe Howe's outlook on Polymer in this way:

Howe followed the new company's progress anxiously, but with growing pride. Polymer, he wrote in August 1942, was so promising that it might keep operating after the end of the war - as a government enterprise. A year later, speaking to the House of Commons, Howe was more positive. Polymer would certainly survive the war, and as long as it turned a profit the government would not sell it: "it should be operated by the government during the war and during peace."

Thus it seems that the question of who should own Polymer after the war was very much up in the air, in the first years of the corporation's existence. The plant's first General Manager, J.R. Nicholson, recalls (1981:29-30) that

...C.D. Howe was...at one stage (this would be in the early 1950's)...prepared to consider a sale.
...[T]he logical buyer was Imperial Oil because they

were supplying us with feedstocks. They were interested because of the butyl connection. But that would have given the Standard Oil in New Jersey monopoly on synthetic rubber in the British Commonwealth. The next logical purchaser was Dow Chemical and they were interested. They were getting ready for a federal election and C.D. said "well, let's not rush it - let's not make a decision until after the election".

Howe's discomfort with a Standard Oil monopoly was based not on antipathy toward American capital, of which in fact he was quite enamoured. Instead, he had concerns which were specific to the peculiar nature and operations of Polymer. The Sarnia plant was a wholly integrated producer of synthetic rubber. If it were to be sold, it would likely be to either an upstream supplier of feedstock (e.g. an oil or chemical company), or to a downstream consumer of product (e.g. a manufacturer of rubber goods). It seemed probable that such a sale would skew and truncate Polymer's operations in one direction, toward either maximization of consumption of those feedstocks which the parent firm had to sell, or concentration on production of a narrow range of products which the parent firm wanted to buy. Such domination by petrochemical or rubber interests would in all likelihood have led to Polymer's failure to innovate and modernize, the loss of jobs, and the eventual balkanization of the Sarnia facilities and their absorption into other (perhaps offshore) plants.

In the immediate postwar period it was feared that the Great Depression would return. Military conflict with the Communist nations seemed imminent. Thus there were salient economic and political reasons for the Canadian government to maintain control of Polymer. The Crown corporation was

not only succeeding in its own right. It was attracting related industry into the Sarnia area's burgeoning Chemical Valley.

For its part Standard Oil of New Jersey, through its Canadian subsidiary Imperial Oil, did not seem to be very intent on acquiring ownership of Polymer in the postwar period. At the end of the war, a large part of the Polymer plant was actually operated by Imperial, through its subsidiary company called St. Clair Processing. However there was a generally held view at that time that natural rubber would again dominate the world market, as it had before the war. Apparently Jersey Standard subscribed to this view.

Imperial Oil had another reason to shy away from a takeover of Polymer. Imperial was supposed to operate St. Clair Processing for a considerable period or time after the war, continuing in its management fee arrangement with Polymer. In January of 1945, the employees of St. Clair Processing were recognized by the Ontario Labour Relations Board as Local 14, United Gas, Coke, and Chemical Workers of America. (5) This union certification was part of the intense and extensive mobilization of organized labour which occurred throughout the war years. Imperial Oil has to this day been successful in keeping the workforce of its largest refinery in Sarnia non-unionized. The company no doubt feared that the organization of workers would spread from its St. Clair subsidiary to its adjacent refinery. Imperial turned over operation of St. Clair Processing to Polymer on 1 May 1946. It was not until the early 1950's that the consortium of rubber companies operating Canadian Synthetic Rubber turned it over to Polymer, and that Dow Chemical transferred its operations the Crown corporation. (6)

An attempt to take over Polymer did come from the Canadian private sector in the late 1950's. Jack Barrington

was President of Polymer from 1952 to 1957. He left Polymer to join McIntyre-Porcupine Mines. Through a subsidiary of McIntyre, Ventures Ltd., he made an offer of \$75 million in 1959. The bid came to public attention a year later (Financial Post, 11 June 1960:3,5).

The offer was neither approved by the Polymer Board of Directors, nor accepted by the government. The responsible Minister in the Diefenbaker government, Raymond O'Hurley, had "no views" in regard to the sale of Polymer. A Cabinet committee was struck to study the question (H.C. Debates, 1960:1587, 2020-21, 7123, 7533-34). Like so many other matters of public importance at that time, decisions about the fate of Polymer seem to have been lost in the managerial chaos of the Diefenbaker government.

What was to become a new option for the proprietorship of Polymer came under discussion soon after Diefenbaker's defeat in 1962. The Liberals reascended to power, albeit with a minority government, under Lester Pearson. During this period, there was a slow but steady upswing in English Canadian nationalism, and concern about American domination of our industry. Walter Gordon was Minister of Finance under Pearson, and was the most prominent Parliamentary spokesman for the nascent forces of economic nationalism.

The Canadian bourgeoisie already dominated the financial, commercial, and transportation sectors of the economy (Clement, 1975:109-22). Gordon had a vision of a strengthened and expanded Canadian capitalism, which would displace American and other foreign investment in the manufacturing and resource industries, and thereby assume control of all sectors of the economy. The Canada Development Corporation (CDC) was to be a vehicle under government auspices which would enhance Canadian ownership and capital growth in the private sector. It was designed to augment the power and financial resources of weaker

segments of the indigenous bourgeoisie, especially in relation to their overpowering American counterparts. The 1981 Annual Report of the CDC (p.2) reiterated the founding purpose of the Corporation.

When the CDC was created in 1971, it was given a unique and challenging mandate by Parliament: To develop and maintain strong Canadian-controlled and managed companies in the private sector; to widen the investment opportunities open to Canada; and to operate profitably, in the best interests of the shareholders.

However after ten years of CDC operation, the federal government still owned 87.7% of common shares outstanding, and carried 48.5% of the votes at shareholders' meetings (CDC Annual Report, 1981:60). Thus, while the CDC was a capital pool and holding company for a large number of private investors, the Liberal government under Trudeau did not want to lose effective control over it.

In the debates surrounding the genesis of the CDC, there were concerns raised about whence the corporation would take its direction. In the 1965 budget debate (H.C. Debates, 1965:790), Andrew Brewin of the New Democratic Party expressed the concern that

[t]his corporation is not to be publically owned or publically directed. Its policies will not be integrated into an overall economic plan controlled by the Government, but in a short time I suggest it will be controlled by the larger shareholders.

After ten years of operation, it was certainly evident that the CDC Board was dominated by individuals representing the

interests of the Canadian capitalist class. In the listing of Directors' primary affiliations in the 1981 Annual Report (p.55), the breakdown was as follows:

private sector	15
federal public service	3
provincial public service	1
crown corporation executive	1
law profession	1
labour representative	1
CDC chief executive officer	1

Polymer was the "crown jewel" in the investment portfolio held by the CDC. It was a stable and prosperous company which would attract additional capital from the private sector, and would help to legitimate other more tenuous ventures in the CDC group of holdings. The decision to put Polymer under the CDC umbrella was taken at senior political levels, and handed down to Polymer as a "fait accompli". Rowzee (1984:25-6) describes how the decision was made, from his perspective as Polymer President.

This was a proposal that Walter Gordon put forward and advocated very strongly, but then [it] sort of languished for many years. The Act creating CDC, I don't think [it] cleared Parliament until 1971. So [it] had been in a stage of debate, discussion, gestation, whatever you want to call it, from about 1965 onward, and it went in sort of waves. Every now and then the subject would get stirred up, and then it would subside, but we at Polymer really were not at all close to it. We knew that this proposal had been made. We were not approached, nor was there any discussion of it until the period subsequent to

the time when the CDC Act was passed, 1971. We were not asked "are you for it?". But we got the drift that there were a lot of people in Ottawa who thought that this would be a good idea.

Thus takeover by the CDC was foisted upon Polymer without prior consultation. However Polymer did not seem to have had its operational autonomy threatened by its new proprietor. Rush (1984:25-6) states that

the CDC, in terms of being an owner and listening to the recommendations of management, has been very good ----, and thankfully they've acted in terms of broad business... judgments, and not tried to 'out-expert' us in our own particular area of expertise.

Rush (ibid) also contends that the CDC takeover modified Polymer's relationship with government.

[T]he principal benefit that I see is that it put this half-step between the political process and Polysar. Since that time we have not felt any direct political pressure.

It is sometimes argued by left nationalists, particularly social democrats, that government ownership of economic enterprises should serve the public interest, however that may be defined. The claim is made that profit maximization need not be the 'raison d'etre' of Crown corporations. The history of Polymer contradicts the view of state enterprise devoted to the broader social good. Throughout the twenty-five year period after World War Two, Polymer clearly embraced capital accumulation, through the extraction of

surplus value both in Canada and abroad, as its sole and essential end.

Polymer was freed from any lingering illusions that it had any corporate goals other than the maximization of profit, when ownership of the company was passed from the Crown to the CDC in 1972. It was more than purely symbolic when, at that time, the company adopted its worldwide product trademark of "Polysar" as its official corporate name. It had reached full maturity as an imperialist enterprise with activity and interests around the globe. Under the CDC, Polysar had more acceptable credentials than it had had previously as property of the state. In its new guise, Polysar could become a fully recognized and legitimate instrument of the Canadian capitalist class in the world capitalist system.

The organic link between Polymer and the Canadian bourgeoisie, that had existed from the beginning of the corporation, was made explicit. The ownership of the Polymer passed to a corporation created by the government, but devoted to the interests and aggrandizement of the Canadian capitalist class. The assumption of the Regina Manifesto of forty years before, that public enterprise could be equated with benefits for the many and counterposed to enrichment of the few, was once again proven to be false.

Reference Notes

1. It is not the point of this analysis to argue that any different approach could or should have been taken, from a technical or logistical point of view, in starting up Polymer. In the 1930's there was in fact underdevelopment of Canadian industry, and exclusive American ownership of

much of the technological knowledge and capabilities essential to modern industry. With the outbreak of war in the Pacific, there was a most urgent need to move as expeditiously as possible in order to produce a substitute for natural rubber. The decision to build Polymer in Sarnia, through close cooperation with American government and industry, was likely the only sensible option open to C.D. Howe and his bureaucrats in the emergency circumstances which prevailed. These men were nothing if not pragmatists. The purpose of this analysis is to trace the structure of the decision-making process, as an illustration of economic dependency. It is not apparent that a different or more "nationalistic" course could have been followed at this particular historical juncture.

2. In regard to capital accumulation, it is no wonder that Polymer has gotten along so well with successive Liberal and Conservative governments. Both parties hold as an article of implicit faith the continuance of the capitalist mode of production, albeit with a few distinctly Canadian wrinkles. In regard to maintaining extant class relations, Polymer implemented a quality-of-work-life type of personnel management scheme in the early 1980's. The corporation was no doubt interested in preventing class conflict, such as that which occurred in 1959 when Local 16-14 of the Oil, Chemical and Atomic Workers engaged in a long and bitter strike against Polymer's management.

3. Although most of Polymer's direct investment has been in the advanced industrial countries of North America and Western Europe, the company has also invested in Mexico and South Africa. In both of these latter instances, Polymer held a minority interest in rubber manufacturing facilities, and provided technical advice and assistance in their

design, construction, and operation. Polymer's share in the South African plant was sold off in 1972. There was strong public and political pressure within Canada to withdraw investment from South Africa, in protest of the policy of racial apartheid practiced by that country's government. As a Crown corporation, Polymer was particularly susceptible to this pressure to divest. In any case, its stake in South Africa was of modest size and did not represent a large rate of return (Rowzee, 1984:32). In the private sector, many Canadian multinational corporations continue to realize significant profits in South Africa.

4. Trebilcock and Pritchard (1983:46-73) describe these fields of activity in the "choice of public ownership as an instrument of economic regulation": (i) natural monopoly regulation; (ii) nation-building and community development; (iii) moderating the effect of economic transitions and stabilizing income; (iv) the provision of capital funds; (v) the promotion of national security and security of supply; (vi) the creation of a yardstick competitor; (vii) the control of externalities.

5. Also in 1945, the hourly-rated workers at Canadian Synthetic Rubber were certified as Local 75 of the International Chemical Workers (ICWU), and the hourly-rated workers at Dow Chemical of Canada entered into their first collective agreement with management as Local 12901, United Mine Workers of America (UMWA). Thus, taking St. Clair Processing into account, the three different parts of Polymer were organized by three different unions. When Polymer took over direct operation of St. Clair Processing in 1946, the existing agreement with Local 14 of the U.G.C.C.W. was recognized.

The postwar years were a period of frequent "raiding" among rival unions. Later in 1946, Polymer employees were enticed away from Gas, Coke into the United Automobile, Aircraft, and Agricultural Implement Workers (UAW), and were designated as Local 923. In 1947 they changed affiliation again, to become Local 14 of the United Chemical Workers (UCW). In 1948, the National Union of Operating Engineers made an unsuccessful bid to represent stationary engineers at Polymer. In 1949, District 50 of the UMWA applied to the Canadian Labour Relations Board for the right to represent Polymer's stationary engineers and research technicians. The UMWA application was contested by Polymer's management, and was rejected by the Labour Relations Board.

On 1 January 1951, Dow Chemical turned over operation of its styrene unit to Polymer. One year later, C.S.R. did the same with the co-polymer unit production facilities. In both cases, the UMWA and the ICWU applied to the Labour Relations Board for the right to continue to represent employees. Once again, applications from these rival unions were turned down, and the JCW was designated as the sole agent for all unionized employees. This was a relief to the management of Polymer. Otherwise labour negotiations would have had to be conducted with more than one union, each trying to outdo the other for the loyalty of employees.

In 1955 the UCW merged with the Oil Workers International Union to become the Oil, Chemical and Atomic Workers International Union (OCAW). In the early 1980's, the Canadian arm of the OCAW became completely autonomous and renamed itself the Energy and Chemical Workers Union. The ECWU maintains fraternal ties with the International OCAW on such matters as research into occupational health and safety issues. Workers at Polysar and several other oil and petrochemical plants in the Sarnia area are still ECWU members. (Source: "History of Unions at Polymer

Corporation", a document prepared by Cy Palmer, OCAW International Representative, circa 1961.)

6. Bertin claims that "in the period after Korea, ...[s]everal oil and rubber companies and some mining interests initiated behind-the-scenes approaches to government in an attempt to obtain an interest in [Polymer]. Just who all these were has never been revealed....." Bertin does go on to discuss Barrington's publicized bid to purchase Polymer (cf. pg. 14.160) as the one exception to this pattern of surreptitious overtures.

W.O. Traits, a former President of Imperial Oil, makes claims about an offer from his company to buy Polymer in the postwar years (cf. Chemistry in Canada, December 1983:26-7). Traits asserts that "Imperial was the obvious and indeed probably the only logical purchaser because of the close integration of operations." He states that the offer was declined by the government amidst "considerable controversy", and with a facetious remark by a Cabinet Minister that Imperial should purchase the Canadian National Railroad, since it was a Crown corporation which was (at that time) unprofitable. It is unclear in Traits' account exactly when this bid to purchase Polymer was made. It is also open to speculation how determined Imperial was to acquire control over synthetic rubber production in Canada. If it and/or its superiors at Standard Oil of New Jersey coveted Polymer highly, a firm bid of an substantial amount of money presumably would have been offered to the Government of Canada. On the other hand, it is possible that Imperial/Jersey Standard was on a "fishing expedition", to see if they could purchase Polymer at a bargain price from a government which was anxious to extricate itself from ownership and management of manufacturing firms.

TABLE 2

Rubber Production and Net Income of Polymer Ltd.:
1946-1952

Year ending March 31	Total Rubber Production (millions of lbs.)	Net Income*
1946	180	2.6
1947	115	3.9
1948	89	25,623 - \$
1949	95	.4
1950	108	.8
1951	132	4.1
1952	149	8.4

* Millions of dollars, unless otherwise indicated.

Note: Polymer was not subject to income tax before its financial reorganization. Therefore figures for the period following 1 April 1952 are separated out into Table 3.

Source: Polymer Annual Reports of 1946 and 1947, and Ten Year Financial Summary attached to Proceedings, House of Commons Standing Committee on Estimates, 23 July 1958:542.

TABLE 3

Rubber Production and Net Income of Polymer Ltd.:
1953-1974

Calendar Year	Total Rubber Production (millions of lbs.)	Net Income (million \$)
1953	180	5.1
1954	192	4.9
1955	231	7.5
1956	268	9.5
1957	293	6.8
1958	296	6.4
1959	220	3.7
1960	351	9.9
1961	361	10.2
1962	370	10.3
1963	436	9.1
1964	532	9.5
1965	555	10.3
1966	593	11.2
1967	617	4.9
1968	685	7.5
1969	732	14.3
1970	801	7.6
1971	856	.8
1972	985	7.4
1973	1135	11.1
1974	1034	18.1

Sources: Financial Summaries contained in
Polymer/Polysar Annual Reports of 1961,
1971, 1976, and 1981.

8

CHAPTER V

CONCLUSIONS TO THE RESEARCH

The case study method in research, like any other approach, has its advantages and drawbacks. On the positive side, one can examine in depth the particular aspects of one situation or instance of a phenomenon. On the other hand, one must be careful not to engage in overgeneralization of the findings, nor to be too hasty in formulating theoretical conclusions based on one or a limited number of examples.

With this caveat in mind, the conclusions to be drawn from this research will be slotted into three categories. First of all, there are conclusions about Polymer Corporation itself, based directly on the empirical data collected. These conclusions are drawn with a high degree of certainty, since the research process went into some depth and detail.

Secondly, conclusions are drawn about the nature of Canadian capitalism and its relationship to state enterprise. Obviously one corporate profile does not paint a complete picture. However this research on Polymer could very well be suggestive of more general patterns and principles. Therefore conclusions in this second category are of a tentative nature and are subject to confirmation through other research. Extrapolation from the specific case to the general issue cannot be made with absolute certitude. However such extrapolation can be heuristic, and it should not be shunned in the testing of existing theoretical assumptions and in the framing of new hypotheses.

Thirdly, conclusions are drawn from this research that relate to theoretical frameworks used. The explanatory power and utility for research of theories of dependency, imperialism, and state capitalism are illustrated through their application in this one study. Thus we are provided with some evidence in the broader debates about the validity of these respective bodies of work. The conclusions in this third category are necessarily partial and provisional, based as they are on one case study of one particular corporation over a limited period of time.

Conclusions in regard to Polymer Corporation

Based on the evidence assembled in the course of this research, it can be concluded that the history of Polymer is one of transformation through the three conditions of dependency on U.S. capital, a nationalist stance, and imperialist behaviour abroad. This finding supports the hypothesis advanced in Chapter One. Moreover, it seems apparent from the data that this metamorphosis of the corporation was a result of both good luck and smart management, within the general tendencies of extraction of surplus value, capital accumulation, and emergence of state monopoly capitalism in Canada.

Chance factors which hastened the inception and early growth of the Canadian synthetic rubber industry include the abrupt interruption of the supply of natural rubber during World War Two; the devastation of European industry wrought by that conflict; the postwar stagnation of the U.S. synthetic rubber industry; and the economic speed-up and demand for rubber which accompanied the Korean War. On the other hand, the leadership of Polymer took good advantage of

these fortuitous circumstances. Senior management personnel provided bold and far-sighted leadership to the corporation. Under their stewardship, Polymer engaged in aggressive marketing, intense research and development, and reinvestment of profit in all corners of the world.

A second conclusion about Polymer is that it evolved very quickly, from a creature hastily begotten by and under the auspices of the state apparatus, into a self-directed and market-oriented capitalist enterprise. To a very large extent and throughout most of its history, Polymer has been free of the responsibilities and restrictions imposed by public policy or partisan agenda. Despite government ownership, there was no significant political or bureaucratic interference in the day-to-day operations of the company. Even in terms of overall policy and long-term planning of the corporation's activities, the federal government adopted a laissez-faire approach. No doubt successive Cabinet ministers responsible for Polymer bore in mind C.D. Howe's dictum that government enterprises should not be meddled with, and those which do not pay their way should be gotten rid of.

In its own right, Polymer was thoroughly incorporated into the capitalist nexus of labour power, commodity exchange, technology, finance, and sales. This melding into the capitalist economy was predictable, given the class composition and free market ideology of the corporate leadership. Perhaps this is the success formula for government enterprise in the era of late monopoly capitalism - that it appear and act in ways which are, in a sense, more bourgeois than the bourgeoisie.

A third conclusion about Polymer concerns the perception of the political system and process which was held by the corporation's leadership. The chief executives of Polymer, and in all probability the vast majority of directors and

senior staff, saw "politics" strictly in terms of parliamentary debate, government bureaucracy, and differing policy alternatives of organized parties. This view was a somewhat narrow one. It did not seem to include any keen awareness or deep understanding of the economic and ideological functions of the state, and how these impact on national industrial development, class relations, and foreign capital. The leaders of Polymer usually summed up their political concerns in the wish that Ottawa would leave them alone, and not shackle them with bureaucratic restriction or political appointees. Conspicuous by its absence was any concept of government enterprise as a tool to help achieve economic self-determination, or more equitable distribution of wealth and power, for Canada as a nation and for the classes and regions of which it is composed. Any sense that the Crown corporation might symbolize or fulfill a mission which transcended the amassing of profit was confined to a few pious statements in Annual Reports.

It could be argued that this myopic and self-interested view of politics is one which is common to all members of the bourgeois classes, and which stems from their position at the apex of power and wealth in the capitalist economy. However one could also expect the managers of a state-owned enterprise to have deeper insight into the processes of political governance, and a greater economic vision than merely the realization of an annual profit. If anything, those who ran Polymer wanted to be seen as more committed to "free enterprise" than their counterparts from the private sector. This latter group has rarely shunned benefits which accrue from favourable legislation, regulations, and policy of the state. Neither do private capitalists often hesitate about going cap in hand to the government, in order to arrange subsidies, concessions, and financial bailouts when

they are in financial trouble. However in the period of 1942 to 1972, Polymer as a Crown corporation seemed to adopt a different approach. The company was eager to attenuate its linkages to the state, in terms of both how it was perceived and how it actually operated. (1) A restricted view of "politics" was consistent with this movement away from state sponsorship.

Conclusions in regard to Canadian Capitalism
and State Enterprise

Examination of Polymer seems to suggest that economic activity in Canada which is nationalistic in orientation can be successful. The fact that Polymer is a world leader in its field has been a cause for flag-waving among economic nationalists. It also seems that there are limits to the scope of economic nationalism which will be tolerated by international capital. An obvious example of a violation of this limit, drawn from more recent Canadian history, is the now defunct National Energy Program which was initiated by the federal Liberal government in 1981. The N.E.P. was a determined but limited intervention by the state into the oil and gas industry. Its major objective was to wrest a significant degree of control of the industry away from American and other foreign interests, and place it in the hands of the the Canadian bourgeoisie. The reaction to the N.E.P. from south of the border and offshore was instantaneous and hostile in the extreme. From the point of view of international capital, nationalism had clearly been carried too far.

In contrast, Polymer was "apprenticed" as a dependency of big American capital during its start-up phase in World War

Two. Despite the occasional family squabble with other firms, Polymer has earned respectability as part of international capital in the oil, petrochemical, and rubber industries. It seems to be an example of how a nationalistic enterprise can earn a place as a worthy competitor in the marketplace, and a harmonious collaborator in multinational investment.

A second conclusion can be drawn, if the state of affairs at Polymer is typical of the public sector. Among commercially successful Crown corporations, there seems to be a more significant linkage of their management to the capitalist class than there is to political masters or the state apparatus. Cabinet ministers, with the advice of their deputies in the civil service, are the individuals who nominally control Crown corporations. However the actual direction and policy for successful state enterprise seems to emanate from those members of the capitalist class who sit on the Board, and especially from those who provide executive leadership on a daily basis. These directors and senior personnel seem to place a high stake on a longer than arm's length relationship with their proprietor.

Finally, if one is to judge from the particular case of Polymer, it would seem that private capital from both Canadian and foreign sources has been able to work constructively with state corporations in order to amass profits. Cooperation between state and private capital is particularly adaptive in the continuous-flow processes of oil refining and petrochemistry, in which products have to be exchanged among various firms. However such cooperation also has potential in terms of joint investment in new ventures, exchange of technical information and patents, and mutually agreed upon segmentation of markets and manufacturing specializations. The convergence of government and private enterprise in these areas may be

implicit and haphazard, or it may be explicit and highly deliberate. In either case, this symbiosis of state-owned corporations and international capital seems to belie any claims that the two are inherently antipathetic.

Conclusions in regard to the Theoretical Framework

This research underscores the paradoxical element in dependency theory, which is applicable in the Canadian context, that there is a category of "advanced dependency" in the modern world economic order. A given country, and in this case one corporation, can be caught up in a dialectic of dependency upon and subservience to foreign transnational capital on one hand, and domination over even weaker productive forces on the other hand. This dialectic of dependency and imperialism is of course concretized and lived out by specific human beings in relationship to each other and the means of production. These social relations incorporate class struggle at the points where resources are extracted, value is added, and commodities are exchanged. Class structure and struggle form patterns that span entire industries and societies, and in sum total comprise the modern world capitalist system.

From the perspective of dialectical materialism, the historical process does not unfold automatically and neatly in preordained steps or at abstract conceptual levels. Rather, history is made by particular individuals and social classes located in specific times and places. They find themselves in sets of relationships with materials, tools, and other human beings, with which they work to ensure individual subsistence and social reproduction. Such interaction among human beings, and between them and the

means of production, cannot be slotted into pure and simple structural categories. Rather, it is complex, contradictory, and ever changing within broad parameters.

In this sense, the title of this thesis is somewhat misleading. Corporations and national economies do not pass through "dependency", "nationalism", and "imperialism" in a lock-step fashion. It would seem that all three of these conditions have existed throughout the entire period of capitalist production. However in many instances one can discern a gradual transformation in the overall nature of capital, which is analagous in descriptive terms to movement from dependency to nationalism to imperialism. Hopefully this thesis has adequately demonstrated just this type of transformation in the case of Polymer Corporation. It does seem to be wildly speculative to postulate that the capitalist class in Canada is caught up in a similar trajectory of development. At least some elements of our economy have reached maturity, and fractions of the bourgeoisie have seized upon new opportunities to realize profit in other parts of the world.

In regard to imperialist theory, it would seem useful to differentiate between capitalist proclivities for extraction of surplus value which are directly and brutally exploitative, and those which are more subtle and indirect, and may even appear to be benign or beneficial to those under the sway of foreign capital. Although it was not specifically examined in this study, it could be that Polymer's holdings in Mexico and South Africa tended toward the former category, while the company's investment in the United States and Western Europe were examples of the latter type of corporate activity abroad. This distinction between imperialist "superexploitation" and "conscionable" rates of return on foreign investment deserves more attention in theoretical work on imperialism. Polymer is a firm in a

technologically sophisticated and capital intensive industry, which has concentrated its investments in industrially advanced countries with relatively strong working class organization (2). On the other hand, Canadian firms in resource extraction and labour intensive manufacturing have invested more heavily in less industrially developed countries. These nations tend to have more disorganized, unskilled, impoverished, and politically repressed proletarian classes.

It stands to reason that the morality of corporate behaviour and the nature of class struggle vary with the objective conditions of foreign investment. Particularly salient factors in this regard would seem to be the type of industry which was investing abroad, and the class formation of the host country. The variations which exist in conditions and consequences of foreign investment is of key importance, in the further elaboration of imperialist theory.

Finally, the findings of this research suggest that extension and refinement of theoretical work on state capitalism is desirable. It is possible to differentiate between two general perspectives on state capitalism. The social democratic perspective, held by many of the left-nationalist school, sees the specific mechanism of state-owned enterprise as a potentially useful device for nation-building and advancement of working class interests. The radical Marxist perspective, as articulated by Engels, sees state capitalism as a broader response to crisis in bourgeois relations of production. According to this latter view, government enterprise is one manifestation of the self-aggrandizement of capital and the extension of bourgeois domination over those who sell their labour power.

Perhaps like dependency and imperialist theory, these two perspectives on state capitalism need not be mutually

exclusive in relation to each other, or all encompassing as they stand. The history of Polymer seems to illustrate the need to avoid theoretical rigidity. In this history we see, in Engels' sense, the role of government in abetting the interests and enhancing the legitimacy of the bourgeois class and the capitalist mode of production in Canada. These ends were accomplished in a way which did not impair, and in fact did much to advance, the process of transnational capital accumulation by the American bourgeoisie. At the same time Polymer has made a very significant contribution, as left-nationalists might see it, to industrial development, favourable trade relations, and scientific and technological progress for Canada. The company did this while generally avoiding the most blatant forms of exploitation of domestic and foreign producing classes.

Perhaps like capitalism itself, theories on state ownership, dependency, and imperialism must adapt to change in historical circumstance, and expand to incorporate new material reality. Economic relationships among people, as well as theories constructed by intellectuals in order to explain them, can be changed by or even cast off for new relationships and theories. The story of Polymer Corporation in the middle decades of the twentieth century necessitates the use of several theories, and spans significant change in class relations, the national allegiances of capital, and the role of government in the capitalist economy. Understanding how these processes work is a difficult and complex challenge. However such understanding is necessary, if the struggle is to continue for an economic and political order which transcends self-interest, competition, and greed. Such understanding would help us to achieve material conditions of life which are more fundamentally rooted in human need and cooperation,

political equality, economic self-determination, and social justice.

Reference Notes

1. It is ironical but not surprising that, as this is being written in the spring of 1985, the Progressive Conservative government under Brian Mulroney has announced its intention to sell off its remaining interest in the Canada Development Corporation to the private sector.

2. In June of 1985 Polysar announced its intention to expand its operations in the Far East. Depending upon the nature and location of the company's investment in Asia, it may over the coming years engage in more or less parasitical and exploitative practices in this region.

APPENDIX I

Data on Directors and Senior Executives of
Polymer Corporation, 1942-1972

Note: Chief executives are listed for 1942 onwards.
Senior executives are listed for the period of
1952-59. Directors are listed for the period of
1952-72. The rationale for this selection is
found on p. 37.

AMBRIDGE, DOUGLAS WHITE born: Mexico City, Mexico 1898
educ: Lower Canada College, B.Sc., McGill, 1923

positions at Polymer: 1942-45 Director 1945-47 President
1946-47 Chairman

external positions: President and General Manager, Abitibi
Power and Paper Co. Ltd.; control engineer, Abitibi, 1923-27
at Iroquois Falls, Ont.; General Superintendent,
Anglo-Canadian Pulp & Paper Mills, and Asst. General
Manager, Anglo Newfoundland Development Co., 1927-36; Asst.
to the President, Asst. General Manager, and
Vice-President, Ontario Paper Co., Thorold Ont., 1936-45;
had much to do with building the company's new plant in Baie
Comeau, Quebec in 1938; appointed Director-General,
Shipbuilding Branch, Dept. of Munitions and Supply, 1941.

directorships: Provincial Paper Ltd. (President); Canadair Ltd.; Canada Steamship Lines.

member: Society of Professional Engineers, Ontario; Phi Delta Theta.

award: C.B.E.

military service: in World War One as Lieutenant, 25th Battery, Canadian Field Artillery

hobbies: golf, fishing

clubs: Toronto, Toronto Golf, Royal Canadian Yacht, University (Montreal).

home: Toronto

source: Canadian Who's Who, 1948

BARBINGTON, JOHN DEFRAYNE born: Toronto, Ont. 1902 educ: B.A.Sc., Toronto, 1926

positions at Polymer: 1952-56 Director, President, and Managing Director 1957-58 Director

external positions: President and Managing Director, McIntyre Porcupine Mines, after 1958; Field Engineer, Nipissing Mining Co., 1926-31; engineer, partner, and manager in Moneta and other mining concerns, 1931-51.

directorships: CIBC, National Trust, Foundation Co., BP Canada, Falconbridge Nickel, Moneta Porcupine Mines, Taylor Woodrow, Alminex Ltd. (chair), Ventures Ltd. (chair).

member: Advisory Board, Engineering Science, UWO; Ontario Research Foundation; Canadian Metal Mining Assoc.; Assoc. of Professional Engineers of Ontario; Canadian Institute of Mining and Metallurgy.

religion: Anglican

clubs: National (Toronto); Engineers (Montreal); Rosedale Golf (Toronto).

home: Willowdale, Ont.

source: Canadian Who's Who, 1961-63

BERKINSHAW, RICHARD COULTON born: Toronto, 1891 educ: Upper Latimer School, London England; Upper Canada College; B.A., Trinity University (Toronto), 1913; Osgoode Hall (Toronto), grad. 1916.

positions at Polymer: 1942-45 President

external positions: Vice-President and General Manager, Goodyear Tire and Rubber Co. of Canada Ltd. since 1945; called to the Bar of Ontario, 1916; practised with the firm of Tilley, Johnston, Thomson, and Parmenter, Toronto, 1919-20; with legal department, Goodyear Tire and Rubber Co. of Canada, Toronto, 1920; appointed Asst. Secretary, 1921; Secretary and General Counsel, 1926; Asst. to the

President, 1931; Treasurer, 1932; General Manager and Treasurer, 1933; appointed Director General, Priorities Branch, Dept. of Munitions and Supply, Ottawa, 1941; Chairman, Wartime Industrial Control Board, Aug. 1941.

directorships: Vice-President, Goodyear Cotton Co., St. Hyacinthe P.Q.; Vice-President, Goodyear Improvement Co. Ltd.; Vice-President, Toronto Elevators Ltd.; Easy Washing Machine Co. Ltd.; Crown Trust Co.; Montreal Mutual Life Assurance Co. of Canada; Economical Investment Trust Ltd., Toronto.

member: director, Canadian National Exhibition; director, Toronto Industrial Committee; President, Ontario Motor League; executive committee, Trinity University (Toronto); Vice-President and director, Queen Elizabeth Hospital; President, Canadian Manufacturers Association, 1947; Citizens' Research Institute of Canada; executive committee, Technical Service Council; Chair, Advisory Board, Boy Scouts Association, Toronto; Toronto Board of Trade (President, 1940); Toronto Art Gallery; Royal Canadian Institute; Phi Delta Phi; Freemason (Scottish Rite).

military service: served in World War One with 124th Battery as Captain and Adjutant; with 12th Battery, Canadian Engineers, as Major; mentioned in dispatches.

religion: Anglican

award: C.B.E.

clubs: National; York; Lambton Golf and Country; Rideau; Royal Canadian Yacht; Toronto Skating; Canadian Progress (past president); Empire; Canadian; Granite; Toronto.

hobbies: golf, fishing, hunting, riding

home: Toronto

source: Canadian Who's Who, 1948

BISHOP, COL. ARTHUR LEONARD born: Brantford, Ontario 1895
educ: Ridley College, St. Catherines Ont.; Royal Military
College, Kingston Ont.

positions at Polymer: Feb. 1942-Jan. 1943 Director
March-Sept. 1942 President Sept. 1942-Jan. 1943 Chairman

external positions: President and Managing Director,
Coniagas Mines Ltd., Toronto.

directorships: Coniagas Reduction Co.; Electric Steel and
Engineering Ltd., Toronto; Sturgeon River Gold Mines;
President and executive committee, Consumers Gas Co.;
Vice-President, Coniaurum Mines Ltd.; Manufacturers Life
Insurance Co.; Toronto General Trusts; Imperial Bank of
Canada; Consolidated Mining and Smelting Co. of Canada Ltd.;
Atlas Steels Ltd.

member: Chair, National Executive, Canadian Red Cross
Society; Vice-President, Board of Governors, Ridley College.
Canadian Military Institute; associate member, Engineering
Institute of Canada; Canadian Institute of Mining Metallurgy

military service: served as Lieutenant in World War One in
France and Belgium, with Royal Engineers in the Balkans, at

the British War Office, and with the R.A.F; served as Major and Lieutenant-Colonel with Lincoln Regiment and O.C., 5th Infantry Brigade, 1921-34.

religion: Anglican

clubs: Junior Naval and Military (London Eng.); University (Montreal); University (Toronto); National; Toronto; Toronto Golf.

hobbies: outdoor sports

home: Toronto

source: Canadian Who's Who, 1948

BRUCE, FRASER W. born : Newmarket, Ont. 1903 educ: Upper Canada College; B.A.Sc. (Mechanical Engineering), Toronto, 1927.

positions at Polymer: 1965-71 Director

external positions: various executive positions with Alcan, in Canada, Japan, and U.K., 1930-69, including President, 1957-69.

directorships: National Trust

chair: Canadian Executive Service Overseas

clubs: St. James, Mt. Royal, Rideau (Ottawa), University (Toronto), Toronto.

home: Montreal

source: Canadian Who's Who, 1970-72

BRUCE, JOHN W. born: Melbourne, Australia, n.d. educ: no information

positions at Polymer: 1952-60 Director

external positions: Secretary-Treasurer, Labour Temple Co. Ltd. since 1937; joined first trade union in 1893; apprenticed in Australia; worked in South Africa, England, and Toronto;

directorships: International Officer, United Association of Journeymen and Apprentices of plumbing and pipefitting for U.S. and Canada; officer in United Association of Plumbers and Steamfitters.

member: TLC delegate; ILO delegate; during World War I on Appeal Board for Industrial Disputes Investigation Act; member of Royal Commission on Industrial Relations, 1919; during World War II on National War Labour Board, Reconstruction Council, Industrial Hygiene Committee, Joint Council Board of the Construction Industry, and Dominion Council of Health.

award: O.B.E.

home: Willowdale, Ont.

source: Canadian Who's Who, 1961-63

BRUNNING, ERNEST JOHN born: London, England 1890 educ:
London, England came to Canada in 1910

positions at Polymer: 1946-51 President 1952-64 Director
1953-64 Chairman

external positions: with Canadian General Electric on
Ontario Hydro construction, 1910; electrical engineer,
Canada Cement Co., 1912-17 (latter two years in electric
melting of steel for munitions); superintendent of munitions
plant in Chicago, 1917; works manager, electric co.,
England, 1920; with Consumers Glass Co., Montreal, 1923-40
(President in 1958); with Dept of Munitions and Supply in
World War II (re:ammunition, gun, and coal production).

directorships: Canadian Vickers Ltd.

member: Advisory Board, Canada Permanent Trust.

religion: Anglican

clubs: Engineers'; Seigniory (Montebello).

home: Montreal

source: Canadian Who's Who, 1964-66

BUCKLER, E.J. born: Birmingham, England n.d. educ: M.A.,
Ph.D (Chemistry), Cambridge

positions at Polymer: 1943-47 with St. Clair Processing
1947-58 Manager, Research and Development 1958-62

Vice-President, Research and Development 1963-70
Vice-President 1971-72 Vice-President, Research and
Development

external positions: research chemist, Trinidad Leaseholds
Ltd. and Imperial Oil prior to 1943;

directorships: past Chair, Canadian Research Managers Assn.

member: American Chemical Society, Society of Chemical
Industry, Royal Institute of Chemistry

office: Sarnia

source: Canadian Who's Who, 1970-72

CONNOLLY, JOSEPH

positions at Polymer: 1961-66 Director

DOUGAN, LEE DODSLEY JR. born: South Dakota, 1912 educ:
B.A.Sc. (Chemical Engineering), University of Toronto, 1934

position at Polymer: 1942 Asst. Engineer 1943-44 Executive
Assistant 1946-51 Assistant Manager 1951-57 Plant Manager
1957-63 Vice-President, Operations 1963-68 Vice-President
President of Antwerp and Strasbourg companies Director of
South African and Mexican companies

external positions: Sales, Engineering, and Asst. Manager
with the Dorr Co., 1935-44

directorships: President, Ontario Chamber of Commerce, 1965

member: Ontario Regional Committee of Canadian Chamber of
Commerce; UHO Advisory Committee on Engineering Science;
Assn. of Professional Engineers, Ontario; Chemical
Institute of Canada; Engineering Institute of Canada;
American Institute of Chemical Engineers; Society of
Chemical Industry; Sarnia Chamber of Commerce;

religion: United Church

hobbies: amateur radio, aeronautics, skiing, photography

clubs: Engineers' (Toronto)

home: Sarnia

source: Canadian Who's Who, 1964-66

DUDLEY, ROBERT STANLEY born: Shanghai, China 1925 educ:
M.Sc., UBC, 1951

positions at Polymer: 1951 joined Canadian Synthetic Rubber
Development Engineer; Supervisor, Technical Development;
Supervisor, Planning and Development; Manager, Business
Development; General Manager, Latex; Vice-President,
European Operations; Group Vice-President, Rubber and Latex;
Executive Vice-President, Operations; 1971 onwards President
and Chief Operating Officer

directorships: Petrosar; Canadian Chemical Producers Assn.;
Chemical Manufacturers Assn. (U.S.); Society of Chemical
Industry Chemical Institute of Canada Canadian Society for
Chemical Engineering Professional Engineers, Province of
Ontario.

home: Sarnia

source: Canadian Who's Who, 1983

DIKE, W.-J.

positions at Polymer: 1952-53 Secretary-Treasurer 1953-72
Secretary and Chief Legal Officer

GENDRON, PIERRE R. born: St. Hyacinthe, P.Q. 1916 educ:
B.Sc. (Chemistry), 1941, Ph.D (Chemistry), 1949, LL.D.,
1959, University of Montreal; D.Sc., University of Ottawa,
1963.

positions at Polymer: 1971-72 Director

external positions: President, Pulp and Paper Research
Institute of Canada since 1968; Asst. Professor of
Chemistry, University of Montreal, 1946-49; Lecturer,
Chemistry, Columbia University, New York, 1949-50; Associate
Professor of Chemistry, University of Montreal, 1952; Dean,
Faculty of Pure and Applied Science, University of Ottawa,
1953-62; Vice-President, Dow Breweries Ltd., 1962-64;
President, Dow Breweries, 1964-68.

directorships: Canadian Patents and Development Ltd.;
Microsystems International Ltd.

member: Science Council of Canada; Canadian Delegation to
UNESCO's General Conference, Paris, 1958; Canadian National
Commission for UNESCO, 1958-60; Past Chairman, Montreal
Section, Chemical Institute of Canada; Past President,
Quebec Branch, Royal Life Saving Society; Past Chairman,
Advisory Committee on Science and Medicine, 1967 Canadian
World Exhibition.

military service: served in Second World War with R.C.N.V.R
Overseas, as Lieutenant, 1941-45; Lieut.-Commander,
R.C.N.(R), 1945-53.

religion: Roman Catholic

awards: C.C. (1970); Coronation Medal.

clubs: Cercle Universitaire d'Ottawa (founding member, 1955
and President, 1962); St. Denis; Laval-sur-le-Lac; Forest
and Stream; Mount Royal.

hobbies: fishing, golf, photography.

home: Mount Royal (Montreal)

sources: Canadian Who's Who, 1973-75; Polysar Annual
Report, 1971.

HAMPSON, H. ANTHONY born: Montreal 1930 educ: Bishops College School; B.A., McGill, 1950; M.A., Cambridge (Economics), 1952.

positions at Polysar: elected Director in 1972

external positions: President and Chief Executive Officer, Canada Development Corporation, since 1972; with Bank of Montreal, Credit Analyst, Head Office, 1952; Department of Finance, Ottawa, Economic Policy Division (on loan for two years to Royal Commission on Canada's Economic Prospects (The Gordon Commission) and co-authored study on Canada's Secondary Manufacturing Industry), 1953; Director, Research and Underwriting, Burns Brothers and Denton, Toronto, 1957-64; Secretary, Royal Commission of Banking and Finance (The Porter Commission), 1961-64; President, Capital Management Ltd., 1965, (full time) 1968-72.

directorships: Vice-President, Power Corporation of Canada Ltd., 1964-68.

member: Past Chairman, General Adjustment Assistance Board, Department of Industry, Ottawa; Pharmacy Industry Development Advisory Committee.

office: Toronto

source: Canadian Who's Who, 1973-75

HATCH, ROGER EUGENE born: Strasbourg, France 1919 came to Canada in 1930 educ: B.Sc. (Chemistry and Engineering), Mt.

Allison University, 1941; McGill, 1942; Harvard (Advanced Management), 1959.

positions at Polymer: 1942 joined Canadian Synthetic Rubber as Chemical Engineer 1942-54 in Sales and Technical Services Division (Manager from 1948); 1954-57 General Sales Manager 1957-63 Vice-President, Marketing 1963-69 Vice-President 1969 Executive Vice-President 1971-72: responsible for all non-rubber business (i.e. plastics, building systems, information processing)

positions with subsidiary companies: chair: Com-Share Ltd. (U.K.) director: Com-Share A.G. Switzerland; Com-Share N.V. Netherlands; Stressed Structures Inc.; Polysar Plastics, Solar Chemicals, Mammoth Plastics, Polytherm Plastics all U.S.); Kayson Plastics, Ontario.

member: Sarnia Chamber of Commerce

military commission: Lieutenant, R.C.E. (inactive)

religion: Protestant

clubs: Rotary

home: Sarnia

source: Canadian Who's Who, 1970-72

HODGSON, JONATHON ARCHIBALD born: Montreal, 1896 educ: Lower Canada College; McGill (Electrical Engineering) 1917

positions at Polymer: 1945-70 Director

external positions: stockbroker; Chair, C. J. Hodgson and Co. (joined in 1917); Vice-President and Managing Director of Fairmont Co. (Crown Corporation for stockpiling and distributing natural rubber), 1942-46;

directorship: Chair for P. Q. Payroll Section of Victory Loan campaigns until June 1942.

award: O.B.E.

religion: United Church

clubs: Delta Kappa Epsilon; St. James; Forest and Stream; Laurentian Lodge; Toronto.

home: Montreal

source: Canadian Who's Who, 1970-72

LA BINE, GILBERT A. born: West Meath, Ontario 1890 educ: LL.D., UWO

positions at Polymer: 1942-63 Director

external positions: President, Gunnar Mining Ltd.; began prospecting in Northern Ontario at the age of 16; surveyed and explored throughout Canada; organized expedition that discovered radium ore at Great Bear Lake, 1930 (first Canadian discovery); built radium refinery at Port Hope, Ontario.

directorship: President, Canadian Uranium Research Foundation; Governor, University of Toronto since 1940.

hobby: golf

home: Don Mills, Ontario

source: Canadian Who's Who, 1964-66

LADYMAN, WILLIAM born: England, 1910 came to Canada in 1927

positions at Polymer: 1966-72 Director

external positions: International Vice-President, International Brotherhood of Electrical Workers

directorships: General Vice-President, Canadian Labour Congress, 1963-73; Ontario Housing Corporation; Canadian Council of Christians and Jews.

member: Economic Council of Canada; Canadian-American Committee, 1963-73; British-American Committee, 1969-73; Council of Regents, Colleges of Applied Arts and Technology, Ontario, 1964-73; Ontario Commission on Post-Secondary Education; Governor, Queensway Hospital, Etobicoke Ont., 1964-73; founding member, Canadian Association of the Club of Rome; consultant to Great West Life Assurance since 1973.

award: Centennial Medal, 1967

affiliations: Freemason, Liberal Party

religion: Anglican

hobbies: fishing, hunting, golf

home: Winnipeg

source: Canadian Who's Who, 1973-75

LAFHAMME, EUGENE

positions at Polymer: 1962-71 Director

external positions: President and Managing Director of South Shore Industries Ltd.

directorships: Vice-President, Valico Inc.; Institut de Cardiologie; Cardiologie; Autobus Levis Ltee.

home: Quebec City

source: Polymer Annual Report, 1970

LOHANGE, PIERRE

positions at Polymer: 1971-72 Director

external positions: Member of Montreal City Council; Executive Member, Societe des Hommes d'affaires de l'Est de Montreal; President, Les Sportifs d'Hochelaga; La Caserne Board of Control.

home: Montreal

source: Polysar Annual Report, 1971

MASSEY, C. A.

positions at Polymer: 1952-70 Director

external positions: President, Lever Bros. Ltd., Toronto

source: Proceedings of House of Commons Standing Committee on Estimates, 22 July 1958, p. 504.

MCGREGOR, WILLIAM STEWART born: Saskatoon, Saskatchewan
1916

positions at Polymer: 1970-72 Director

external positions: President and Managing Director, Numac Oil and Gas Ltd. (est. 1963).

directorships: President, Jasper Sky Tram Ltd.;
Vice-President, McGregor Johanson Contracting Ltd.; Canadian Utilities Ltd.; Bank of Nova Scotia; Western Canadian Resources Funds Ltd.

member: Advisory Board, the Royal Trust Co., Edmonton;
Canadian and Edmonton Chambers of Commerce.

religion: Protestant

clubs: Edmonton Petroleum; Mayfair Golf and Country.

hobbies: golf, hunting.

home: Edmonton

source: Canadian Who's Who, 1973-75

MERO, H.-J.

position at Polymer: 1946-53 Director

source: Polymer Annual Report, 1953 and Kennedy, 1950:403

NICHOLSON, JOHN ROBERT born: Newcastle, N.B., 1901 educ:
B.A. (1921), LL.B (1923), LL.D (1967), Dalhousie

positions at Polymer: 1942 General Manager and Secretary
1943-47 Managing Director 1947-51 Executive Vice-President

external positions: partner in law firms of Russel,
Nicholson Co. (1927), Locke, Lane and Nicholson (1933);
Deputy Controller of Supplies, Department of Munitions and
Supply, 1941; Executive Vice-President and Managing
Director, Brazilian Traction, Light, and Power Co., 1951-56;
partner in law firm of Guild, Nicholson, Yule, Schmitt, Lane
& Collier, 1956-63; M.P. and Cabinet Minister in federal
Liberal government: Minister of Forestry, 1963-64;
Postmaster-General, 1964-65; Minister of Labour, 1965-68;
Lieutenant-Governor of British Columbia, 1968-73.

directorships: President, Council of the Forest Industries of B.C., 1960-61; director of several Canadian and international companies.

awards: O.B.E., Q.C., K.G. St. J.

home: Vancouver

source: "Biographical Note", Polysar Ltd., 1982

REA, W. HAROLD born: Kincardine, Ont., 1907 educ: Institute of Chartered Accountants, Ont., C.A. 1931; F.C.A. 1953

positions at Polymer: 1963-72 Director

external positions: accountant for Canadian Oil Co.; on loan to Canadian government during World War Two with Oil Controller, worked with U.S. government Petroleum Administration for war; President, Canadian Oil Co., 1949-63; Chair, Great Canadian Oil Sands; Chair, A. Johnson and Co. (Canada) Ltd.

directorships: Bank of Nova Scotia; Interprovincial Pipe Line; Moore Corp.; Dominion Foundries and Steel; Kerr' Addison Mines; Canadian and Foreign Securities Co.; Mutual Life (Vice-President). member: Governor, UWO; Board of Finance, United Church of Canada (Chair); Advisory Board, Toronto Salvation Army; life member, YMCA National Council; director, Wellesley Hospital; Sports Hall of Fame (Chair).

religion: United Church

clubs: Toronto, Rosedale Golf, Canadian, Mt. Royal

home: Toronto

source: Canadian Who's Who, 1970-73

ROW, EDGAR CHARLES born: St. Mary's, Ohio, 1896 educ:
Valparaiso (Indiana) University

positions at Polymer: 1953-56 Director

external positions: began career with Dodge Bros.; joined Chrysler in Detroit in 1932; Director of Operations, Export Division, 1941; Asst. to the President, Chrysler Canada, 1942; General Manager of Anniston Ordnance Depot, 1943-45; returned to Chrysler as Asst. to the President, 1945; Vice-President and General Manager, 1946; President and General Manager, 1951-56; Vice-President and Director, Chrysler (U.S.), 1956-58; First Vice-President and Director since 1958.

military service: served in France as 2nd Lieutenant, 329th Machine Gun Battalion, in World War One

religion: Presbyterian

hobbies: golf, fishing

office: Detroit

source: Canadian Who's Who, 1961-63

ROWZEE, EDWIN RALPH born: Washington, D.C., 1908 educ: S.B. (Chemical Engineering), Massachusetts Institute of Technology, 1930; S.M. (Chemical Engineering), M.I.T., 1931; Honourary D.Sc., Laval, 1955.

positions at Polymer: 1942-44 Manager of Canadian Synthetic Rubber 1944-46 Director of Research and Development, Polymer 1946-51 Director of Sales, Manager 1951-57 Vice-President and Manager 1957-72 President 1972-78 Chairman of the Board 1978 Honourary Chairman

external positions: chemical engineer with Goodyear Tire and Rubber Co., Akron, Ohio, 1931-42 (involved with "test tube" and pilot plant research on synthetic rubber); loaned by Goodyear to Polymer for war effort.

member: Urban Transportation Development Corporation, (Chair), 1973; Board of Governors, Ontario Research Foundation; Chemical Institute of Canada, (President), 1945-55; Science Council of Canada, 1966-68; Society of Chemical Industry, (President), 1969-70; Director, Canadian Chamber of Commerce, 1953; Board of Governors, University of Windsor, 1965-72.

awards: Purvis Memorial Lecturer of the Society of Chemical Industry, 1949; Eighteenth Foundation Lecturer, Institute of Rubber Industry (England), 1963; R.S. Jane Memorial Lecture Award, Chemical Institute of Canada, 1960.

religion: Anglican

clubs: Phi Sigma Kappa (M.I.T. chapter); Detroit Athletic; London Hunt and Country; Sarnia Golf and Country; Toronto; Canadian (New York).

source: "Biographical Note", Polysar Ltd., n.d.; and
Canadian Who's Who, 1970-72.

RUSH, IAN C. born: Bexhill, England 1918 came to Canada in
1920 educ: U.B.C.: B.Sc., 1942; M.Sc., 1943

positions at Polymer: came to St. Clair Processing from
Imperial Oil during World War Two; stayed with Polymer after
war 1963-69 Vice-President 1969-71 Executive Vice-President
1971-81 President 1972-83 Chief Executive Officer 1981-83
Chairman retired 1 March 1983

home: Sarnia

source: Canadian Who's Who, 1970-72

SHERMAN, FRANK ALBERT born: Essex County, New York 1887
came to Canada in 1912 educ: public and high school in
Chicago; LL.D, McMaster, 1959

positions at Polymer: 1952-63 Director

external positions: Chair, Dominion Foundries and Steel
Ltd. Chair, National Steel Car Corporation. began as Asst.
Chemist, Mesta Machine Co., Homestead later Chemist with
Fort Pitts Malleable Iron Co., Pittsburgh, Pa.; served in
all departments of Pratt and Letchworth Co., Buffalo and
Brantford.

directorships: National Trust Co.; Canadian Iron Foundries Ltd.; The Jockey Club Ltd.

member: Honourary Governor, McMaster University

religion: United Church

club: Freemasons

hobbies: farming, golf

home: Ancaster, Ontario

source: Canadian Who's Who, 1964-66

SHERMAN, F.H. born: Uniontown, Pa. 1916 educ: Queen's: B.Sc., P.Eng.

positions at Polymer: 1963-72 Director

external positions: President, Director, and Chief Executive Officer, Dominion Foundries and Steel since 1964; joined Dofasco as Metallurgical Asst. in 1939; worked up to President in 1959.

directorships: Arnaud Railway Co.; Bank of Nova Scotia; Crown Life Insurance; Knoll Lake Minerals; National Steel Car; Port Weller Dry Docks; Wabash Lake Railway; Investors Growth of Canada Fund; Investors Mutual of Canada; Investors International Mutual Fund; Canada Development Corporation; Canon.

member: Vice-Chairman, Board of Governors, McMaster University; Governor, Art Gallery of Hamilton; Trustee, Ontario Jockey Club; Director, American Iron and Steel Institute; Great Lakes Waterways Development Corporation; National Executive Council, Canadian Medical Association; National Advisory Committee on Mining Industry.

religion: Presbyterian

clubs: Tamahaac, Hamilton; Toronto; St. James; Seignior; Muskoka Lakes and Country.

home: Hamilton, Ontario

source: Canadian Who's Who, 1970-72

TODGHAM, R.W. born: Toronto 1910 educ: B.A. (Business Administration), Michigan, 1931

positions at Polymer: 1956-72 Director

external positions: President of Chrysler Canada since July 1956; summer employee with Chrysler, 1927-31; joined in Statistical Advertising and Sales, 1931-38; owner and operator of Ron Todgham Motors, Chatham Ont., 1938-53; General Manager, Pittsburgh dealership, 1954; returned to Chrysler Canada in 1955; Alderman, Chatham, 1948-49.

directorships: Crown Trust; Union Gas.

member: Ontario Racing Commission

military commission: Captain in RCAPC (R)

religion: United Church

clubs: Delta Sigma Pi; Essex; Detroit Athletic; Beach Grove Golf.

hobbies: golf, hunting, sailing

home: Tecumseh, Ontario

source: Canadian Who's Who, 1970-72

WEIR, GEORGE CRAWFORD born: Scotland, 1899 educ: business college, Brandon, Manitoba

positions at Polymer: 1942-53 Accountant, Assistant Treasurer, Controller and Assistant Comptroller

external positions: accountant, B.A. Oil Co., Western Canada, 1928-42

member: National Office Management Association; Canadian Bandmasters' Association; Lambton County Music Festival Association.

religion: Salvation Army

club: Freemasons

hobbies: golf, swimming

home: Sarnia

source: Canadian Who's Who, 1948

WILK, STANLEY born: Philadelphia 1912 educ: B.S. (Chemical Engineering), Drexel, 1934

positions at Polymer: joined Polymer in 1946 1952-53 Comptroller 1953-57 Treasurer 1957-63 Vice-President, Finance 1963-71 Vice-President 1971-72 Vice-President, Corporate Finance

positions with subsidiary companies: Director: Polysar Belgium N.V.; Polysar International S.A.; Polymer Corp. (SAF); Polusar, Nederland N.V.; Hules Mexicanos S.A.; The Synthetic Rubber Co. (Pty) Ltd.

external positions: Atlantic Refining Co., Philadelphia, 1934-42; Petroleum Administration for War, Washington D.C., 1942-45.

directorship: Royal Trust Co.

member: Sarnia and Lambton County Advisory Board; Director, Victorian Order of Nurses; Director, Sarnia General Hospital; Chair, Lambton Hospital Planning Council; Director, Sarnia Chamber of Commerce; Association of Professional Engineers, Ontario.

military commission: Lieutenant-Colonel (Infantry), 1942-46

clubs: Sarnia Golf and Curling, Sarnia Riding, Rotary

home: Sarnia

source: Canadian Who's Who, 1970-72

WILKINSON, FRANK CAMERON born: Vancouver 1928 educ: St. George's School, Vancouver; B.Comm., UBC, 1948; post-graduate work, London School of Economics, 1948-49.

positions at Polymer: 1970-72 Director

external positions: President, Wilkinson Co. Ltd. (Steel & Metals Distributors, est. 1910).

directorships: B.C. Sugar Refinery Ltd.; Crown Zellerbach Canada Ltd.; Sun Publishing Co. Ltd.; Grosvenor International Holdings Ltd.; Garibaldi Lifts Ltd.; MacQuarrie Steel; Canadian Sugar Factories Ltd.

member: Vancouver Advisory Board, National Trust Co.

religion: Anglican

clubs: Alpha Delta Phi, Shaughnessy Golf, Vancouver, Vancouver Lawn Tennis.

hobbies: golf, skiing, fishing, riding

home: Vancouver

source: Canadian Who's Who, 1973-75; Polymer Annual Report, 1970.

APPENDIX II

Operating Companies of the Polysar Group, 1979
(Wholly owned except where % indicated)

CANADA

Polysar Limited,
(Corporate Offices, Plant)
Sarnia, Ontario

Kayson Plastics Division,
Cambridge, Ontario

UNITED STATES

Polysar Incorporated
Akron, Ohio

Rubber Sales Office,
Akron, Ohio

Latex Division,
Chattanooga, Tennessee

Rubber Services Division,
Hudson and Barberton, Ohio

Resins Division,
Leominster, Massachusetts
Forest City, North Carolina
Akron, Ohio

Polymer Services Inc.,
East Brunswick, New Jersey

EUROPE

Bellaplast GmbH,
Wiesbaden, Alf, and Deizisau Fed. Rep. Germany

Bellaplast Nederland B.V.,
Vijfhuizen, Netherlands

Bellaplast (UK) Ltd.,
Farnham, England

Komfortplast GmbH,
Wiesbaden-Schierstein, Fed. Rep. Germany

Polysar Belgium N.V.,
Antwerp, Belgium

Polysar (Deutschland) GmbH,
Neu-Isenburg, Fed. Rep. Germany

Polysar Europa S.A.,
Brussels, Belgium

Polysar France,
La Wantzenau, France (95%)

Polysar GmbH,
Wiesbaden, Fed. Rep. Germany

Polysar Handelmaatschappij B.V.,
Amsterdam, Netherlands

Polysar International S.A.,
Fribourg, Switzerland and in Sao Paulo, Brazil;
Tokyo, Japan; Barcelona, Spain; Caracas, Venezuela

Polysar Italiana S.p.A.,
Milan, Italy

Polysar Skandinaviska A.B.,
Goteborg, Sweden

Polysar Technical Service Centre N.V.,
Antwerp, Belgium

Polysar (UK) Limited,
Guildford and Wilmslow, England

Societe Francaise Polysar,
Paris, France

SOUTH AMERICA

Polysar de Venezuela S.A.,
Caracas, Venezuela

Polysar do Brasil Produtos Quimicos Ltda.,
Sao Paulo, Brazil

AUSTRALIA

Polysar Australia Pty. Ltd.,
Melbourne, Australia

OTHER INTERESTS

Bellaplast A.G.,
Altstätten, Switzerland (49%)

Bellaplast Maschinenbau GmbH,
Heidesheim, Fed. Rep. Germany (49%)

Bellaplast Maschinenverkaufs A.G.,
Baar, Switzerland (49%)

Bellaplast Kunststoffverpackungen Gesellschaft mbH,
Vienna, Austria (49%)

Bellaplast Inc.,
Fall River, Massachusetts (100% Bellaplast
Maschinenverkaufs A.G.)

Comshare Limited,
Toronto, Ontario (45%)

Comshare Inc.,
Ann Arbor, Michigan (17%)

Hules Mexicanos, S.A.,
Mexico City, Mexico (40%)

Monoplast S.A.,
Soustons, France (25%)

Petrosar Limited,
Sarnia, Ontario (40%)

Source: Polysar Annual Report, 1979

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VITA AUCTORIS

James Patrick Mulvale was born in Sarnia Ontario in 1950, and graduated from St. Patrick's High School. He received a Bachelor of Arts degree from the University of Western Ontario in 1971. He spent two years working as an attendant in institutions for persons with developmental handicaps, in Smiths Falls and London. In 1975 he received a Master of Social Work degree from Carleton University, doing field work and research in community development of one-to-one advocacy for individuals with disabilities.

For five years he worked as a Regional Consultant for the Ontario Association for the Mentally Retarded in the southwestern part of the province. This job entailed support to community-based services, advocacy, and public education on behalf of citizens with developmental disabilities.

He returned to academic work in 1980, as an instructor in social sciences at Lambton College in Sarnia. A year later he became a graduate student in Sociology at the University of Windsor. He also was a teaching assistant and sessional instructor there. In this latter capacity, he taught courses in introductory, social, and organizational psychology, the social aspects of crime, and general practice social work.