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OPTION-LIKE PROPERTIES OF ORGANIZATIONAL CLAIMS: TRACING THE PROCESS OF MULTINATIONAL EXPLORATION

Working Paper 91-011*

by

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ABSTRACT

The multinational growth of organizations, a currently salient form of organizational change, takes place as a process of implicit exploration of prior claims, or options, on environmental opportunities. The histories of forty organizations were studied to develop propositions which describe this process. Growth and change is the result of a fundamental mechanism underlying strategy and selection: the time-lagged interaction of the organization's prior options with stochastically arising environmental opportunities.
OPTION-LIKE PROPERTIES OF ORGANIZATIONAL CLAIMS:
TRACING THE PROCESS OF MULTINATIONAL EXPLORATION

The growth of multinational enterprises during the past four decades has been viewed as a "third industrial revolution" (McCraw, 1988) which has produced organizations comparable in economic power to sovereign nations. Multinational growth, or the spread of the organization's foreign direct investments, is a currently salient form of organizational change which occurs through a complex process of expansion and contraction across world markets. The purpose of this paper is to trace the general process of multinational growth by reporting on a qualitative study of the growth histories of forty organizations. Little received theory exists to guide research. Accordingly, this paper seeks to develop a conceptual framework for understanding multinational growth. The process is grounded in the implicit exploration of the organization's pre-existing claims to current growth opportunities in several host countries. This study extends the basic concepts of Option Theory to organizations and provides an exposition of its use as a lens for viewing organizational action. The resulting view of a basic mechanism underlying both organizational strategy and environmental selection is discussed.

MULTINATIONAL GROWTH AND ORGANIZATIONAL CHANGE

Multinational growth through foreign direct investment is accompanied by considerable organization change in the form of the internalization of import and export markets, increased complexity of organizational structure, and exposure to competition within global industries dominated by powerful players. At the same time, growth opportunities also increase as new foreign markets come within reach.

Multinational Theory has tended to focus on the motives for growth rather than on the growth process itself (e.g., Hymer, 1960; Caves, 1982; Hennart,
Process insights are few and far between in the literature. Vernon (1966) has given a three-stage cycle of growth based on a search for lower production costs. This approach provides a partial explanation of growth since it considers only the expansion case. Multinationals, however, clearly show cases of contraction as well as expansion. Both aspects are part of the same broad phenomenon. For example, Chrysler's growth shows two trends: from domestic to multinational growth during 1950-1970, and in the reverse direction subsequently. It has been suggested (Casson and Norman, 1983; Kogut, 1983) that expansion occurs through sequential foreign direct investment. However, the process itself was not explicated. The present study seeks to supply a complete description of the organization-level process of growth which will explain foreign expansion and contraction as part of the phenomenon of organizational change.

Multinational Theory has viewed organizational change as the product of organizational action, by and large. This is similar in spirit to the schools of organizational Strategy and Adaptation (e.g., Andrews, 1971; Miles and Snow, 1978). In contrast to the above approach, Ecology theory views change as arising principally from the environment (e.g., Hannan and Freeman, 1977) which is susceptible to sudden change (Meyer, 1982; Meyer, Brooks and Goes, 1990). Given the sudden political and economic changes which are a feature of the global environment, it is surprising that multinational theory has not taken an ecological approach to the analysis of its phenomena.

A trend towards a resolution of the "strategy or selection" issue in Organization Theory, and one which has value for Multinational Theory, is now evident. Hannan and Freeman (1984) have considered the possibility of change as arising from both environment and organization, the critical factor being the relative rates of change at these two loci.
Importantly, Singh, House and Tucker (1986) have shown empirically that strategy and selection are complementary explanations of organizational change in that some kinds of change were explained by strategy while others were explained by selection.

The present study seeks to extend this integrative effort. Both Multinational and Organization Theories may be enriched by another perspective, that change is produced as the result of a fundamental process underlying both strategy and selection. This basic process becomes visible through the analytical lens provided by Option Theory.

OPTION THEORY AND ORGANIZATIONAL DISCRETIONARY ACTION

Financial Option Pricing Theory, like Agency Theory, has been called a "growth industry in the academic literature" of Finance (Sick, 1989). Attention has moved in recent years from the valuation of financial contracts to the valuation of real organizational investments.

A "financial" option (e.g., a Stock Call Option) gives the holder the right to discretionary action such as the right to purchase a fixed quantity of shares on or before a given date at a predetermined "strike" or "exercise" price. The option contract contains a claim on possible future investment, which is valuable given that the investor is faced with an uncertain future, since stock price diffusion occurs through stochastic processes generated by the environment. A "real" option operates similarly: renting a house "with an option to buy" for example, gives the tenant a similar right of discretionary future investment.

Several types of organizational action have an option-like nature, including research and development (Mitchell and Hamilton, 1987), owning multiple foreign production facilities (Kogut and Kulatilaka, 1988), even
building a factory (Majd and Pindyck, 1987). Option Theory studies investments which contain claims that are contingent upon environmental changes and organizational discretionary action. Option investments involve two stages: option "purchase" which confers the claim, and option "exercise" which enacts it. Option Theory, therefore, takes the claim inherent in each investment as the unit of analysis.

Extending this view to organizations implies studying the claims inherent in organizational action. This marks a departure from the traditional approaches of studying managerial motives and intentions, methods of decision-making, features of the environment, and so forth. While valuation is the subject of inquiry in Finance, from the standpoint of Organization Theory the issue to be studied is the availability of discretionary action itself as a necessary condition for growth and change. A wealth of detail that might otherwise escape attention may be found in the properties of organizational investments per se, in terms of their prior claims to stochastically arising current opportunities. This detail precedes organizational action, which later interacts with environmental forces to produce change.

The study of growth and organization change requires an understanding of the "claims" structure of the organization over time and the implicit exploration of these claims by the organization. This structure may be determined by viewing the organization as a "bundle of options" (Bowman and Hurry, 1987; Hurry, 1990). The bundle contains prior claims (on current growth opportunities) which permit discretionary action. Three forms of discretionary action are available to the organization at any point in time: "holding" the option, "exercising," or "abandoning" it. This approach gives a dynamic view of the organization as an entity operating in time. Exercise of prior options (e.g., expansion of prior investments) leads to "chains of options" over time. Each investment simultaneously exercises a prior option and purchases a new
option for growth. Abandonment of an option truncates the chain at that point (i.e., contraction of investment). The present study applies this analytical lens to multinational growth and organizational change in studying the growth histories of forty multinational organizations.

METHOD

George (1979) has given a procedure for dealing with situations in which prior theory for testing is not available, the method of "structured focused comparison and process tracing." This method requires generating a significant number of cases chosen to reflect preselected attributes. Comparison across attribute groups permits the basic process to be identified and be traced.

In order to understand the process of multinational growth in sufficient scope to permit formulating general propositions, it was necessary to sample a wide range of organizations. The following attributes were thought to be particularly relevant based on commonly held intuitions about multinational activity:

1) The organization's Home country: U.S., Europe, Japan etc.
2) The Host countries in which growth occurred
3) Growth direction: expansion or contraction
4) Age of the organization
5) Industry: whether manufacturing or service industries

Forty organizations were selected for study. The sample permitted comparison across and within the attribute-groups to ascertain the consistency of the process of growth. The sample reflects a selection bias in favor of large organizations in each industry due to the size of multinational firms. Many of the organizations in the sample were listed in the Fortune 500, Global 500 and 100 Commercial Bank lists (e.g., Chevron, Daewoo, Gulf & Western, Industrial Bank of Japan, 3M and Volkswagen). Some were well-known names such
as Disney, Reebok and Benetton. The others were smaller and less well-known outside their market niches despite being leaders in their own industry segments (e.g., Microsoft, National Medical Enterprises and LSI Logic). A profile of the sample is given in the Appendix.

Chronology of Growth

Data was collected from published sources such as annual reports, business and trade publications, news reports and industry directories. A set of standardized general questions were applied to the data to provide guidance in drawing up a detailed chronology for each organization (see Appendix). Two researchers worked independently on each history (in some cases, three or more persons were involved) so that cross-checking was possible. One researcher drew up the chronology starting from the earliest date for which data was available. The other worked backwards, from the most recent events to their enabling prior investments, through the date when the organization had begun its multinational growth. Events which were confirmed by both the Forward and Backward methods were included in the history.

Where an investment followed on an earlier investment in the same line of activity, it seemed reasonable to infer that the investment stream containing the earlier one had been continued by the organization provided there was some other evidence such as a statement from the management. In this regard, there is a small possibility of falling prey to the common fallacy of post hoc ergo propter hoc, even though care was taken to cross check against multiple sources of information.

Although no attempt was made to analyze managerial motives or intentions, the use of managements' retrospective accounts may be a potential source of error. However, the use of these accounts yielded a significant benefit. The retrospective sense-making exercise could be interpreted as enactment (Weick,
1979). It was possible to thus identify the organization's post facto "recognition" of the claims contained in its prior investments and to trace their subsequent conversion into options for growth.

TRACING THE PROCESS OF MULTINATIONAL GROWTH

Tracing the process of growth was initially a matter of historical analysis using multiple inferences to identify the stream of events through time. After the chronologies had been drawn up certain common features could be discerned. The growth process was identified and confirmed by iteration as observations were compared across cases. A second set of questions guided this structured comparison (see Appendix). An option diagram traced the growth process across host country "exploration sites." The process of growth was robust across the various attribute groups, although differences of content existed across the organizations.

Four types of options were identified in the growth process (see Appendix for listing of organizations). These will be described with special reference to one organization from each category and general propositions, based on the entire sample, will be developed.

<table>
<thead>
<tr>
<th>NATURE OF MAJOR INHERENT CLAIMS UNDERLYING GROWTH</th>
<th>NUMBER OF ORGANIZATIONS OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Entry Foothold</td>
<td>9</td>
</tr>
<tr>
<td>2. Horizontal Proliferation</td>
<td>15</td>
</tr>
<tr>
<td>3. Exit</td>
<td>2</td>
</tr>
<tr>
<td>4. Flexibility</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
</tr>
</tbody>
</table>

1. The Entry Foothold Option

Nine organizations exhibited this type of option. The organization first invested in a host country firm, often by way of a joint venture. This investment yielded a claim in the form of a foothold in the new country or
line of business. After a period which varied from a few months to a few years, the organization made a second investment that, in effect, exercised this option, by either acquiring its joint venture partner, or through investment in other facilities to develop the exploration site (i.e., the new business or host country market). For instance, Dainippon Ink and Chemical Company first invested in several joint ventures with Reichhold Chemicals and then exercised the resultant option in its acquisition of the latter, thus entering a new exploration site, the U.S. Sony invested in a ten-year joint venture with CBS Records to form Japan's most successful record company and later exercised its option to enter that line of business in the U.S. by acquiring the U.S. company. Industrial Bank of Japan will be taken up as an illustration.

The Industrial Bank of Japan

In 1985, the Industrial Bank of Japan (IBJ) was ranked sixth in size (assets) among Japanese banks and sixteenth worldwide. Its clientele included ninety percent of Japan's two hundred largest corporations. IBJ did not have a presence in the global fixed-income securities industry, whose major centers are London and New York. During the summer of 1985, IBJ formed a partnership with Schroders PLC, one of the largest British merchant banks and a major player in the London market, which gave it a 75.1% holding in the Schroder Bank.

The above joint venture yielded two inherent claims: a claim on growth in the London market, and a claim on growth in New York. The presence of these claims makes IBJ's joint venture with Schroders effectively the purchase of an option on gaining a foothold in these two markets. This option was exercised as follows:
At the beginning of 1985, Aubrey G. Lanston, Inc. was a private company in the fixed-income securities business as a Primary Dealer for the U.S. Federal Reserve. As one of only nine specialists in a select group of thirty-five firms, Aubrey Lanston was one of the members of Wall Street's most exclusive club, to which the Federal Reserve had restricted admission. In late 1985, the IBJ-Schroder Bank acquired Aubrey Lanston, Inc. for $234 million (i.e. the "strike" price). Wall Street recognized that Industrial Bank of Japan had gained entry to the global fixed-income securities industry as a major player, the first Japanese bank to have made this transition.¹

Proposition 1

Multinational growth takes place in stages which exhibit the following option-like properties:

a) Each stage of investment has its origins prior organizational investments.
b) Each stage provides a base for further investment.
c) The returns from each stage of investment consist of two components: (i) direct returns (if any) from operations (ii) the potential for future returns available upon further investment
d) The value of these future returns is uncertain (or even unknown) and will depend on the distribution of opportunities in future in the environment.

The organization's prior home country investments form the base for the first host country investment, by carrying the organization to the threshold of multinational growth.

Proposition 2

The option-claim inherent in each stage of investment:

a) is an option on future growth
b) exercisable on payment of a strike price represented by the further investment required
c) to capture one or more of several possibilities (e.g., exploitation of proprietary knowledge or preemption of competition)
d) and will be exercised when the environment offers growth opportunities for which the organization is favorably positioned by prior investments.
Although real options differ from financial option contracts (e.g., secondary markets may not exist, there is no quoted strike price, expiry date, etc.) their structure as contingent claims does not vary. Extension to multinational growth retains this claim structure.

**Proposition 3**

Since the future value of each option-like investment is uncertain (or unknown), multinational growth is implicitly a process of exploration.

This proposition suggests that, regardless of managerial intent or strategy, a process of exploration occurs.

**Shadow Options and Real Options**

Using the retrospective accounts of management, it was possible to bifurcate each organization's options into two categories: "shadow options" or latent claims which had not been recognized as such by the organization (per Bowman and Hurry, 1987; Hurry, 1990), and "real options" or investments which had been made upon recognition of the inherent possibilities open to the organization (i.e., upon recognition of the prior shadow options).

For example, prior investment in a joint venture might allow the organization advantages over its competitors in acquiring its partner. These advantages can be viewed as yielding a claim on growth in that exploration site. However, should this possibility remain unrecognized, for whatever reason, the organization cannot be said to hold a claim in the full sense (e.g., consider CBS which appears not to have recognized its option on acquiring Sony's music industry operations in Japan). At best we could say that the organization possesses a shadow claim which could become a real possibility only on recognition. The recognition of shadow options thus forms an important part of organizational enactment (Weick, 1979).
Proposition 4

Recognition of the inherent shadow option in each stage leads to its conversion into a real option.

2. The Horizontal Proliferation Option

Fifteen organizations in the sample grew through multiple stages of sequential investment in several host countries, extending their operations horizontally across the world. An investment in a strong brand image or core technological competences would yield claims on rapid growth in several exploration sites. Exercise took the form of sequential investments which served to "clone" the organization in multiple host countries. Pepsico, Nestle, Perrier, Reebok and Nike form examples of this type of option. Disney expanded its theme parks sequentially in the U.S., Japan and France similar to Marriott's Courtyard chain in Europe. Companies such as DSC Communications, Microsoft, and Northern Telecom showed the option purchase in the form of investments in core technology which were then exercised through horizontal investment in several countries. The Benetton Group forms a good illustration.

The Benetton Group

In 1965, Luciano and Giuliana Benetton brought their complementary skills in wholesaling and designing garments together. They opened their first retail store in Italy in 1968. In 1972 they began dyeing assembled garments, instead of dyeing yarn as was customary, and saw an immediate improvement in inventory turnover as a result. In 1978, BG had expanded throughout Italy with sales of $78 million and a small export business. Management believed the Italian market was near saturation.² An export program to the rest of Europe was launched, followed by the opening of a store in Paris.
The foregoing investments formed the purchase of the horizontal proliferation option claim, which was exercised as follows:

In 1980, there was an explosion of stores throughout Europe. A system of franchising of outlets was set in place through local agents. Management believed that a product which had been successful in Europe would probably attract the US market. Five stores were opened in the U.S. with adjustments to suit the US consumer and market. The system of franchising was extended to manufacture. In 1982, sales had grown to $289 million. BG took a 50% stake in Fiorucci - an Italian label, acquired a Scottish garment maker and later set up its own factories in Europe.

In 1983 there were 250 retail outlets in the U.S. In 1984, management believed that products which had been successful in the U.S. were likely to find acceptance in Japan. An entry was made into Japan, on the assumption that BG's production technique generated cost savings which would make its products competitive in Far Eastern markets. In 1986, worldwide outlets had risen to 4,000 stores in 60 countries. Stores were opened in Budapest, Belgrade and Prague. Management stated its goal of opening 7,000 stores, with at least one in every country, by 1991.

In 1986, with net income of $86.9 million, BG announced its strategy of achieving a 50-50 mix in revenues between textiles and financial services. A financial services supermarket was envisaged under the Benetton name. Between 1987 and 1990, several investments were made in the financial services industry, through alliances with Merrill Lynch, Prudential and others.

In 1988 the number of outlets in the U.S. grew to 758 but on account of overcrowding were reduced to 650 by 1990. BG began sales of non-garment products to U.S. department stores but abandoned its option in the financial services industry.
BG's growth is shown as an option diagram in Figure 1.

----------------------------------------
INSERT FIGURE 1 ABOUT HERE
----------------------------------------

Proposition 5

a) Option investment occurs over time in an "option chain" in which the "exercise" of a prior option has the effect of "purchasing" a new option for future growth.

b) Each option chain explores growth opportunities in a particular "exploration site" (i.e., a host country or line of business).

c) An option chain may contain options on growth in other existing exploration sites or new ones.

3. The Exit Option

Two organizations, National Medical Enterprises and J. C. Penney International, showed negative growth through the abandonment of foreign options. These organizations contracted from multinational to domestic operations during the period of study. The flip side of every option claim is always the inherent choice of abandonment (i.e., the choice of making an exit from the multinational arena altogether). Abandonment of this multinational claim implies the choice for renewed growth in the home country. The exit option thus provides the mechanism for negative growth or contraction of the multinational enterprise. Reversal of direction (i.e., a modified version of complete contraction) was found to be a common feature of the growth histories of several organizations in the sample. National Medical Enterprises will be considered briefly as an illustration.

National Medical Enterprises

National Medical Enterprises (NME) was founded in California in 1969. In 1976, NME was described as the most diversified health care company in the U.S., with operations in several types of health care services. A contract was received to manage a hospital in Saudi Arabia. Management considered the
possibility of foreign operations, thus registering the recognition of a shadow claim of the entry foothold type.

In 1979, the shadow option was converted into a real option through contracts which were signed for planning services in Korea, and for maintenance services in Abu Dhabi and Saudi Arabia. International operations brought in revenues of $5.1 million and made a loss of $600,000 (i.e., the cost of the option).

In 1980, NME exercised the first option through contracts for over nine medical facilities in Saudi Arabia. NME opened offices in Saudi Arabia, Jordan, Philippines, Italy, London, Stockholm, Los Angeles and Dallas, thus suggesting the recognition of a horizontal proliferation option. In 1981, international operations brought in revenues of $77.4 million and a net income of $5.5 million. In 1983, NME owned or managed 39,532 beds in 320 facilities in 6 countries. International revenues were $83.7 million and net income was $1.9 million.

The proliferation option was exercised over the next two years in Malaysia, Singapore and the U.K. Management announced the major thrust of its international operations to be Western Europe and the Pacific Basin (i.e., shadow option recognition).

In 1986, Middle East operations lost $22.1 million. The discontinuation of this line of business was announced. In 1988 the company announced expansion plans in the U.S. but not elsewhere, thus signifying abandonment, or taking the exit option. An executive made the following comment: "International operations have not met our expectations. Right now, we are very reluctant to invest overseas. I think we ought to focus on opportunities in the U.S., and de-emphasize overseas operations. Our problem now is to be sure not to overextend ourselves, and to pick the best of these opportunities."
Proposition 6

Negative growth may occur when an option chain is truncated (i.e., the latest option in the chain is "abandoned").

Truncation or abandonment will occur if the organization is unable to earn returns in excess of the strike price payable for exercise because the environment does not offer opportunities for which the organization is favorably positioned by prior option investment.

4. The Flexibility Option

The sample contained fourteen organizations whose growth patterns were complex, with several reversals of strategic direction, while exploration of growth opportunities was undertaken simultaneously in multiple sites. Investment in multiple exploration sites yielded yet another form of claim, the flexibility option, conferring the right to switch operations across host countries in response to environmental changes (Kogut and Kulatilaka, 1988). For instance, AMR was a domestic carrier at two periods in its history sandwiched between periods of international operations. IBM, Dresser Industries, Control Data, and Texas Instruments showed a history of combined positive and negative growth occurring across countries and businesses.

Option diagrams for Volkswagenwerk now follow.

------------------------------------------
INSERT FIGURE 2 ABOUT HERE
------------------------------------------

Volkswagenwerk

Figure 1 shows the growth history of Volkswagenwerk (VW) as a process of exploration involving several host country sites and exhibiting all four types of options. Prior to 1970, the organization held shadow options in manufacturing technology and several entry foothold and horizontal proliferation options around the globe. The flexibility option is most noticeable in the
organization's entry and exit from the U.S. exploration site. In the fifties, VW had acquired a production facility in the U.S. and had later abandoned it to continue exporting cars from Germany. In the eighties, VW decided once more to enter the U.S., purchased a factory in Westmoreland, PA and announced expansion plans.\textsuperscript{10} However, as demand did not reach economic capacity, VW exited from the U.S.\textsuperscript{11} In the meanwhile, earlier investments in Latin America had started producing cash losses. Despite this situation, VW made substantial investments in this region, switching production from the U.S. to Latin America and to re-opened plants in Germany. In addition to growth through the flexibility option, VW explored several host country sites through entry foothold and horizontal proliferation options.

**Proposition 7**

The process of multinational growth over time may involve multiple changes of direction:

a) Environment changes over time within each exploration site and across the entire option bundle offer new growth opportunities and/or remove existing ones.

b) An option will be "held" so long as it offers the potential for exploration (in that site or another).

c) Exploration may occur through the expansion of some sites and the contraction of others.

Figure 3 shows the time-lagged interactions between the VW's options and environmental changes. The vertical axis shows option investment in a prior time period while the horizontal axis shows the environment's offer or removal of growth opportunities in the current time period. The movement of the organization in and out of exploration sites as prior options interact with current environmental offer or removal of growth opportunities is highly suggestive of a process of implicit exploration.

\textsuperscript{-----------------------------}

\textbf{INSERT FIGURE 3 ABOUT HERE}

\textsuperscript{-----------------------------}
DISCUSSION: IMPLICATIONS FOR THEORY

The Exploration Cycle

The global environment is susceptible to change through variations in income and demand, evolving globalized industry structures and competitive forces, varying input and transport costs, fluctuating exchange rates, shifting rates of innovation and political upheavals. Organizations explore opportunities across this stochastically changing environment. Growth, both positive and negative, is the result of the time-lagged interaction between the organization's "exploratory" option investments and environmental changes. When the environment offered opportunities for which the organizations in the sample were suitably positioned through prior options, growth occurred in the positive direction. When the environment removed opportunities, negative growth occurred. Option investment and environmental change appeared to occur as quasi-independent events in time-lagged interaction with each other.

Figure 4, the Exploration Cycle, shows a summary of the growth possibilities found in the sample. The axes are the same as the previous figure.

Cell 1 shows a situation where prior option purchase had positioned the organization to avail of the opportunities currently offered by the environment of a host country. The organizations in the sample who were in this situation invested in the new exploration. Growth began in the positive direction.

Cell 2 shows a continuation of this situation. The host country environment continued to offer opportunities to the organization which had recently exercised its option to grow. Rapid positive growth, accompanied by high performance, was seen in the sample organizations.
Cell 3 shows a situation where the current environment has changed so as to present fewer growth opportunities or to remove the ones offered earlier. The organizations in the sample by and large continued to exercise their options in that exploration site, though some sought new options. Performance was low and growth slowed down.

Cell 4 shows a continuation of this situation. Organizations were seen to make several option investments. Some of the organizations in the sample were successful in moving to a new host country (i.e., Cell 1) while others abandoned their options and withdrew from that host country, registering negative growth.

Each of the above cells should be viewed as a transition state for the organization as it explores growth. The organizations in the sample were observed to move in varying orders of transition through these four states, although the two most frequent transition are those exhibited by VW. It is likely that an organization will pass through the exploration cycle several times during its lifetime. The time-lagged interaction between the organization's exploratory option investment and the environment's changing opportunities provides the hidden detail of the change process and offers a glimpse of a fundamental mechanism underlying both organizational strategy and environmental selection.

The Fundamental Selection/Strategy Process

This inter-temporal interaction between environmental opportunities and organizational options suggests that selection and strategy, far from operating at different levels of analysis or being in conflict (per Astley and Van de Ven, 1983), instead interact in close succession.

Organizational change in the form of multinational growth is the result of two sets of events which take place over time. One set is produced by the
organization through its enactment of the shadow options embedded in prior investments. The other is produced by the environment operating through its own stochastic processes. The ordering of these two sets of events yields the variety of transitions that occur in the Exploration Cycle. The result of a current environmental offer of opportunities meeting with the organization's prior options is the "selecting in" of the organization to the exploration site. Retrospective sense-making might cause this situation to be described as "strategy" or "fit" or "adaptation." "Selection in" leads to growth and high performance for the organization. The impact of the environment currently presenting few or no opportunities for the organization's prior options, produces the opposite effect of "selecting out" the organization from the exploration site, with correspondingly poor growth and performance.

The fundamental process underlying the "selection/strategy" phenomenon consists of repeated interactions between prior organizational options and current environmental growth opportunities. The continual iteration of this process over time yields growth, change and performance. This process is shown in Figure 5. The process appears familiar to common intuition, yet an appreciation of the time dimension has rarely entered research agendas in Organization Theory (Kimberly, 1986).

CONCLUSIONS

The present study should be viewed as suggestive rather than exhaustive. The unique nature of each growth history restricts generalization in a broad sense. Even so, the methodology forms a "fine-grained method for studying processes of organizational change" (Singh, House and Tucker, 1986). This study offers a reasonable understanding of the process of multinational growth
in the form of an "interpretive explanation" (Geertz, 1980) using Option Theory as a lens for analysis.

The organization-environment relationship is currently discussed in terms of two themes: a "habitat" and "change" (e.g., Hall, 1980; Dess and Beard, 1984; Fredrickson and Mitchell, 1984). Questions that follow logically are those of "fit" (contingency theory) or "selection" (ecology theory). The present study indicates that the organization-environment relationship is also a relationship in time. However, time in the sense of the duration between events or a rate of change may not be the only appropriate measures. What is relevant is the ordering of organizational and environmental events in time. It is a question of "today's options for tomorrow's growth" (Kester, 1984; Myers, 1984) or, more accurately, "yesterday's shadow options enacted in tomorrow's environment." An understanding of such ordering leads to an appreciation of the dovetailing of organization and environment in the process of growth and change.
APPENDIX

A. ORGANIZATIONS IN THE SAMPLE

OPTION TYPE EXHIBITED

1. Entry Foothold
   Bridgestone, Dainippon, First Boston, Hoechst, Indust. Bank Japan, LSI Logic, Procter & Gamble, Rockwell International, Sony,

2. Horizontal Proliferation
   Benetton, Computer Assoc. Intl., Daewoo, Disney, DSC Communications, Lotus, 3 M, Marriott, Microsoft, Nestle, Nike, Northern Telecom, Pepsico, Perrier, Reebok,

3. Exit
   National Medical, J.C. Penney Intl.,

4. Flexibility
   AMR, Borden, Chevron, Citicorp, Control Data, Dresser Industries, Gulf & Western, IBM, ITT, McDermott Intl., Philip Morris, Roche, Texas Instruments, Volkswagenwerk.

B. ATTRIBUTE-GROUP PROFILE (Number of Organizations)

<table>
<thead>
<tr>
<th>Home Country</th>
<th>Host Country</th>
<th>Age</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>29</td>
<td>11</td>
<td>&lt;25 yrs.</td>
</tr>
<tr>
<td>Europe</td>
<td>5</td>
<td>26</td>
<td>&gt;25 yrs.</td>
</tr>
<tr>
<td>Pacific</td>
<td>6</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

(*) Will not total 40 due to multiple exploration sites.

The following broad industries were represented: Airlines, Automobiles, Commercial Banking, Computers, Consumer Products, Electronics, Equipment Manufacture, Food, Health Care, Investment Banking, Petroleum, Pharmaceuticals, Retail Distribution, Soft Drinks, Software, Telecommunications, Tyres.

C. STANDARDIZED GENERAL QUESTIONS

Chronology
1. Can the first multinational move be identified?
2. Can the last move be identified?
3. What was the antecedent "enabling" resource base for each move?
4. What inherent claims are contained in each move?
5. What environmental opportunities were available after each move?
6. What is the chronological sequence of events?
7. How well did the organization perform after each move?

Comparison
8. Are there any common features across the various groups?
9. What differences exist across the sample?
10. Is there evidence of a uniform process in operation?
11. What are the main elements of this process?
D. FOOTNOTES

11. Interview with VW Public Relations Executive.
REFERENCES


FIGURE 1: BENETTON GROUP
1970 to 1974: Environment changes. The “Beetle” loses popularity. Market share declines from 37% to 27% in Germany and from 6.3% to 4.9% in the United States. Volkswagenwerk makes a loss of $336 million and skips annual dividend amidst shareholder protests.

1974: Shadow Option in manufacturing technology recognized. Four new car lines with standardized production are introduced.

1975: Company makes decision to invest in the U.S.

1980: Plants shut down, but not sold. Option: FLEXIBILITY OPTION

1988: Plants reopened to serve U.S. market. FLEXIBILITY Option Exercised

Late 1970s: exports to several countries gives Shadow Options HORIZONTAL PROLIFERATION

Late 1970s: Global sourcing through new plants in Nigeria, Egypt, China, Romania, Tunisia, Spain, Yugoslavia and a joint venture with Nissan in Japan.

Capacity increased and investment in R&D is made. Further options purchase/exercise

Option Exercise
Brazil plant makes alcohol car for local market, motorbicycles for Argentina, spare parts for U.S. market, and Beetle for export to Nigeria, Iraq, northern Africa and Middle East

Announcement of investment in a second plant in Detroit, and two plants in Canada. ENTRY FOOTHOLD OPTION EXERCISED

Shadow Option: HORIZONTAL PROLIFERATION/ FLEXIBILITY

FIGURE 2: VOLKSWAGENWERK (continued on next page)
FIGURE 2: VOLKSWAGENWERK

Option Chain: Germany

Losses in the Pennsylvania plant, and in Brazil & Mexico

1988: Withdrawal from the U.S. EXIT OPTION

1988: Canadian option exercised - components for Germany

Option Chain: United States

1979: Investment in Peru and Ecuador for manufacturing plants
Purchase of ENTRY FOOT-HOLD OPTION

1988: Mexico plant to make components for reopened German production.

Volkswagenwerk buys Chrysler out of Latin America, forms Autolatina.

Brazilian cars exported to U.S. Exercise of FLEXIBILITY OPTION.

Option Chain: Latin America

1990: Buys 30% of Czech plant for $5.37 b.
ENTRY FOOT-HOLD OPTION: EASTERN EUROPE

Option Chain: Other nations
### CURRENT ENVIRONMENTAL OPPORTUNITIES

(Period: \(t\))

<table>
<thead>
<tr>
<th>Offered</th>
<th>Removed</th>
</tr>
</thead>
</table>
| 1981 to 1987
Additional plants planned. New investments made. Plant makes loss due to low demand and capacity used. |

#### Exploration Site

**United States**

- **Westmoreland, PA plant opened.** 1980
- **Late 1970s**
  - Production shifted to U.S.
  - Option is needed from Germany.
- **1988**
  - U.S. from abandoned

#### Exploration Site

**Latin America**

- **1959**
  - Mexico plant is opened.
- **1957**
  - Brazil plant is opened.

#### 1960s and 1970s

Market dominance, high profits. Several expansion investments made.

#### 1980s

Cash losses are seen. Company steps up its investment and acquisitions.

---

**FIGURE 3: VOLKSWAGENWERK: EXPLORATION CYCLES**
**CURRENT ENVIRONMENTAL OPPORTUNITIES (t)**

<table>
<thead>
<tr>
<th>Option Exercise</th>
<th>PRIOR INVESTMENT MODE (t-1)</th>
<th><strong>OFFERED</strong></th>
<th><strong>REMOVED</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome:</td>
<td></td>
<td>POSITIVE GROWTH AND HIGH PERFORMANCE</td>
<td>POOR PERFORMANCE</td>
</tr>
<tr>
<td>Action:</td>
<td></td>
<td>Multinational makes further investment.</td>
<td>Multinational invests further in same site.</td>
</tr>
<tr>
<td>Result:</td>
<td></td>
<td>CELL 1</td>
<td>CELL 2</td>
</tr>
<tr>
<td>Action:</td>
<td></td>
<td>Multinational invests in a new exploration.</td>
<td>Multinational abandons options and seeks new site.</td>
</tr>
<tr>
<td>Outcome:</td>
<td>GROWTH BEGINS</td>
<td></td>
<td>NEGATIVE GROWTH AND POOR PERFORMANCE</td>
</tr>
</tbody>
</table>

**FIGURE 4: THE EXPLORATION CYCLE: TRANSITION STATES**
Exploration of the inherent claims in prior investments.

Arising from stochastic processes in the environment.

**Figure 5: The Fundamental Selection/Strategy Process**
Note: The following is a partial list of papers that are currently available in the Edwin L. Cox School of Business Working Paper Series. When requesting a paper, please include the Working Paper number as well as the title and author(s), and enclose payment of $2.50 per copy made payable to SMU. A complete list is available upon request from:

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89-111  "Normal Effects of Corporate Sponsorship and Departmental Power on Career Tournaments: A Study of Intraorganizational Mobility," by John E. Sheridan, John W. Slocum, Jr., Richard Buda, and Richard Thompson


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