STRATEGY MAKING IN CONTEXT: TEN EMPIRICAL ARCHETYPES

Danny Miller

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ABSTRACT

How do interactions amongst environmental, organizational, and strategy making characteristics lead to the failure and success of business firms? Are there an almost infinite number of possible interaction patterns, or only a few which are most common? A preliminary attempt to answer these questions revealed ten extraordinarily popular patterns or 'archetypes' which characterize successful and unsuccessful firms. These were identified using obverse (Q-type) factor analysis and were found to be more common than could be expected by chance. A sample of written case studies on 81 firms was used as the data base and each firm was scored along 31 variables dealing with environmental, organizational, strategy making, and performance dimensions. Findings of the research indicated that there are a relatively small number of very different ways to fail and succeed in business. The universalist and simple bivariate contingency approaches for studying organizations are shown to be inadequate.

ABSTRACT

Quelles intéractions existent entre les caractéristiques d'un environnement donné, les données propres à l'organisation de certaines fèrmes opérant dans cet environnement et leur processus de prise de décisions stratégiques? En particulier quelles intéractions conduisent à l'échec ou succès? Y a-t'il une quantité infinie de formes ou de tendances ou seulement quelques-unes très répandues? Dans la recherche d'une réponse à ces questions, une première tentative a permis d'identifier dix tendences ou configurations répandues qui caractérisent les fèrmes qui réussissent et celles qui échouent. Ces configurations furent identifiés à l'aide d'une analyse factorielle renversée (type Q); elles sont apparues plus fréquentes que par le simple jeu du hasard. La base de données était constituée à partir d'un échantillon de 81 cas écrits d'organisations: chaque organisation a été mesurée sur 31 variables ayant trait à l'environnement, à des caractéristiques structurales au processus de formulation de stratégies et au rendement. Les résultats de cette recherche indiquent qu'il existe un nombre relativement restrient de facons très différentes de réussir ou d'échouer. Il est démontré que les approches situationnelles bien connues à deux variables sont insuffisantes pour étudier les organisations.

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They could not have known what they were getting into - the members of my supervisory committee. It mustn't have been a joy to spend the discretionary hours of a rather hectic academic career arguing with an all too opinionated and temperamental doctoral candidate. Fortunately for these individuals, this experience is coming to a close. I can't thank my committee members enough for their enthusiasm, their ideas, their hard work, and their humanity. A word of appreciation to each of the individuals who have helped me through the program is in order.

In 1967 I enrolled in the first course that taught me how to reason and to deal with an unstructured problem. I was 20 years old, in fourth year university, and had undergone 14 years of schooling. Dr. Henry Tutsch was my teacher. I have had none better. Any semblance of analytical prowess or empirical inquisitiveness that I may possess is due in large part to Henry's initial efforts.

After a brief career in business, I began in 1971 to long once again to enter an academic environment. Dr. Henry Mintzberg hired me as his research associate and so began a relationship which more than any other has influenced my intellectual growth and curiosity and my essential research orientation. It is not that I was a particularly malleable student. After a while though, Henry's creativity and contagious enthusiasm couldn't help but sway me. Our discussions, debates, and countless joint projects, I found so very enriching. Henry taught me what it was like to do 'exciting' work. His lessons were not solely intellectual. They provided a set of emotional as well as cognitive standards against which to gauge research endeavours. Were it not also for Henry's sense of humor and his considerable moral and financial support, I'd probably still be a banker.

I first met Dr. Peter Friesen in September 1974. Even though our relationship is of such recent origin, Peter has contributed more than anyone else (hopefully with the exception of the author) to this dissertation. Together, we have spent literally hundreds of hours perfecting the research methodology and the findings sections of the work.

Specifically, Peter suggested the use of the binomial test for establishing the statistical significance of archetypes, scored many of the actual cases used as the data base, wrote a computer program to sort cases into archetypes, and made many suggestions on the mode of presentation for the findings. Peter's help came at considerable personal cost as he was at the time conducting his first few semesters of teaching with all the effort and preparation that entails. I can't find the words to thank him.

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PREFACE: CONTRIBUTIONS OF THE DISSERTATION TO ORIGINAL KNOWLEDGE

The contributions to original knowledge of the dissertation are of two types: those which relate to methodology, and those which relate to the content of the findings. The methodological orientation attempts to escape the more traditional search for universal rules or for simple bivariate contingencies. Instead, an approach is proposed which aims to isolate complex tentative causal models which describe the most common structural orientations and decision making styles used by firms to cope with different environments. Various successful and unsuccessful coping patterns which occur very frequently in our sample of firms have been discovered. These are called archetypes. The methodology used to find such archetypes has never before been employed to study organizations and strategy making. Indeed, the author is unaware of any instance where Q-type (obverse) factor analysis has been used to derive a typology of administrative structure and functioning. The hypothesis testing procedure which establishes the statistical significance of each archetype is also believed to be novel in this research context. Finally, the use of case studies as a data base, and the methods of scoring and estimating the reliability and validity of scores, represent quite unexplored techniques for advancing our knowledge of organizational behavior.

The findings of the dissertation which entail contributions to original knowledge are portrayed mainly in the discussions of archetypes. Detailed descriptions are provided which indicate the typical decision-making practices and structural orientations which apparently lead to corporate success and failure in different environments. It is shown that the relationships amongst environmental, organizational/structural, and strategy making variables differ, depending upon the archetype membership of the firm. Simple bivariate contingency approaches which hide these important differences are seen to be inadequate.

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INTRODUCTION

What are the most common configurations amongst environmental, organizational, and strategy making characteristics which lead to success or failure? Are there virtually an infinite variety of these or only very few? After studying a great number of business case studies we concluded that there were several likely ways for successful firms to structure and make decisions in different environments rather than just one way, yet the number of ways was just not very great. The same held true for unsuccessful companies. This opinion appeared to fly in the face of most of the management literature. Many theoreticians take a universalist point of view, a slight contingency modification thereof, or an idiosyncratic 'case method' stance in looking at the determinants of corporate health.

Our aim in this dissertation was to see if there were in fact only a few ways for firms to be successful and fail in terms of their environmental, organizational and strategy making qualities and the relationships amongst these qualities. We have named the common modes of success and failure 'archetypes' in that there appear to be several basic molds which are conformed to by many corporations.

The utility of discovering archetypes is that the most common modes of failure can be identified in some detail so that relevant problem diagnosis might be possible. Also, if there are a number of common paths to success, each of which is most prevalent in a particular environment, these can be used to identify remedial targets which can most readily and appropriately be met by failure companies. The identification of more precise models of corporate functioning under different conditionslends more accuracy toward a contingency approach of organizational behavior. For example, in looking at the relationship between say, centralization of power and risk taking, we can refer to the specific context in which the relationship occurs and <u>then</u> study the association. In some models this association might be positive, in others negative, and in the remainder insignificant.

Chapter One introduces the objectives of our research and their basis in the literature. Two primary motivations did underly our proposed

orientation: (1) the gaps in the actual knowledge about the strategy making process and its relationship to performance and the environmental and structural context, (2) the shortcomings in the research methodologies of others in the field of management policy and organization theory. Each of these facets are discussed in detail.

The second chapter presents our own research methodology. We discuss our variables, the data base, methods of scoring and estimating data validity and reliability, and the manner of generating and testing the significance of archetypes.

Chapter Three presents the overall findings of the data. Variable means, standard deviations, Spearman correlations, and R-type factor analyses are performed for our total sample and for the successful and unsuccessful sub-samples. The most fundamental relationships amongst the variables and the differences between the two sub-samples are highlighted. It is concluded that the gross relationships can hide a great number of important distinctions within the classes of successful and unsuccessful firms. The utility of searching for particular archetypes of success and failure is suggested.

Chapter Four discloses each of our successful archetypes. The chapter begins with a brief overview which compares the six archetypes along several key dimensions. For each archetype, some essential features of member firms are discussed, the general attributes and hypothesized causal model is presented, detailed evidence is given using quotes from cases about the important environmental, organizational, and decision making attributes, and a set of hypothesized relationships are postulated. There are six successful archetypes: S_{1A} The Adpative Firm Under Moderate Challenge, S_{1B} The Adaptive Firm in a Very Challenging Environment, S_2 The Dominant Firm, S_3 The Giant Under Fire, S_4 The Entrepreneurial Conglomerate, and S_5 The Innovators.

Chapter Five employs the same format as Chapter Four in presenting the four failure archetypes: F_1 The Impulsive Firm, F_2 The Stagnant Bureaucracy, F_3 The Headless Giant, and F_4 The Aftermath.

In Chapter Six we explore the data on transitional events which lead a firm to move from one archetype to another. Several hypotheses are suggested which go beyond our data in an attempt to show the utility of future empirical research into interarchetype transition paths.

The Final Chapter presents some general conclusions from the research, though it is pointed out that such sample-wide generalizations are anathema to our orientation. The main emphasis is on highlighting some advantages of the research approach, indicating some unanswered questions which may warrant further explanation, and proposing a few tentative suggestions for the practitioner.

CHAPTER ONE

LITERATURE REVIEW AND RESEARCH OBJECTIVES

INTRODUCTION

CONTENT INFLUENCES AND DEFICIENCIES

METHODOLOGICAL DEFICIENCIES

OBJECTIVES AND RESEARCH ORIENTATION

INTRODUCTION

The literature review is presented in three sections. The first two explore 'content' and 'methodological' deficiencies in previous research which suggest strategies for further investigation. By 'content' deficiencies we mean omissions or gaps in our actual knowledge of administrative behavior. For example, little is known about the influence of environmental heterogeneity upon the modes of decision making. Methodological or structural deficiencies are those which concern the manner in which theorizing or data gathering and analysis are carried out. A 'methodological' or structural deficiency might be the focus by previous researchers on bivariate relationships if important facilitating or inhibiting co-conditions which bear upon these associations are ignored. Obviously, content and methodological deficiencies are interrelated. A methodological deficiency can inhibit the advancement of certain specific types of knowledge. The reason for segregating the two types of shortcomings in the literature is that each suggests different sorts of useful research strategies for subsequent investigators.

The third literature related section (see Chapter 2) refers to the works in the fields of organizational behavior and management policy which involve our research variables. Most of these variables have been treated before by management theorists and some of the sources are cited.

In the interests of brevity, our citations are not nearly as profuse as they might be to do credit to previous researchers. For a much more thorough treatment of the literature, the reader is referred to a McGill Working Paper written by the author in 1974 and entitled "Towards a Contingency Theory of Strategy Formulation".

CONTENT INFLUENCES AND DEFICIENCIES

If we measure a business firm's performance in terms of profitability, revenue growth, return on investment, or some similar financial indicator, it is expected that this will be a function of the ability of the firm to adapt to its environment. The environment is made up of competitors, customers, suppliers, unions, government and other important influencers

of the firm. Adaptation requires that the firm's structure, technology, products, resources, procedures, and policies be as suitable as possible to environmental conditions so that performance is enhanced. The firm's structure, technologies, etc. are defined to be 'organizational' variables, and the adaptation process which must tailor these to external (and even some other internal) conditions is defined as the 'strategy making' process. The process can be described in terms of the amount of analysis that takes place, the time horizons of decision makers, their attitudes towards risk, etc. Thus, we look at three essential variable classes which are expected to influence performance: environment, organization, and strategy making behavior. It becomes interesting to learn which configurations or profiles of environmental, organizational, and strategy making qualities, lead frequently to success and failure.

Our concern with the literature is focussed on studies which provide insights regarding the utility or prevalence of relationships amongst environmental, organizational, and strategy making variables.

The first attempts to understand organizational behavior involved the search for universal principles. Authors such as Weber (1947), Gulick & Urwick (1937), Barnard (1938), Simon (1947), as well as Taylor (1911) and the proponents of scientific management have written works which sought invariant truths about organizations. Questions asked ranged from: what is the optimum span of control?; to: what are the essential behavioral characteristics of organizational decision makers? Certainly these classics contributed a great deal to our understanding of how organizations function. They did not however provide much insight into the determinants of organizational performance under different environmental, organizational, and strategy making conditions.

The contingency theorists did begin to look at this topic, or at least some of its parts. We shall discuss the quite diverse findings of several very popular contingency theorists in order to indicate how the fragmented results make it difficult to obtain a unified, integrated picture of the relationships amongst environmental, organizational, and strategy making variables.

In 1958, Joan Woodward initiated the contingency approach to organizational research. She found that the nature of the production technology

used by a firm (e.g., custom, batch, assembly-line, continuous process) influenced the number of levels in the hierarchy, the levels at which decisions were made, the ratio of managers to hourly personnel, the dominant functional areas, and so on. Thus, it was concluded that the environment, which helped determine the necessary production technologies, influenced the required organizational mechanisms and procedures. No longer was research aimed at invariant principles, it sought out optimal orientations given the particular situation.

Burns & Stalker (1961) also employed a contingency orientation. They identified two modes of organizational functioning; the "mechanistic" and the "organic". The mechanistic mode was patterned after the Weberian bureaucracy in which authority is based upon the level in the organizational hierarchy, promotion is a function of seniority, many explicit and rather confining rules and procedures guide task performance, and so on. This orientation was determined to be satisfactory for firms in relatively stable environments. The organic mode stresses flexibility. Authority is a function of knowledge, promotion is based on ability, and employees decide how to carry out a given task without many standard operating procedures being brought to bear. The organic orientation was found to be more effective in turbulent environments than the mechanistic. Again we are shown the importance of adapting the organization to the environmental characteristics.

Lawrence & Lorsch (1967) reinforce this theme. These authors have indicated that as the environment becomes more dynamic and uncertain, it is necessary for structural, interpersonal, goal, and time orientations to vary more amongst functional areas in a firm. This in turn requires more sophisticated integration and conflict resolution devices (such as cross functional committees and 'integrators' who coordinate their sub-units) in order to enhance organizational performance.

James Thompson (1967) theorizes that additional discretion must be allocated to lower level boundary-spanning units which deal directly with the external environment as uncertainty and dynamism increase. It is also hypothesized that the effectiveness of the modes of inter-unit coordination will be a function of the nature of the tasks and required technologies. Thompson's book contains dozens of other hypotheses on the relationships between environment and organizations. They are too plentiful and varied

to be summarized here.

Jay Galbraith (1973) hypothesized that the environment of the firm influences the structural requirements largely through the information processing task which is imposed. As the processing task increases in magnitude it is necessary for the firm to use more sophisticated types of coordinative and integrative mechanisms. The use of liason roles, task forces, teams, managerial linking roles, and matrix organizations become particularly valuable as environmental uncertainty increases the need for information processing.

There are many other works in the field which employ such a contingency orientation. Journals like the Administrative Science Quarterly, the Academy of Management Journal, the Journal of Management Studies, and so forth are replete with such works. Some of these works are normative, while others are descriptive. Nonetheless, there is a good deal of empirical evidence which indicates that the environment of the firm causes certain organizational orientations to be useful and others to be dysfunctional.

The story on the environment-organization match is by no means settled or complete. Each theorist has concentrated upon different variables and it is difficult to put together the pieces in a manner that would describe the required organizational orientation in rich terms (rather than simply along, say, dimensions of differentiation and integration) given the nature of the external environment. What is [redacted], even though we do have information on some of the required parameters which influence the environment-organization match under different conditions, we do not know which mode of strategy making would be appropriate to ensure that an effective match is maintained.

In order to look into this issue, it is necessary to examine some of the literature in Management Policy which concerns the strategy making process. Mintzberg (1973) has isolated three modes of strategy making in the literature: the planning mode, the adaptive mode, and the entrepreneurial mode. We shall discuss each in turn.

Ansoff (1965), Cannon (1968), and Steiner (1970) are amongst the most popular proponents of the planning mode of strategy making. They believe that in order for a firm to be successful, strategy making should be characterized by long planning horizons, much analysis of problems and

opportunities, and a conscious and innovative product-market orientation which takes advantage of various organizational complementarities and synergy. Strategy making is seen to be a conscious, deliberative and rational process--an intellectual exercise.

Lindblom (1968) and Cyert & March (1963) are the most articulate spokesmen for the 'adaptive' school of theorists. Strategies are viewed by Lindblom as being the outcome of a political process. Since they must be acceptable to a number of people in authority, strategies usually cannot be radically different from existing postures. Also, because of the complexity of the environment (e.g., the number of potential stimuli, problems, alternatives, and solutions are essentially infinite) strategists tend to be remedial. That is, they only address specific problems which have made themselves felt. Strategies attempt only to improve the existing situation and make it acceptable,not optimal. Cyert & March (1963) have indicated that organizations are coalitions of individuals and that objectives arise out of the bargaining which takes place amongst such persons. Policy commitments are in many cases rewards for members of the firm. Strategies thus tend to be the uncoordinated result of a number of independent forces. Goals are attended to only sequentially and so may be mutually conflicting. Strategists are said to be risk averse and attempts are made to reduce uncertainty by creating a negotiated environment.

Collins & Moore (1970) describe an 'entrepreneurial mode' of strategy making. A bold and venturesome executive concentrates on building his enterprise with little help or interference from others within the firm. This entrepreneur possesses a great deal of decision making power since he owns all or a controlling interest in his firm. He is shown to be a rather impulsive and intuitive operator who is not partial to spending much time analyzing, discussing and deliberating. Rather, he 'wheels and deals', takes large risks, and shapes his environment to conform to his wishes.

Each of these modes of strategy-making presents a very different picture of the process. One is reminded of the five blind men touching different parts of an elephant and coming away with quite varied conceptions about the nature of the beast. We are not sure about when each of the strategy making modes are likely to take place, that is under which environmental and organizational conditions. Similarly, we don't know the circumstances under which any of the modes are most effective--or ruinous. It would seem that

in order to obtain a more comprehensive picture of strategy making, the process must be viewed as variable—that is, something which can change and must change from one situation to the next. Unfortunately, the literature on strategy making has not been very helpful in determining the nature of the adjustment process required for different environments and organizations.

Only recently have researchers employed a contingency approach in studying strategy. The relationship between the events and forces in the environment and the nature of strategic responses are being studied by Hofer (1976). Tuason (1973) examined the effects of the corporate life-cycle on the types of strategies being pursued. Max Richards (1973) looked at the causes of strategic failure in different industries. A group of authors at Purdue University are interested in the strategies firms use to cope with technological threats (Cooper, et. al 1973). Hedberg & Targama (1973) studied the causes of organizational stagnation in different environments. All of these studies represent an advance over much of the previous literature in that they recognize the need for different strategies and responses in different organizations or environments. The emphasis of most of these studies is however on the CONTENT of strategies rather than the formulation process per se.

The concern here is mostly with the strategy formulation process since it represents the heart of the problem of adapting the organization to its environment. It becomes a question not only of what to do (the content feature), but also how to do it given existing capacities and predilections. For example, a market segmentation strategy may be useful for coping with the introduction by a competitor of a new product. However, the extent to which such a strategy could, or would tend to be applied successfully, might be contingent upon a variety of behavioral variables such as the tendency to make bold moves, the amount of analysis performed by the strategist, the extent to which conflicting points of view are taken into account in making the decision, the sensitivity of the strategy making body to external conditions, etc. Content prescriptions alone may be unfeasible if they do not take into account the process requirements compatible with their implementation.

We may summarize the deficiencies in the knowledge of organizational adaptation as follows:

1. Given a fairly rich description of the environment of a firm, what are the organizational attributes that would facilitate success? We have evidence about some of these attributes such as differentiation, integration, and bureaucratization, but what about others such as organizational power centralization, scanning of the environment, controls, technocratization, and so forth. Also, what influences do environmental hostility and heterogeneity have on the required traits of the organization.

2. Even if we knew the ideal 'matches' between environmental and organizational conditions, we know nothing about the strategy making behavior that is necessary under different circumstances to achieve such a match. How important is analysis, risk taking, innovation, sensitivity to the environment, long planning horizons, etc. to organizational success under different conditions?

3. Perhaps most importantly, we know nothing about how environmental, organizational and strategy making traits simultaneously combine to produce success and failure. All we really have seen are a few common, statistically significant bivariate relationships.

METHODOLOGICAL DEFICIENCIES

We have searched the previous literature to determine important gaps in our knowledge of the environmental, organizational, and decision making style determinants of success and failure. Having identified areas where further research is needed, we now turn to the literature to appraise the methods of study used in the past. These disclose some important deficiencies which must be remedied if we are to fill in gaps in our knowledge of organizations.

Three quite different methods of study have been very popular, and though they have contributed much to our understanding of the structural and behavioral characteristics of organizations in the past, their current marginal utility does seem to be rather limited.

Let us first consider the school of theorists who have focussed upon the search for the invariant characteristics existing within, or required of

organizations. Fayol (1916), Barnard (1938), Simon (1947), March & Simon (1958) and more recent policy theorists such as Cyert & March (1963), and Lindblom (1968) have employed such an orientation. The insights offered by these authors are of a very general nature and the abstractions, while often interesting and rich in complexity, are quite removed from the arena of practical application. In order to make generalizations which are relevant to all organizations, it is necessary to theorize at a level which is of limited utility to the operating executive. Little specific information about useful and readily applicable courses of action is forthcoming. Another potential reason for the difficulty with the findings of this school is that the variables focussed upon are somewhat vaguely operationalized and have not been subjected to the rigours of empirical validation. Conclusions might be influenced more by the search for intellectual parsimony than by the messy dictates of reality.

The second school of organizational researchers have adopted the contingency approach. The focus of theorists such as Woodward (1958), Burns & Stalker (1961), Lawrence & Lorsch (1967), the Aston group, Thompson (1967), and many others was on the mutual impact of individual differences in environmental, organizational, and to a much lesser extent, decision making characteristics. There was some advance in the knowledge of organizations as theorists became a little more specific regarding which modes of administrative behavior are needed in certain types of environments. There are some basic problems with the approach however. Contingencies are often narrowly defined because few variables are considered.

Contingency theorists, or at least many of them, are enamoured of correlational methods. Bivariate relationships take on great importance and a large number of articles (particularly in the Academy of Management Journal and the Administrative Science Quarterly) focus on the associations between two variables at a time. The result is a fragmented group of findings which often conflict and are far too atomistic to combine into a theory or a set of usable guidelines. The conflicts arise sometimes because of the failure to take into account extenuating circumstances which have a bearing on the magnitude and even the direction of a given bivariate relationship. The applicability of findings is therefore poor.

Any student of business policy who is familiar with live administrative situations is only too well aware that patterns and causes of corporate

success and failure vary substantially from one firm to another. Not only do firms differ along environmental, organizational and strategy making style dimensions, they also vary in terms of the relationships amongst the dimensions. For example, in one company, bold-proactive strategies can be the result of the aggressive temperament of its powerful entrepreneur. In another firm, bold strategies may stem from a group of bureaucrats who have had to respond to the needs of their turbulent environment. Different 'models' or causal textures are suggested in both cases. Simple relationships amongst organizational variables may be negated, or facilitated, depending on the set of co-conditions which prevail. We must take issue then with hypotheses of the form:

If element A, then element B.

Still a third stream of administrative theorists comprises those adherents of the case approach who are convinced that organizational situations are so complex that each must be studied individually (Learned, Christensen, Andrews & Guth, 1965, McNichols, 1970, etc). They believe that it is impossible to make generalizations about administrative issues and that each problem should be approached tabula rasa. This approach is exemplified by some of the better known policy casebooks. The student is expected to develop an intuitive 'feel' of administrative problems but receives little in the way of conceptual ammunition with which to tackle them. We can summarize the methodological shortcomings of previous literature as follows:

1. Some findings or theories are too general. They apply to all organizations but their implications are insufficiently precise to be practically useful.

2. Many of the contingency theorists focus on a rather narrow set of relationships and variables. The frequent conflicts about the magnitude and even direction of a bivariate association suggest that it might be useful to look at a larger part of the picture.

3. The case approach treats problems individually. No generalizations are drawn about the administrative situations encountered. Thus there have been few if any useful practical principles which have been gathered through the use of cases. All that is imparted is a method of analysis.

OBJECTIVES AND RESEARCH ORIENTATION

Having explored the content gaps and methodological weaknesses of the previous literature, we are in a position to come up with more relevant research objectives and a sounder methodological orientation. We present these in turn in the following paragraphs. It is important to bear in mind that the directions which are to be followed stem directly from an attempt to overcome the key content and methodological deficiencies highlighted in the preceding sections.

The objectives of our research were:

1. To discover the most common associations amongst environmental, organizational and strategy making traits. For example it would be interesting to know the most likely strategy-making traits, given a complex characterization of the environment, and to discover the typical modes of strategy making behavior given the nature of the organization.

2. To find the environmental, organizational, and strategy making styles which individually, and jointly cause organizational success or failure. We wish to know what types and relationships amongst environment, organizational, and strategy making variables lead to failure/success?

3. Finally, to discover the most common patterns of scores (or archetypes) which describe a firm in terms of environmental, organizational, and strategy making attributes. Whereas our first objectives seek out bivariate relationships, this one searches for the most frequently occurring, or archetypal profiles of failure and success. Each profile is described in terms of all variables simultaneously and the relationships amongst them. All firms within an archetype would be in a similar state: they would possess basically similar environmental, organizational and strategy making traits and could be described by the same causal model. New hypotheses would be of the form:

If state A, then relationships $B_1 \ldots B_n$.

Theorizing could be made much more precise since all relationships would be viewed within a specified context. This objective becomes meaningful

only if the number of archetypes is relatively small. Otherwise, we encounter unmanageable complexity and cannot make useful generalizations.

In order to overcome the methodological deficiencies that we cited we plan the following research orientation:

1. First, it is important to explore a rich data base which deacribes an administrative situation in a concrete and detailed fashion. Abstract data are likely to lead to generalizations which are far too ethereal to be of any practical value.

2. In studying organizations, it is important to simultaneously look at many of their attributes, rather than just a few. Extreme selectiveness in choosing which variables to study may yield findings which are often irrelevant since relationships are not qualified by their inhibiting and facilitating co-conditions.

3. When we look at a rich data base, it is important to construct models amongst the broad array of variables focussed upon and to determine how common these models really are. It is only when we try to systematize our knowledge of a complex situation and use this knowledge to predict and control a similar situation, that we have made a practical and useful contribution. To treat complex cases as individual entities defeats this purpose.

CHAPTER TWO

RESEARCH METHODOLOGY

INTRODUCTION

THE VARIABLES IN THE STUDY

THE DATA BASE

DATA GATHERING AND SCORING

HYPOTHESIS GENERATION

HYPOTHESIS TESTING

INTRODUCTION

This chapter presents the details of the methodology which we have employed to come up with our findings. The principal research objective was to derive the most frequently occurring models of successful and unsuccessful strategy making in its organizational and environmental context. The methodology chapter describes how we defined and identified these models or 'archetypes'. First, we indicate the criteria used to select our research variables and we list and define these variables, making reference to their sources in the literature. We proceed to discuss the nature of our case data base and its strengths and weaknesses. Data gathering and scoring procedures are subsequently discussed with particular attention being paid to the nature of our checks of reliability and validity. Our method of generating and testing hypotheses about archetypes is then presented. It should be noted that in Chapter Three we discuss the aggregate findings involving the means, standard deviations, and Spearman correlations of company variables. It is assumed that the reader has a basic familiarity with the standard methods of calculation and the interpretation of these statistics, and so, we do not discuss this aspect of the dissertation in the methodology section. Our focus in this chapter is with the novel and untrivial parts of the methodology.

THE VARIABLES IN THE STUDY

The criteria for choosing to focus on our research variables were fourfold: First, and perhaps most important, variables had to be shown by previous studies, or at least theories, to be of substantial importance in describing the nature of the relationships amongst environmental, organizational, and strategy-making qualities. Because there is a great deal of conflict in the literature on the environment--organization match, and indeed the relationships between these classes of variables, strategy making behavior, and corporate performance, it is useful to make our contribution as relevant as possible to what has gone before. Another incentive, is that more useful findings can emerge when we try to take the most promising ideas from previous theorists.

Our second selection criterion was that collectively, variables had to

span a broad array of environmental, organizational, and strategy making dimensions. We have already discussed the shortcomings which stem from too narrow a research focus and we consciously tried to avoid this.

The third criterion is of a 'common sense' nature. It stipulates that variables should be conceptually distinct. They should not overlap in their meaning so that redundancy can be minimized. This is simply a dictate of parsimonious research.

Our final, and most pragmatic criterion asserts that variables should be measurable given our data base. We have to have sufficient data available for reliable and valid scoring in order to deal adequately with any variable.

What follows is a listing of our variables and how we defined them. We cite, where relevant, the most popular studies which dealt with the variables in question.

Definitions of the Variables

ENVIRONMENT

Dynamism in the environment is manifested by the amount and unpredictability of change in customer tastes, production or service technologies, and the modes of competition in the firm's principal industries.

V1. Past Dynamism (refers to dynamism which existed 5 years before case date). See Lawrence & Lorsch (1967) and Burns & Stalker (1961)*.

Much less than other firms	1	2	3	4	5	6	7	Much greater than** other firms
				Same				

V2. Current Dynamism (dynamism at the time case was written).

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* Only some of the most popular sources are cited. The authors called attention to the nature of variables in question but did not necessarily define the variables in exactly the same manner as we have done.

** Scales are identical for all variables except V11.

Heterogeneity in the environment concerns the differences in competitive tactics, customer tastes, product lines, channels of distribution, etc. across the firm's respective markets. These differences are only significant to the extent that they require very different marketing, production, and administrative practices. See Thompson (1967), Chandler (1962), Channon (1973).

V3. Past Heterogeneity (5 years before case date).

V4. Current Heterogeneity (at time of case study).

Hostility in the environment is evidenced by price, product, technological, and distribution competition, severe regulatory restrictions, shortages of labour or raw materials, and unfavourable demographic trends (e.g. the drying up of markets). Hermann (1971).

V5. Past Hostility (5 years before case date).

V6. Current Hostility (at time of case study).

ORGANIZATION

V7. Scanning involves the search for problems and opportunities in the external environment of the firm. Firms are to be scored in terms of the amount of tracking performed of consumer tastes, competition, technological and administrative developments, etc. Scanning may be done by staff departments, executives, the sales force, etc. The greater the number of factors tracked and the more widespread the participation in scanning activity, the higher the rating (score). Wilensky (1967), Aguilar (1967).

V8. Delegation of Operating Authority concerns the amount of authority transferred to lower and middle levels of management (any parties below V.P.) for administration of the day-to-day operation of the business. Operating decisions involve equipment replacement, production planning, adjusting prices of goods, inventory purchases, hiring of lower level personnel, etc. Worthy (1951), Likert (1961).

V9. Centralization of Strategy Making Power involves the distribution of power for making strategic decisions regarding acquisitions, diversification,

major new product introductions, long term goals, etc. Centralization is high if the top executives alone make most of the decisions with a minimum of consultation; low, if middle managers determine strategies by the default or intent of top executives (general manager and up). Pugh et al (1963, 1968).

V10. Resource Availability concerns the state of the firm's material and human resources. Evidence of resource shortages are labour scarcity, poor raw material supply, inadequate sources of capital, poor production facilities, etc. If resources are abundant, score this scale high. March & Simon (1958), Hedberg et al (1976).

V11. Management Tenure measures the length of time the most important (top) strategist or executive of the firm has been at the helm. If it is more than 5 years, score 2, if less, score 1.

V12. Conflict gauges the amount of dissent, overt or covert dissatisfaction, and hostility amongst members of the firm at and above the Vice Presidential level. Conflict may concern organizational goals and means. It may be indicated if it takes very long to arrive at a consensus on courses of action, if management turnover is high, if there is much politicking, etc. Lawrence & Lorsch (1967), Cyert & March (1963).

V13. Controls monitor the internal trends and incidents relevant to organizational performance. M.I.S., employee performance appraisals, quality controls, cost and profit centres, budgeting, and cost accounting are types of control devices. Score high if there is much emphasis on such controls. Gordon & Shillinglaw (1969), Anthony, Dearden & Vancil (1972).

V14. Team Spirit involves the desire on the part of managers (one level below VP and up) to work unusually diligently to achieve organizational objectives and to do so in concert with others so that team goals take precedence over individual needs. Likert (1961), McGregor (1960), Roethlisberger & Dickson (1939).

V15. Internal Communication System concerns the open-ness and fidelity of information channels in the organization. A high score is given when information reaches decision makers quickly, when it is relevant and undistorted, and when communication flows readily in top-down, bottom-up, and lateral directions. Burns & Stalker (1961), Thompson (1967), Wilensky (1967).

V16. Organizational Differentiation measures the degrees of difference among organizational divisions in terms of their overall goals, marketing and production methods, and decision making styles. The more disparate the divisions, the higher the score. Even functionally organized firms with only one division may have high levels of differentiation if there exist many different styles of marketing and production, etc. within respective departments due to the nature of products and markets. Lawrence & Lorsch (1967), Chandler (1962).

V17. Technocratization. Do there appear to be a great many staff specialists and professionally qualified people (accountants, engineers, scientists, doctors) as a percentage of the number of employees? If yes, score high. Pugh et al (1968).

V18. Initial Success of Company Strategies. The initial strategy is either that formulated by the founder of the firm, or, the basic product-market orientation which had existed at least 5 years ago. Was this strategy quite intelligent and sound (score high), or did it seem destined to failure from the start. Hedberg et al (1976).

STRATEGY MAKING

V19. Product-Market Innovation. Does the firm seem particularly innovative in terms of the number and novelty of new products and services which are introduced, and the new markets which are entered? Burns & Stalker (1961), Normann (1971).

V20. Adaptiveness of Decisions concerns the responsiveness and appropriateness of decisions to external environmental conditions. For example, an adaptive pricing decision would take into account competitive strategies, customer buying habits, government regulations, etc. Unadaptive decisions (score low) would consistently neglect an important set of external factors. Braybrooke & Lindblom (1963), Hedberg et al (1976).

V21. Integration of Decisions. Are actions in one area of the firm complementary or supportive of those in other areas (i.e. divisions, functions) or are they conflicting and mutually inhibiting? High integration would result in (or from) a concerted and well coordinated strategy, while low integration might be manifested by fragmented or clashing tactics (e.g. acquiring new companies when there is inadequate ability to finance or run them, selling products which compete against each other). Ansoff (1965), Cyert & March (1963).

V22. Analysis of Major Decisions. Do decision makers devote much reflective thought and deliberation to a problem and the array of proposed responses? The time spent on inter-relating symptoms to get at the root cause of problems, and the effort spent to generate solutions (good or bad) are examples of the analytical process. A low score would be given when there is a very rapid intuitive response to issues (this response could be ideal or the worst possible). Evidence of analysis comprises - time delays, frequent meetings and discussions, the use of staff specialists, the writing of lengthy reports, etc. Dror (1968), Braybrooke & Lindblom (1963).

V23. Multiplexity of Decisions. Do top managers address a broad range of factors in making strategic decisions, or merely a narrow set of factors (low score)? For example, in deciding whether to acquire a company, a multiplex strategist would consider marketing, financial, production, demographic, administrative and other complementarities and problems, whereas low multiplexity would be evidenced by a focus, say, on marketing factors alone. Bruner, Goodnow & Austin (1956), Schroder, Driver & Streufert (1967).

V24. Futurity of Decisions concerns how far ahead the firm looks into the future in planning its strategies and operations. A relatively long time horizon (5 years) warrants a high score. A focus on crisis decision making and staving off disasters, warrants a low score. McGuire (1963), Dror (1968).

V25. Proactiveness of Decisions. Does the firm react to trends in the environment or does it shape the environment by introducing new products, technologies, administrative techniques, etc.? A reactive firm (low proactiveness) follows the leader while a proactive firm is the first to act. Hedberg et al (1976).

V26. Industry Expertise of Top Managers. Are top managers (VP and up) very familiar with their products and markets? That is, are they in a position to make the most routine decisions because of their excellent knowledge of internal operations and the outside environment, or are managers removed from the field of action and cognizant only of the very gross aspects of the big picture (score low)? Cannon (1968).

V27. Risk Taking. Is there evidence that top managers are risk averse (score low), or does the firm frequently make large and risky resource commitments - i.e. those which have a reasonable chance of costly failure? Normann (1971), Peterson & Berger (1971).

V28. Consciousness of Strategies concerns the degree of top managers' conscious commitment to an explicit corporate strategy (i.e. a set of objectives coupled with a number of stated favoured means for attaining these). A low score is evidenced by unclear goals and the firm's muddling through rather haphazardly. Chamberlain (1968), Selznick (1957), Dror (1968).

V29. Traditions. Does the firm often re-think its strategies (i.e. objectives and means for their attainment) or are these tied largely to precedent (high score)? Hedberg & Targama (1973).

SUCCESS

Success is measured in terms of growth in profits and sales, stability of profits, and returns on equity relative to other firms in the same industry.

V30. Past Success (5 years before case date).

V31. Current Success (at time of case study).

THE DATA BASE

Appendix I contains a listing of the cases which were used as our data base. We employed 81 cases on business organizations which were published in Fortune Magazine, the Harvard Case Clearing House series, and a policy textbook. Because the use of cases as a data base is somewhat unusual in organizational research, it is important to discuss the advantages and disadvantages of this procedure:

a) Cases are longitudinal. They illustrate which variables change first--a precondition for the establishment of causality. Cases also provide a vivid account of the nature of the strategy making process. Cases often portray the emergence of strategies in very concrete terms: they specify the actions which have taken place and often the decision making process which preceded such action. Many studies even illustrate strategies changing over time in response to various organizational and environmental influences. These afford tremendous insights not only into the nature of the firm's behavior but into the nature of the strategy making process in general.

b) Cases tend to be quite rich in detail. Lengthy cases have advantages over most other instruments in terms of the amount of information which they yield about a firm, its management, and its environment. They tend as a result to be more thought provoking and suggest as well as answer research questions.

c) It is usually more difficult to hide the real situation of a firm from a case writer who is studying the organization in detail, than from a remote researcher who mails a questionnaire (even if the latter has some check of reliability).

d) Cases usually separate fact from opinion. They often contain information on the actual state of affairs as well as that perceived by the manager.

e) Cases supply objective information on the characteristics of the industry the firm is in. This provides a good basis for comparison of firms and industries.

Unfortunately, there are also several important disadvantages associated with the use of case studies as a data base.

a) Different cases supply different types of information. This fact creates difficulties in analyzing data since inevitably some information will be absent from certain cases and available in others. Thus, strictly speaking, it will be impossible to compare firms accurately across all desirable dimensions.

b) There is often a dearth of information about organizational/structural attributes such as differentiation, bureaucratization, specialization, structural integration, and so on. One particular bias we noted in the Fortune cases was the stress on leadership styles and personalities as key impetuses behind corporate failure and success. Often, no mention was made of structural variables which might have also played a key role in the situation.

c) In performing any sort of quantitative analysis of case data, two levels of abstraction are involved: first, the case writer must interpret the situation; then, the researcher must interpret the written case and attempt to quantify ratings of things the writer describes. Risks of distortion are present in both stages.

d) Some case studies are presented in a dramatic manner. The journalists employed by Fortune to write cases focus on 'interesting' situations and sometimes try to develop a theme behind the firm's success and failure. There is thus some danger of a 'halo effect' in describing mainly the strengths of successful companies and the weaknesses of those which have failed.

DATA GATHERING AND SCORING

To offset the disadvantages which accrue from the use of case data, a number of precautions were necessary. Cases had to be selected which addressed most of our research variables. Once it became apparent that a large number of cases skirted some of the variables of initial interest, these variables had to be deleted from the study. This was particularly true for organizational variables, and thus our research is not as 'balanced' in scope as we would have liked it to be. We could not take into account the influence of several illusive organizational variables which had been shown to be significant in previous research--e.g., bureaucratization, specialization, organizational integration.

In order to use cases as a data base, it was necessary to employ a somewhat unusual scoring procedure. Since the information on any given variable is presented differently across cases, it is impractical to have a large number of refined scales to measure each variable. Information is either insufficiently detailed or too variable to enable raters to respond to very specific scale items for the majority of firms in the sample. For example, in order to measure environmental dynamism it was impossible in many instances to obtain information on the exact nature of price, technological, consumer tastes, and source of supply dynamism. Most cases contained information on certain of these attributes, but not on others. Thus it was necessary to have only one rather general (gross) seven point scale for each of the 31 variables. It was the task of experienced case raters to translate the specific facts of the case into numerical scores along these scales. Variables were operationalized for scoring via definitions and examples of the types of facts reported in the case which

would influence variable scores.

A score of 1 represented a 'very low' score on the variable such that most firms in the rater's experience scored higher. A score of seven represented the opposite, while a score of 4 implied that the firm was 'about average' along the variable when compared to other companies. A sample scale was contained previously, along with the individual variable definitions. We should point out that the case scorers (myself, Dr. Peter Friesen and Dr. Manfred Kets de Vries of McGill, and a final year management policy undergraduate) had collectively read hundreds, if not thousands of case studies and were intimately familiar with the case method of analysis and instruction. A number of different firms have to be analyzed and scored before ratings achieve maximum reliability since it is hard to come up with relative scores without having internalized a somewhat broad basis for comparison.

Cases which lacked sufficient data were rejected. In the event that only a few variables for a case could not be scored, neutral ratings (4) were given on the problematic scales. Because our scoring procedures placed so much reliance upon rater inferences, inter-rater reliability had to be verified. About thirty percent of the cases were rated by at least two independent scorers. Rating was performed in double-blind fashion. Less than 10% of the total number of ratings differed amongst raters by two or more points on the scales. The reliability of ratings was thus judged to be extremely good.

It was somewhat more difficult to verify the validity of case data. Only the cases which had been written quite recently could be checked. This accounted for about 10% of the total sample (8 responses were received). For each case, five quotations which seemed important to the description of the firms were selected. These were often of an inferential and pejorative nature and were sent to top executives of the firms. The following page presents an example of a validity-check sheet.

The executives were asked to comment upon the accuracy of the quotations selected and to pass judgement about the general validity of the case. Only one firm failed to respond to our inquiries. All respondents agreed with the vast majority of quotations. The fewer than 10% of all statements which met with disagreement were usually subject to qualification on the basis of a minor technicality rather than on the basis of a

SAMPLE VALIDITY CHECK

The following are disguised examples of quotes excerpted from cases and mailed to executives in order to verify case validity. We include sample responses (also disguised). Five case quotes and three general questions on case accuracy were sent to each company in the validity-check sample.

Quote 1: In achieving such hectic European sales growth, the company commited a number of classic management errors, and so stumbled into that familiar booby trap: an excess of inventory.

Response 1: Correct.

Quote 2: It took months before top company executives realized that they faced a serious problem. And it required a full year before anybody decided to take the initiative to do something about it.

Response 2: True generally, but it took only about 9 or 10 months to take action which began the development of alternative solutions.

Quote 3: If the new system does not capture the public's fancy, it would not only be a serious financial setback, but would jeopardize the firm's very survival.

Response 3: Correct, this was a tremendous risk we took.

Quote 4: Our managers are monitored carefully but have a lot of operational freedom.

Response 4: Very true - we employ profit and cost centres and give managers complete discretion in performing their tasks. Our concern is with the bottom line.

Quote 5: Price and distribution channel competition is so intense that the rate of company failures in the industry is legendary.

Response 5: Very true.

General Question 1: Did the case accurately represent the external environment (markets, competition, buying habits of customers) of the firm?

Response 1: Yes.

General Question 2: Do descriptions of the management style ring true?

Response 2: In general, yes.

General Question 3: Were there any notable omissions which might give the reader a distorted picture of what transpired (or of the firm itself)?

Response 3: No.

fundamental judgemental error on the part of the case writer. No respondant claimed that a case was basically inaccurate or misleading. These included managers whose firms were generally unsuccessful and had received unfavourable case write-ups.

HYPOTHESIS GENERATION

The critical hypothesis of this dissertation which is to be made precise and to be tested is that the cases in the working population can be grouped into a few specific types. Only if this is true can one hope to prescribe certain managerial actions which can be appropriate for all cases of a given type. Otherwise, each case is different and requires a unique analysis. Experience in reading and analyzing policy cases made us believe our general hypothesis was true.

The first step in making our hypothesis precise enough to be tested is to consider the scores of a given case on the 31 variables along a scale of 1-7. The average of these 31 scores can be taken for a given case. Then the score of this case on any given variable can be compared with the average to see whether it is higher or lower. If the score is above average, the case has a relative "strength" on that variable and, if below average, it has a relative "weakness" there. The sequence of 31 scores as measured from their average will be called the pattern of scores of the case. When the pattern of scores of one case is compared with that of another, it may be that the scores fluctuate above and below their respective averages on the same variables. However, the fluctuation of one of the two patterns may be more exaggerated than the other. In this case, the patterns of the two cases will still be said to be the same. This definition of sameness focusses on the correlation between the two sequences of scores rather than on the exact scores themselves. The motivation of the definition is the idea that the two sequences of scores record the same underlying phenomenon which can be seen more clearly in one of the cases than in the other. This is analogous to the principle of concentrating on the correlation between variables. When two variables are highly correlated, though one fluctuates more than the other, they are generally considered to be measuring the same property though one does so with better discrimination than the other.

Now the general hypothesis can be rephrased. There are only a few basic patterns of scores on the 31 variables and the pattern of each case is like one of these basic patterns. How can these basic patterns be found? There is a method called obverse factor analysis (or Q-type factor analysis) which was designed to solve just such a problem. The method generates the basic patterns of scores along 31 variables. These patterns are called factors. The factor analysis gives a correlation coefficient between the score pattern of every case and every factor. Any such correlation coefficient is also called the loading of the corresponding case on the corresponding factor. If a case is highly correlated with a factor, it will have a high loading on that factor and will have a score pattern much like that generated for the factor by the obverse factor analysis method. It follows that two cases loading highly on the same factor will also have similar score patterns.

The obverse factor analysis was done using 52 cases. These were divided into successful and unsuccessful groups according to scores on variable 31. The analysis was done on each of the groups. A varimax rotation of the factors in each application caused the factors to be as much like many of the companies in the sample as was possible. Where a number of firms loaded highly (usually greater than .55) on a factor, it was used as a tentative basis for an archetype (Appendix II).

For most of the archetypes a firm was included whenever its loading on the corresponding factor was higher than on any other factor. Where a firm had almost equally high loadings on two factors, the case was re-read to determine which group of firms it seemed to fit best. The result was a collection of ten lists of companies, each of which was considered to form a tentative archetype. (Factor groupings remained stable when the number of firms was increased to 81. Compare Appendices II and V.)

The scores on the 31 variables were inspected again for each firm in a given tentative archetype. We noted the range of possible scores for each member firm on each variable. Ranges were expanded whenever, in our judgement, it was only accidental that the scores in the tentative archetype were not larger. This collection of 31 score ranges, one for each variable, for an archetype was called the region of scores corresponding to the archetype. Ten regions were defined which correspond to each hypothesized archetype.

The range expansion was done from an intimate knowledge of each of the cases in a tentative archetype. The nature of an archetype becomes quite obvious when the cases in it are reread. This is because the member cases are highly intercorrelated and therefore have similar score patterns.

Let us define a sequence of scores on the 31 variables to be a site. A site is included in the region corresponding to an archetype whenever each of the 31 scores of the site falls within the corresponding 31 ranges of the region. The region corresponding to an archetype specifies a certain collection of sites which fall within it (Appendix III). Any company which is in a tentative archetype will occupy a site which is located within the archetype.

It should be noted that the regions defined to correspond to the archetypes are different from each other only in their interiors. Some of the regions merge into each other since their boundaries touch. A company on a site near the boundary between two regions would exhibit properties of both archetypes. The archetypal regions are placed side by side in such a way that they enclose the sites which are occupied by most of the 52 cases. As one crosses from one archetypal region to another, one mode of organizational success or failure fades away and another becomes increasingly dominant.

As a matter of interest, the ten hypothesized archetypal regions together included only one ten-thousandth of the sites which could in principle be occupied.

HYPOTHESIS TESTING

The hypothesized archetypal regions may have resulted from the first 52 cases only by chance. That is they might not recur in a larger sample. To test this possibility, a computer program was written to sort another 29 cases into the already defined archetypal regions.* If a case didn't occupy a site in any of the regions, the program noted that fact. Then the program used the number of cases that fell into each region as a proportion of the total 29 to give a 95% confidence interval estimate of

* Dr. Peter H. Friesen of McGill wrote this program and suggested the use of confidence intervals for the hypothesis test.

the proportion of companies that fell into the region. For every region the lowest end of this confidence interval was at least 1000 times higher than the ratio of the archetype region size to the size of the Cartesian product space (2×7^{30}). See Appendix IV. This means that the ten archetypes occur more commonly than could be assumed by chance, with a confidence level of better than 95%. We can reject the hypothesis that the archetypes occurred by chance.

Nothing inherent in Q-type factor analysis would allow us to test the significance of our factors in terms of the population densities of each of the archetype regions. In this study we have been fortunate in that the orientations of the factors and the scatter of scores in an archetype have given us relatively small regions. Had we not been so fortunate, we would have had to test the significance of factors in terms of score ranges after scores had been adjusted (e.g., made relative to company means).

Of the 29 cases in the second sub-sample, only 3 were outliers and did not fit any archetype. The smallest number of firms in an archetype for the total population (N of 81) is 4, the largest is 11. There are 4 unsuccessful and 6 successful archetypes. We shall discuss our archetypes later in the thesis.

Before describing the archetypes we shall discuss the aggregate findings suggested by our data. Only Chapter Three focuses on these more general findings while the balance of the dissertation is oriented towards a detailed treatment of the ten archetypes which were discovered. The methodologies employed to arrive at the general findings are all quite standard. We therefore will not go into detail about how means, standard deviations, and Spearman correlations were calculated. All this was done using the Statistical Package for the Social Sciences (SPSS) at the McGill Computer Center. The R-type (standard) factor analysis was performed by the same program using orthogonal, varimax rotated factors. Strictly speaking, since our data was ordinal and not interval, the concept 'variance explained by factors' cannot be applied. Chapter Three makes passing reference to this concept only to indicate that the factors do collectively account for much of the information contained in our data.

CHAPTER THREE

THE AGGREGATE FINDINGS

TOTAL SAMPLE

- Means
- Standard Deviations
- Spearman Correlations
- R-Type Factors

SUCCESSFUL AND UNSUCCESSFUL SUB-SAMPLES

- Means
- Standard Deviations
- Spearman Correlations
- R-Type Factors

SUMMARY

- The Search for More Refined Causal Modals

INTRODUCTION

In this chapter, we examine the aggregate findings of the study. The focus is upon the means, standard deviations, Spearman correlations, and R-type factors which have been calculated for the total sample of 81 firms as well as the successful and unsuccessful sub-samples. First, the findings concerning the total sample are discussed. Then successful and unsuccessful sub-samples are analyzed and compared.

We have noted in the methodology chapter that our data is ordinal, not interval, in nature. Strictly speaking then, it is meaningless to deal with means, standard deviations and concepts of "variance" explained by factors. Nonetheless, as measures of central tendency and dispersion respectively, we found that means and standard deviations were excellent approximations to the modes and ranges of the variables. In addition, means have the capacity to convey more information when there are ties in the modes of the data. Standard deviations are more representative measures of dispersion than ranges, particularly when ranges are always at or near their maximum because of a few extreme observations. Thus we chose to present these more typical statistical measures. The R-type factors discussed in this chapter are mainly presented in the same vein as the Q-type factors explained in the methodology chapter. Variance explained is essentially an irrelevant measure and R factors are presented merely to compare the relative clustering of variables according to their degree of correlation with a varimax rotated R factor. In presenting correlational findings we have employed the Spearman measure of association which is free of parametric assumptions and is suitable for use with ordinal data.

When we discuss the aggregate findings concerning our successful and unsuccessful sub-samples, our mode of presentation becomes rather cryptic and assumes something of a 'staccato' cadence. This is particularly true when we focus upon the many associations suggested by two 30 X 30 correlation matrices. Rather than list each association verbally, we present schematic diagrams which accomplish the task with greater parsimony. In discussing these findings we do not repeat each of the relationships shown on the diagrams. It is important then to study each diagram with some diligence before proceeding to read the interpretation of the findings.

THE TOTAL SAMPLE

Variable Means

Figure 3-1 illustrates the means of each of the 31 variables employed in our study. All of the 81 firms were included in the calculations. Means represent arithmetic averages of the individual company scores which were rated on a scale of 1 to 7. Variable 11 was scored on a two point scale (1 to 2). Two facts seem to be most interesting when we examine the means. The first is that environmental scores have increased over time. Dynamism, heterogeneity, and hostility have intensified over the past five years. The second intriguing point is that scores on most variables tend to be close to, but somewhat above the midpoint (4) of the seven-point scale. We shall briefly discuss each of these observations.

Environmental trends which display increasing turbulence and heterogeneity over time seem to be associated with the growth of companies and their diversification into less established markets. This is quite a common tendency for many firms in the sample.

Diversification increases heterogeneity as firms enter different sorts of markets. Also, the markets entered tend to be less established and are often characterized by emerging technologies, fairly rapid product obsolescence, and other manifestations of environmental dynamism. Increased hostility seems to stem more from the saturation or maturation of the older markets of the firm and the consequent, often fierce, battles for market-share.

In rating the case studies, an attempt was made to ensure that scores could be used to rank companies along any of the variables. Thus, scores were 'relative' to the norms set by the other members of the sample. Environmental scores posed an additional problem. Not only had they to be relative to similar scores for other cases, they also had to be comparable to scores on the same variable, for the same case, over time. All environmental variables were scored for current and past (5 years ago) time intervals. The deviation from the scale midpoint results in part because of this necessity for a temporal comparison. The same is true for the 'past success' variable.

Most scores are above, not below the scale midpoint. We can think of two possible explanations for this. Firstly, there are a very great majority

FIGURE 3-1 VARIABLE MEANS AND STANDARD DEVIATIONS OF TOTAL SAMPLE

	Variable	Mean	Standard Deviation
1	Past Dynamism	3.4	1.4
2	Current Dynamism	4.9	1.3
3	Past Heterogeneity	3.0	1.3
4	Current Heterogeneity	4.2	1.5
5	Past Hostility	3.7	1.3
6	Current Hostility	5.5	1.4
7	Scanning	4.3	1.7
8	Delegation	4.9	1.6
9	SM Centralization	5.4	1.5
10	Resources	4.8	1.7
11	Management Tenure	1.7	.5
12	Conflict	3.6	1.7
13	Controls	4.1	1.9
14	Team Spirit	4.0	1.6
15	Communication	4.0	1.7
16	Differentiation	4.4	1.5
17	Technocratization	4.0	1.6
18	Past Strat. Success	4.3	1.8
19	P-M Innovation	4.5	1.8
20	Adaptiveness	4.1	1.9
21	Integration	4.0	1.8
22	Analysis	3.9	1.6
23	Multiplexity	3.7	1.6
24	Futurity	4.2	1.4
25	Proactiveness	4.9	1.9
26	Industry Expertise	4.8	1.8
27	Risk Taking	4.6	1.7
28	Consciousness of Strategy	4.8	1.7
29	Traditions	3.8	1.9
30	Past Success	5.3	1.8
31	Current Success	4.2	2.4

of successful firms which require high scores on many variables in order to succeed. On the other hand, failure may result from low scores on a select few (or at least fewer) variables, while other scores remain much more substantial. It should be noted that there is some bias in number in favour of successful firms (N = 44) vs. unsuccessful ones (N = 37) and this may certainly be a contributing factor to "4 plus" means. A much different reason for a positive scoring bias may stem from the nature of the case evidence. At times, there is less evidence for rating a given variable 'low' than for giving a high rating. For example, the failure to mention analytical activity coupled with a description of an event which appears to be a manifestation of an ill-considered judgement, is certainly some justification for giving a low score on 'analysis'. However, it is not as strong a signal as is the enthusiastic description of positive analytical procedures and habits which go into the making of a key decision. Perhaps in the former case, a score of 3 would be given, while in the latter case, a score of 6 or 7 might be deemed appropriate. A vigilance against vaguely written cases should help alleviate this type of difficulty. We mention the problem mainly as a caution to subsequent researchers.

Standard Deviations

Figure 3-1, column 2 presents the standard deviations (σ) of the 31 variables for the total sample. We shall discuss the scores which deviate most from the average σ. These once again have to do with environmental and 'success' variables.

Some difficulty in scoring environmental variables led to a form of rater 'conservatism' under which scores of 1 or 7 seldom seemed to be justified. As it happens, reliability tests disclosed that the greatest rater disagreement also occured for environmental variable scores. This difficulty stemmed in part from an inability to order firms simply along an environmental dimension. For example, dynamism might be a function of a great many things: technological change, fluctuations in consumer wants, needed changes in distribution methods, and so on. One firm may be very 'high' on one count and moderately 'low' on the other two, while another company might be 'moderate' on all dimensions. Under such conditions assigning a dynamism ranking was not always very simple. This was particularly

true when the cases made no mention of some of the dimensions of dynamism (or hostility, or heterogeneity). Thus, scores at the extremes of the environmental scales were avoided and α is relatively low.

Lest the reader become too distrustful of the scores, it should be noted that even for environmental variables, rater disagreement usually involved only one or two score points, the latter being quite a rare occurence. Also, in spite of the 'conservatism truncations', scores of 2 and 6 were not at all uncommon. There would be an advantage however in using more refined environmental scales where there is a broader, more detailed, data base.

The standard deviation for 'current success' is also abnormal. It is unusually high because of a rating convention that was adapted for scoring this variable. Scores of 1 (failure) and 7 (success) were given when success or failure were unequivocal. Less extreme scores were given only in the event that there existed some important qualification. This heuristic was adopted since it was impossible to gauge rates of profitability and growth quantitatively. Success data was not uniform accross case studies and many different industries were involved. Extreme scores for success were not due to any sampling bias in favour of dramatic situations.

Spearman Correlations

Table 3-1 condenses a Spearman Correlation (r) matrix and indicates levels of r, by category, for only the very most significant relationships. Our selectivity is due to the extremely high number of significant r's (too many figures in the matrix had a ρ-value of $< .05$). We only portray r's of $> .7$ (ρ-value of $<.001$). Variable numbers are recorded at the top and the left-hand side of the matrix. The table is divided into nine sectors, each containing a group of correlations within or across the classes of variables known as environment (E), organization (O), strategy making (SM) and success (S). For example, the O/SM sector contains only correlations between organizational and strategy-making variables, the E sector contains only correlations amongst environmental variables.

Correlations are portrayed in a different fashion on Figure 3-2. The balance of the significant relationships will be dealt with indirectly when the Spearman r's for successful and unsuccessful sub-samples are discussed.

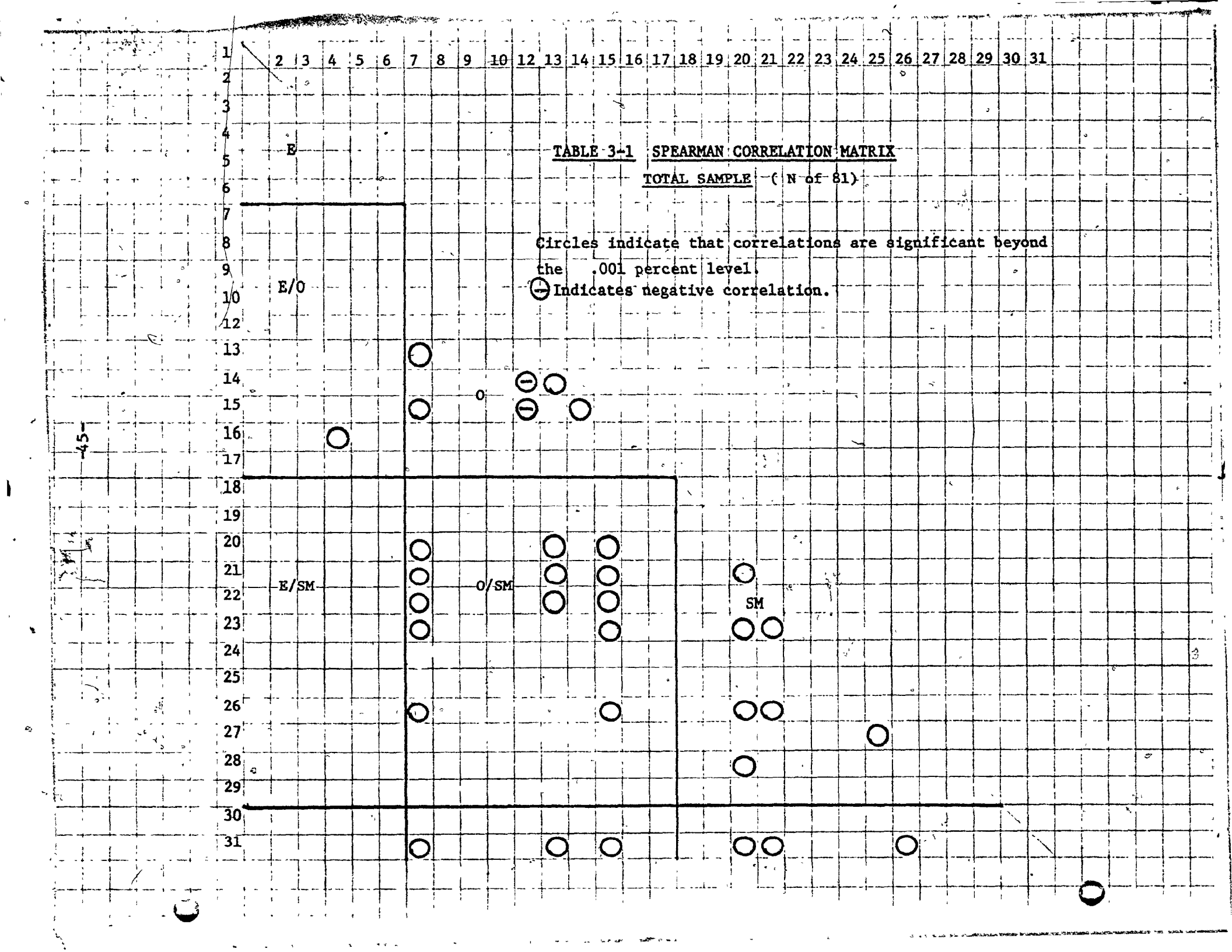


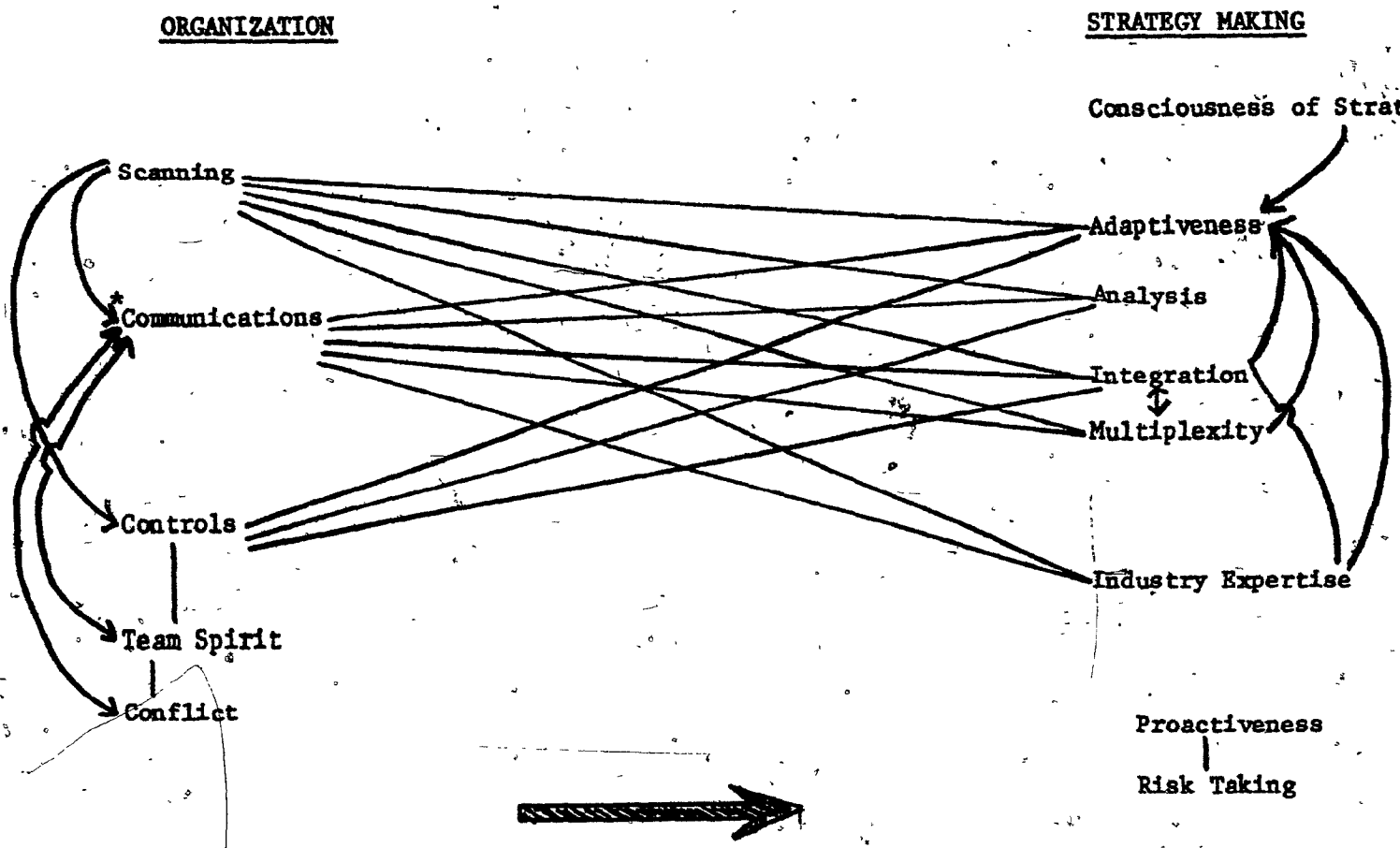
TABLE 3-1 SPEARMAN CORRELATION MATRIX

TOTAL SAMPLE (N of 81)

Circles indicate that correlations are significant beyond the .001 percent level.

⊖ Indicates negative correlation.

FIGURE 3-2 TOTAL SAMPLE SPEARMAN CORRELATIONS



Current success = Fn (Scanning, Controls, Communication, Adaptiveness, Integration & Industry Expertise)

* Arrows represent hypothesized causal direction. (-) indicates negative correlation.

The lines joining variable names in Figure 3-2 represent Spearman correlations of .70 or more. To save space, correlations between current success and other variables are expressed as a 'function' at the bottom of the figure.

The strongest correlations in the overall sample are mainly those relating to organizational intelligence (scanning, controls, and communication) and the deliberative-cognitive elements of strategy making (analysis, multiplexity, integration, futurity, expertise, consciousness, and adaptiveness). The amount of scanning of the environment may influence the perceived need for better communication and control systems, while the efficacy of the internal communication network is expected to be a function of organizational conflict (inversely) and team spirit. We postulate that scanning, communication and controls will facilitate or impede multiplexity and analytical, integrative, and adaptive processes, depending on the appropriateness of these organizational intelligence devices. If we consider the relationships amongst strategy making variables, it appears that proactiveness and risk taking occur jointly and that adaptiveness to the environment is influenced by industry expertise, multiplexity, integration and consciousness of strategies. Multiplexity is expected to coexist with integration to the extent that joint decision making elicits multifaceted and conflicting perspectives and simultaneously presses for the reconciliation of opposing viewpoints. It should be noted that the correlation coefficients imply nothing about the direction of causality and that all interpretations are intended to be taken only as hypotheses.

Our discussion of the Spearman matrix has been deliberately brief since we shall have occasion to bring out many of the most salient relationships far more cogently in subsequent phases of the analysis. It is important however to bear in mind the most interesting aspect of the Spearman matrix, and that is its incredibly high number of significant r's. Part of the reason for this will be discovered as we look at successful and unsuccessful sub-samples.

R-Type Factor Analysis

Because of the many significant intercorrelations amongst so many variables, it is useful to indicate their interrelatedness in a more discrete and parsimonious manner. An R-type factor analysis was performed using the Statistical Package for the Social Sciences with the othogonal, varimax-

rotated option. This method had the effect of ensuring the statistical independence of factors and caused the artificial variables to be defined to be most like some of the original variables. The utility of statistical independence derives from our ability to discuss separately the interrelationships within each class of variables which load highly on the same factor. The resemblance to the original variables made it easier for us to interpret the meanings of the factors. We have defined a variable as "loading highly" on a factor if its loading (i.e., its correlation with that factor) is higher than |.55| and if this loading is higher than it is between the variable and any other factor. This is a somewhat arbitrary cut-off point but one which has been very frequently used in previous factor analytic studies and which assures a very significant relationship between the variable and the factor given our sample size. We shall discuss our factors below, attempting to explain why variables cluster and relate the way they seem to.

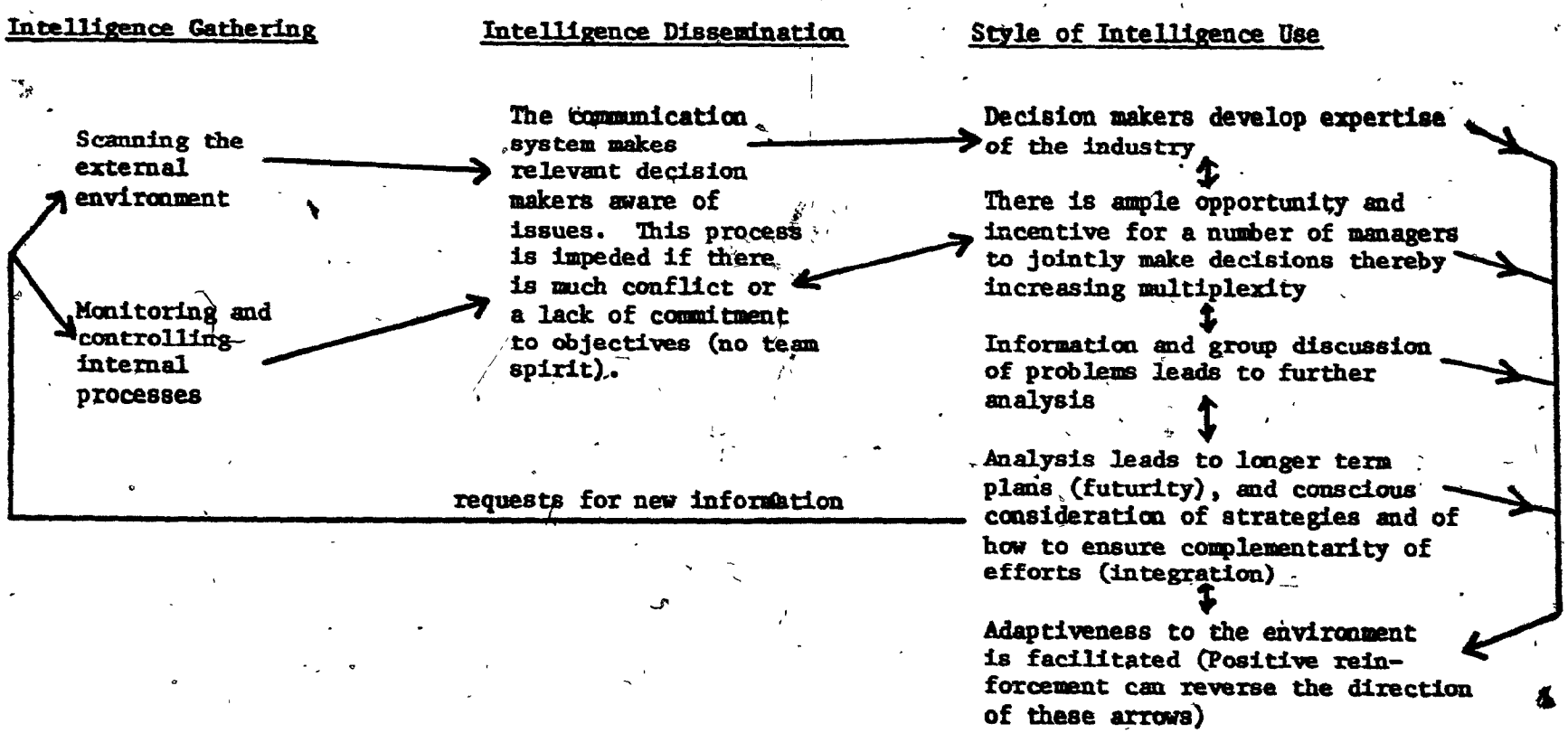
Factor 1: Administrative Rationality

The firm's proclivity to gather and make use of intelligence in decision making is described by the first factor. The intelligence gathering variables which load highly are scanning and controls; the intelligence dissemination variables are communication, team spirit, and the absence of conflict, and the intelligence use variables are analysis, industry expertise, multiplexity, integration, futurity, and adaptiveness. The current success variable also loads highly on factor 1. It is not hard to see why there is a good deal of similarity amongst these variables. All are important to organizational intelligence while the absence of any one may reduce the scores of the others.

Let us hypothesize a typical information flow sequence within an organization to show the possible interrelationships amongst the intelligence variables. Figure 3-3 presents this model.

Given the nature of the hypothesized model, it is quite conceivable that low scores on any variable can prompt similar ratings on a number of other variables. For example, if scanning or controls devices are weak, the communication network will not be communicating sufficiently relevant information to decision makers. To the extent that such individuals do not become aware of key issues, they will perceive no reason to get together to

FIGURE 3-3 ORGANIZATIONAL INTELLIGENCE



Sufficient resources are needed in order to carry out most of the above steps.

N.B.: In the long run, many of these arrows become bi-directional since, for example, analysis creates the need for more intelligence gathering and dissemination as it prompts additional requests for information.

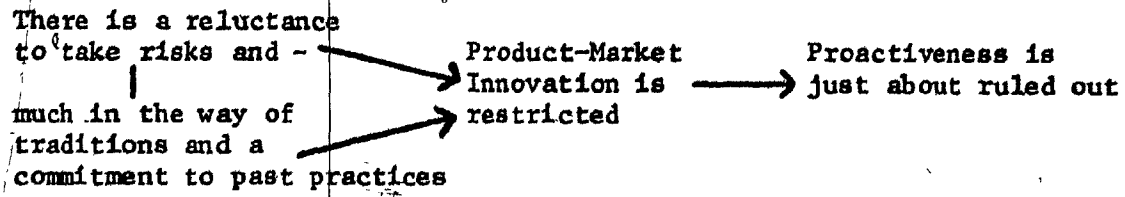
analyze these and plan for their resolution. Adaptiveness will be diminished. If there is much organizational conflict, it will be difficult for information to flow freely amongst managers. This restriction will again result in reduced multiplexity, analysis, and adaptiveness. If we take as a starting point a later phase of the model, say inadequate analysis, there will be few requests for information and thus little incentive to employ sophistication in scanning and controls. Inadequate financial and managerial resources weaken each link in the model (Miller & Mintzberg, 1974).

If we look at the positive side of the model, it becomes possible to view each variable as important to the success of the firm. The absence of only a few can lead to the firm's demise. Thus successful companies will tend to score relatively highly on most all of the intelligence gathering, dissemination, and use parameters. In fact, when we look at the successful subsample, this is very much the case. No doubt this is why current success is an important variable in the factor.

Factor 2: Corporate Temperament

Some firms are conservative, traditional, and very slow to innovate. Others are undeniably bold, and entrepreneurial and come up with a steady stream of innovations. The second factor describes the corporate temperament in terms of product-market innovation, proactiveness, risks, and the absence of traditions. It is not difficult to imagine why these variables are interrelated. Traditions tend to limit the adoption of new procedures and techniques. Product-market innovation is thus restricted and risk taking is discouraged. Under such circumstances it would be very difficult to be proactive or to beat competitors to the punch in making changes. A reactive stance would be far more likely. Our model for factor 2 is presented below.

FIGURE 3-4 TEMPERAMENT



When there is a commitment to innovation, on the other hand, it is usually necessary to take risks and abandon traditions, and so proactiveness is more possible (Peterson & Berger, 1971).

Factor 3: Heterogeneity

The variables which load most highly on factor 3 are those which relate to past and current market heterogeneity and organizational differentiation. It stands to reason that firms which have had relatively high levels of market heterogeneity several years ago will have higher current levels of heterogeneity than those which dealt in the past with homogeneous environments. It is also reasonable that greater market heterogeneity which accrues from an aggressive diversification or acquisition program will result in differences of orientation amongst members of the firm. Managers dealing with different industries and functions are likely to be quite unsimilar in terms of their tasks and operating procedures (Lawrence & Lorsch, 1967).

Factor 4: Environmental Turbulence

The final factor for the total sample entails an index of environmental turbulence. The variables which load highly are past and current dynamism and current hostility. Market turbulence caused by competition, technological change, alterations in customer tastes, and challenges from the economic climate, government and suppliers are the main things which influence the factor. The link between past and present dynamism seems clear. Once the process of innovation starts in a firm, competitors react, creating the need for still further innovation. The result is the propagation of product-market dynamism. Any relationship between dynamism and hostility may be due to the introduction of new products and technologies (additional dynamism) in response to greater competition (additional hostility) (Hedberg et al, 1976).

Having presented an overview of the interrelationships amongst the variables in the total sample, we can go on to look at the very different successful and unsuccessful subsamples.

SUCCESSFUL AND UNSUCCESSFUL SUB-SAMPLES

Means

Figure 3-5 presents the means and standard deviations of each of the 31 variables for successful and unsuccessful sub-samples. Looking first at the successful sub-sample, it is apparent that dynamism, heterogeneity, and hostility have increased somewhat, making the environment more challenging. Dynamism and hostility tended to be moderate in the past and have increased gradually. The growth in heterogeneity has been a bit more dramatic. Perhaps the most notable feature of the variable means for successful firms is the array of high scores on the balance of the variables. Intelligence variables are scored high (scanning, controls, and communication). Delegation and centralization of strategy making authority are also substantial. Decision making tends to be analytical, multiplex, integrated, adaptive, and oriented to the future (long decision time horizons). Product-market innovation is substantial as firms try to be leaders in introducing new products and processes. This usually involves a good deal of risk and the abandonment of many traditions. Both past and current success scores are very high. Industry expertise tends to be great in spite of substantial organizational differentiation. There is little evidence of internal conflicts and there is much team spirit. Resources are quite abundant. We shall speak later about the interrelationships amongst these variables. For the time being let us compare the means of these successful companies to those in the failure sub-sample.

In the unsuccessful sample, environments have changed very substantially over a relatively short period. Dynamism, heterogeneity, and hostility have increased dramatically, making it difficult for firms to adapt to the new conditions. Recall that no such sudden transition took place for most firms in the successful sample. Another major difference between successful and failure sub-samples is that the latter tend to have much lower scores along the great majority of variables. Scanning, controls, and communication scores are low and so are scores for decision making variables of multiplexity, analysis, integration, adaptiveness, and futurity. Unsuccessful firms tend to be more traditional and are less likely to undertake much product -

FIGURE 3-5 MEANS AND STANDARD DEVIATIONS OF SUCCESSFUL(S) AND UNSUCCESSFUL(F) SUB-SAMPLES

#	Variable	Means		Standard Deviations	
		S	F	S	F
1	Past Dynamism	4.0	2.8	1.3	1.1
2	Current Dynamism	4.9	4.9	1.3	1.3
3	Past Heterogeneity	3.3	2.7	1.2	1.2
4	Current Heterogeneity	4.2	4.3	1.4	1.7
5	Past Hostility	4.0	3.2	1.4	1.1
6	Current Hostility	5.1	5.9	1.6	1.1
7	Scanning	5.6	2.9	.9	1.3
8	Delegation	5.5	4.2	1.2	1.7
9	SM Centralization	5.4	5.4	1.4	1.7
10	Resources	5.7	3.6	1.0	1.7
11	New Management	1.7	1.8	.5	.4
12	Conflict	2.8	4.6	1.3	1.4
13	Controls	5.4	2.4	1.1	1.3
14	Team Spirit	4.9	2.9	1.2	1.4
15	Communication	5.3	2.6	1.1	1.2
16	Differentiation	4.5	4.1	1.2	1.7
17	Technocratization	4.7	3.2	1.7	1.3
18	Past Strat. Success	5.3	3.2	1.1	1.8
19	P-M Innovation	5.4	3.5	1.2	1.8
20	Adaptiveness	5.5	2.4	1.1	1.1
21	Integration	5.2	2.5	1.1	1.5
22	Analysis	4.8	2.9	1.3	1.2
23	Multiplexity	4.7	2.4	1.3	1.1
24	Futurity	5.0	3.2	1.0	1.3
25	Proactiveness	5.8	3.9	1.1	2.1
26	Ind. Expertise	6.0	3.4	1.0	1.6
27	Risk Taking	4.9	4.3	1.2	2.2
28	Consciousness of Strategy	5.9	3.5	.8	1.5
29	Traditions	3.0	4.7	1.7	1.7
30	Past Success	6.1	4.4	1.5	1.8
31	Current Success	6.3	1.8	.9	1.0
		N = 44	N = 37	N = 44	N = 37

market innovation. Also, less use is made of professional technocrats. Delegation of authority tends to be rarer than in the case of successful companies and conflict is more common.

The former strategies of unsuccessful firms have been poorer than those of successful firms and past success scores seem to reflect this. Team spirit in these companies is often remarkably low.

The most notable conclusions to be drawn from the above is that successful firms are very much different from failure firms along the vast bulk of the 31 dimensions. Much questionnaire research fails to come up with such poignant and widespread divergences. Perhaps this is because respondents to questionnaires falsify some of their answers. More likely, it is because individuals within a firm cannot rate scales because their knowledge of practices in other companies is limited. Individuals who are forced to rate a large number of firms along a given scale find it easier to make distinctions than those who are faced with a sample size of one and who may be somewhat anxious to ensure that their company "not look too bad" to the researchers.

As usual, there is another, less flattering, explanation for these marked differences: a halo effect, which influences the case writer (or rater). This is a particularly important potential shortcoming of our research because the majority of our case studies were taken from Fortune magazine. The cases tend to be presented in a dramatic manner and usually, the author's 'slant' on a particular company is quite decisive and consistent. It is possible that the writer might be unusually sensitized towards the 'good' or the 'bad' features of a firm in order to explain the notable success or failure. If a company has performed in an exemplary fashion for some years, it is plausible that the case writer looks hardest for the strengths of the firm and ignores many nascent problems or important weaknesses.

In order to guard against this possible halo effect (at least to some extent), we did check for case validity by directly approaching several companies within the sample. No evidence of exaggeration in a positive or negative direction could be found (see Chapter 2). Also, inter-rater reliability was extremely high even though all raters were consciously aware

of the dangers of the halo effect. Another encouraging sign was that there were tremendous variations both amongst successful and unsuccessful companies. If there was a halo effect, it would have to relate mainly to intelligence/rationality variables since these are the only ones which discriminate fairly (but not always completely) consistently between successful and failure companies. As we have seen, the correlations amongst intelligence/rationality variables were quite high. This lends credence to the hypothesis that the variables are influenced by some sort of normative bias. If a firm made the wrong decision, it is easy to infer that they had an inadequate intelligence system to guide them (and vice versa). It should be noted, however, that usually there were specific facts in the cases which guided the scoring of intelligence variables and that at least one class of very successful firms engaged in a rather lacklustre intelligence effort. Also, as we have seen there were excellent a priori reasons for intelligence/rationality variables to correlate strongly.

These conclusions suggest more questions than they answer. For example: Why are unsuccessful firms faced with such a rapidly changing environment? Did this just happen fortuitously or did it have something to do with the behavior of management? Which types of successful firms must score high on most variables to be profitable? What types can afford to be lax in certain areas? The analysis proceeds.

Standard Deviations

The standard deviations shown in Figure 3-5 reveal important differences between successful and failure sub-samples. The σ's for failure firms tend to be much larger. Successful companies fit a tighter 'template' of possible scores whereas failure firms have more range in which to fall. Perhaps then the path to success is a relatively narrow one. Also, there may be an array of diseases which are quite different from one another that plague unsuccessful corporations. Note that differences amongst standard deviations are prominent for organizational and strategy making variables, but not for environmental or success variables. This lends strength to the hypothesis since there does not seem to be an invariant discrepancy in the data which may have been due to some systematic error.

Spearman Correlations

More interesting differences between successful and unsuccessful companies are brought to light by the Spearman correlation matrices. The most significant (ρ value $<$ .01) r's are discussed, first for successful, then for failure sub-samples. A comparison of the two sub-samples follows the commentory on the individual correlation matrices.

Successful Firms' Correlations: Introduction

Table 3-2 represents an abbreviated description of the correlation matrix for successful firms. Dots represent positive relationships while minus-signs represent negative ones. Only relationships with a ρ-value of less than .01 are shown. (Circled symbols represent ρ-values of less than .01) The matrix is divided into the same nine sectors as was the correlation chart for the total sample. The discussion is organized according to the important sectors. The most significant relationships are portrayed in Figures 3-6 to 3-8 respectively.

Successful Firms' Correlations: Organization and Environment

Figure 3-6 indicates that there is considerable association between organizational and environmental variables. There are also strong interrelationships within environmental and organizational categories. Starting with intra-environmental correlations, past conditions of dynamism, heterogeneity, and hostility are respectively correlated with current conditions amongst these variables. Thus there is some continuity in the nature of the environmental change which takes place. Transition is more gradual since the present is related to the past. Current dynamism and hostility are related, perhaps because competition, one aspect of hostility, gives rise to the need for change in technology and product design. The latter attributes fall into the realm of dynamism. There are also relationships between dynamism and heterogeneity scores. To the extent that dynamism prompts the introduction of new products and entry into different markets, the environment can become more heterogeneous (Chandler, 1962).

Associations between environmental and organizational variables are plentiful and strong, indicating a quite adaptive orientation. Past and

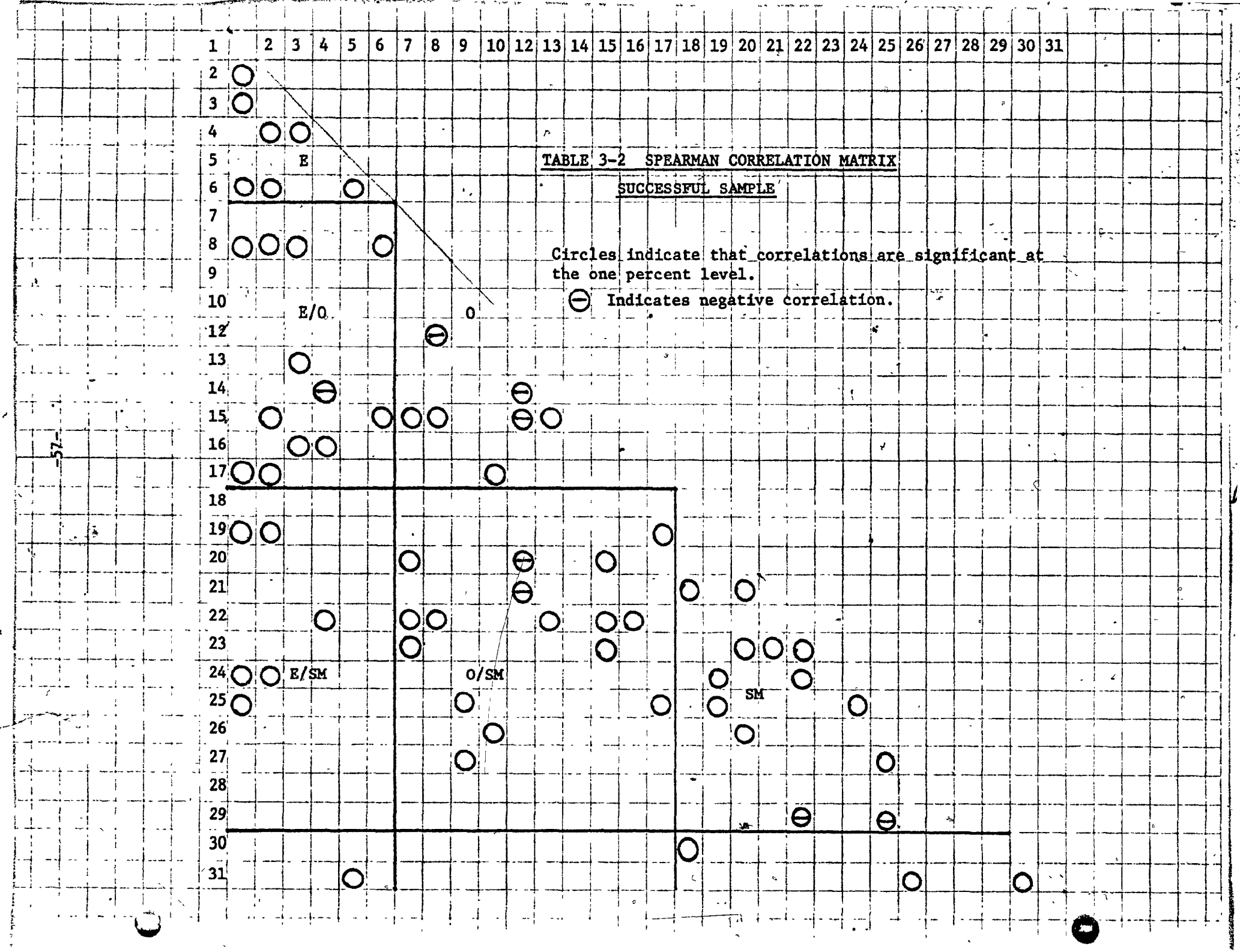


TABLE 3-2 SPEARMAN CORRELATION MATRIX

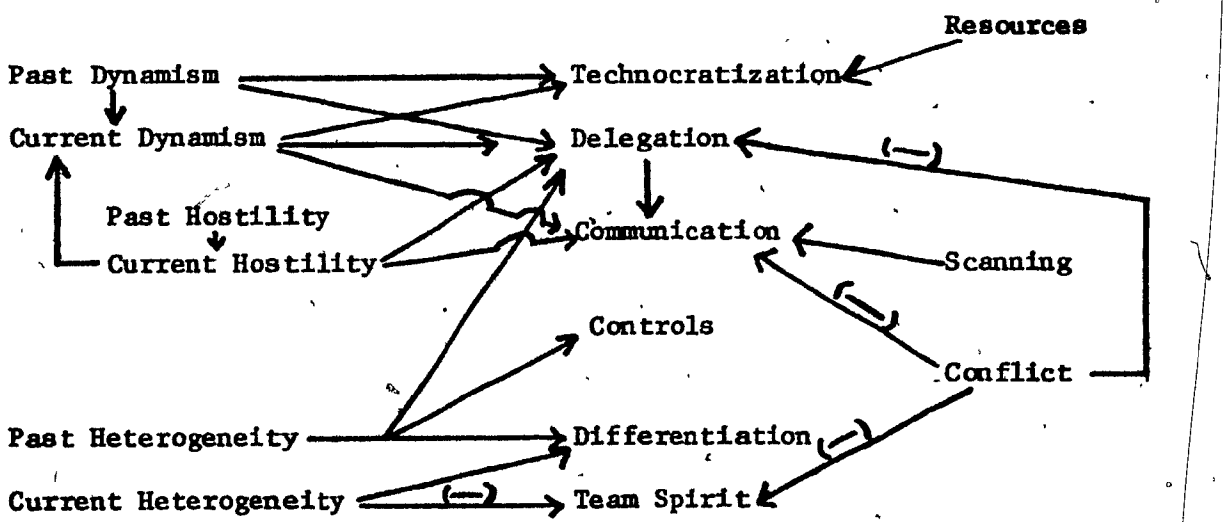
SUCCESSFUL SAMPLE

Circles indicate that correlations are significant at the one percent level.

⊖ Indicates negative correlation.

current dynamism result in attempts to cope by employing skilled technocrats to help in processing information and formulating innovations. They also cause managers to delegate more authority to lower levels because of the increasingly complex administrative task. Current dynamism results in more open communication networks so that a more difficult information processing task can be handled. Current hostility has the same impact upon delegation and communication as current dynamism. This is not surprising given the link between dynamism and hostility (Thompson, 1967).

FIGURE 3-6 ORGANIZATION-ENVIRONMENT CORRELATIONS: SUCCESSFUL FIRMS*



* For all figures, arrowheads represent hypothesized causal directions, their absence indicates we have no reason to favour any causal direction, and (-) indicates a negative correlation.

Environmental heterogeneity causes increased organizational differentiation as company sub-units must adopt characteristics which are suitable to different products, markets, and functions. Heterogeneity increases the challenge and difficulty of the management task, and, after a while, more delegation takes place and more sophisticated control systems are established to monitor decentralized operations. Heterogeneity may entail a more difficult, though perhaps less urgent administrative problem since successful companies are slow to adapt to this element. Note that the

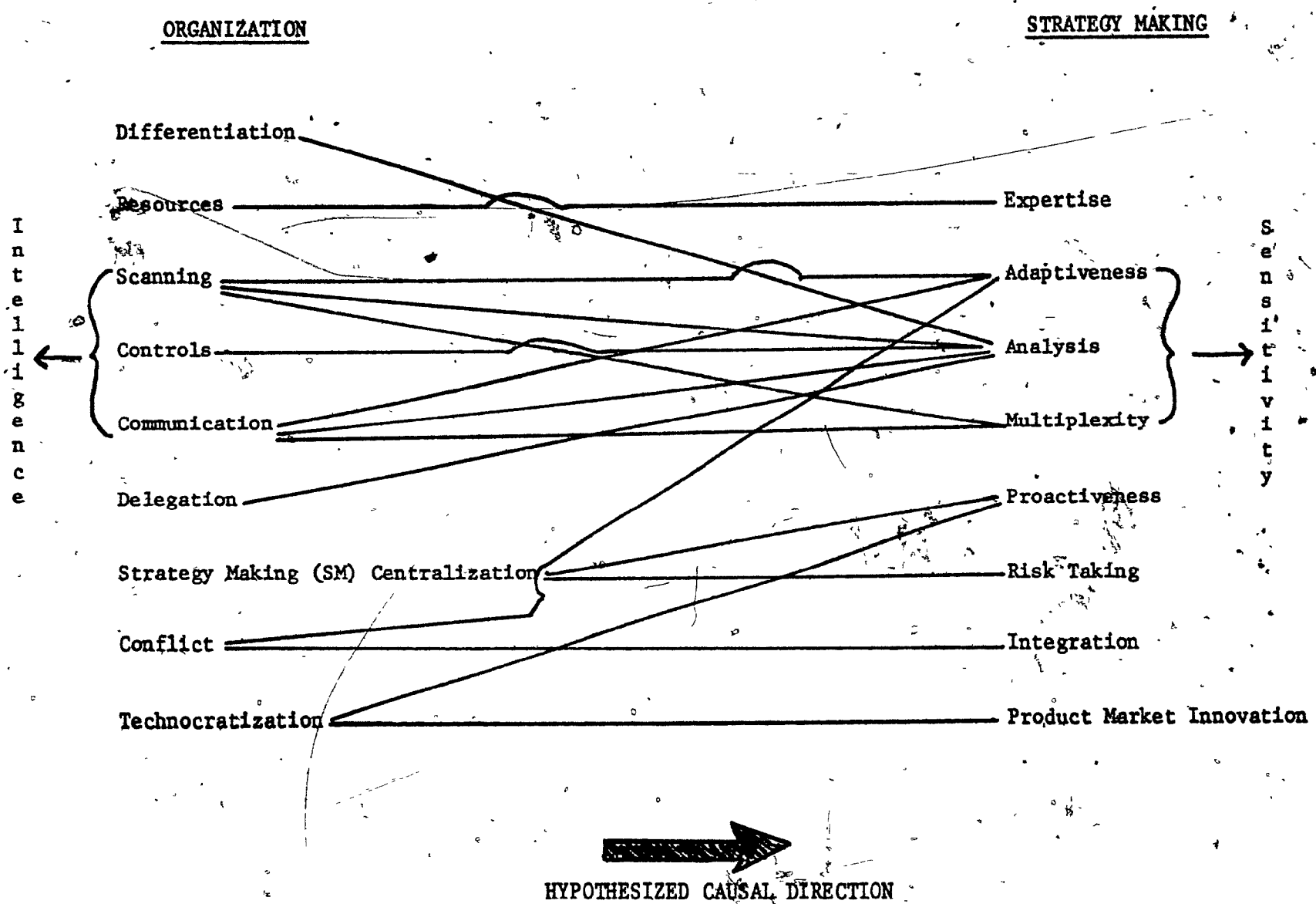
organizational variables are correlated with past rather than current heterogeneity. Perhaps this is because organizational fragmentation causes a deterioriation in team spirit and so it takes a while to get the cooperation necessary to effect organizational change.

There are some interesting relationships amongst organizational variables as well. The level of technocratization seems to be contingent upon the availability of resources with which to hire and support a demanding staff of professionals. Engineers, accountants, and lawyers don't come cheap and often require a substantial expenditure for non-salary related staff costs (R&D, computers, etc.). Conflict amongst members and/or sub-units of the organization clearly serves to dramatically impede the cooperation and trust needed for effective delegation, communication, and team spirit. Also, some scanning activity may serve as an incentive to set up better communication systems since, as important information is gathered on the external environment, the need to communicate this data to decision makers or action takers becomes more obvious. Delegation also creates the need for more communication since centers of power must remain in touch to coordinate and integrate efforts. No longer is the unilateral edict from the top adequate for these purposes (Galbraith, 1973).

Successful Firm Correlations: Organization and Strategy Making

Figure 3-7 portrays some of the key relationships between organizational attributes and the styles of strategy making which take place. Particularly prominent are the relationships amongst organizational intelligence and strategy making sensitivity. Controls flag situations which require further investigation (analysis) while scanning and effective internal communications result in greater multiplexity and adaptiveness as well as a more analytical orientation. The gathering and dissemination of relevant information in essence prompts more considered and adaptive judgements which reflect the most important points of view. Delegation of authority also facilitates analysis since those most familiar with a situation (members of boundary-spanning units) can make the decisions themselves and have time to examine its repercussions. Meanwhile top level executives are less pressed for

FIGURE 3-7 ORGANIZATION-STRATEGY MAKING CORRELATIONS: SUCCESSFUL FIRMS



time and can therefore devote more effort to detailed analysis of important problems and issues (Thompson, 1967).

Resource availability makes problems less pressing and allows for the recruitment of individuals who have the ability and time to devote to building up their expertise of the environment. The link between differentiation and analysis is somewhat more puzzling. Perhaps it results from the fact that highly differentiated firms tend to be large and that there is a tendency for larger companies to perform more analysis before making any substantial commitment of funds. Another reason might be that differentiation brings out different points of view in the decision making process and attempts at reconciliation prompt a closer investigation of the situation.

When power is centralized in the hands of an entrepreneur, he can take whatever actions he deems necessary to run the firm (without any interference from conservative cohorts). Risk taking and proactiveness become more feasible. Technocratization facilitates proactiveness since product-market innovation proceeds more smoothly with the availability of skilled professionals. Also, conflict impedes the integration of effort and the wholistic nature of strategies is eroded. Finally, conflict reduces adaptiveness as managers respond more according to their political interests than the needs of the environment (Lindblom, 1968).

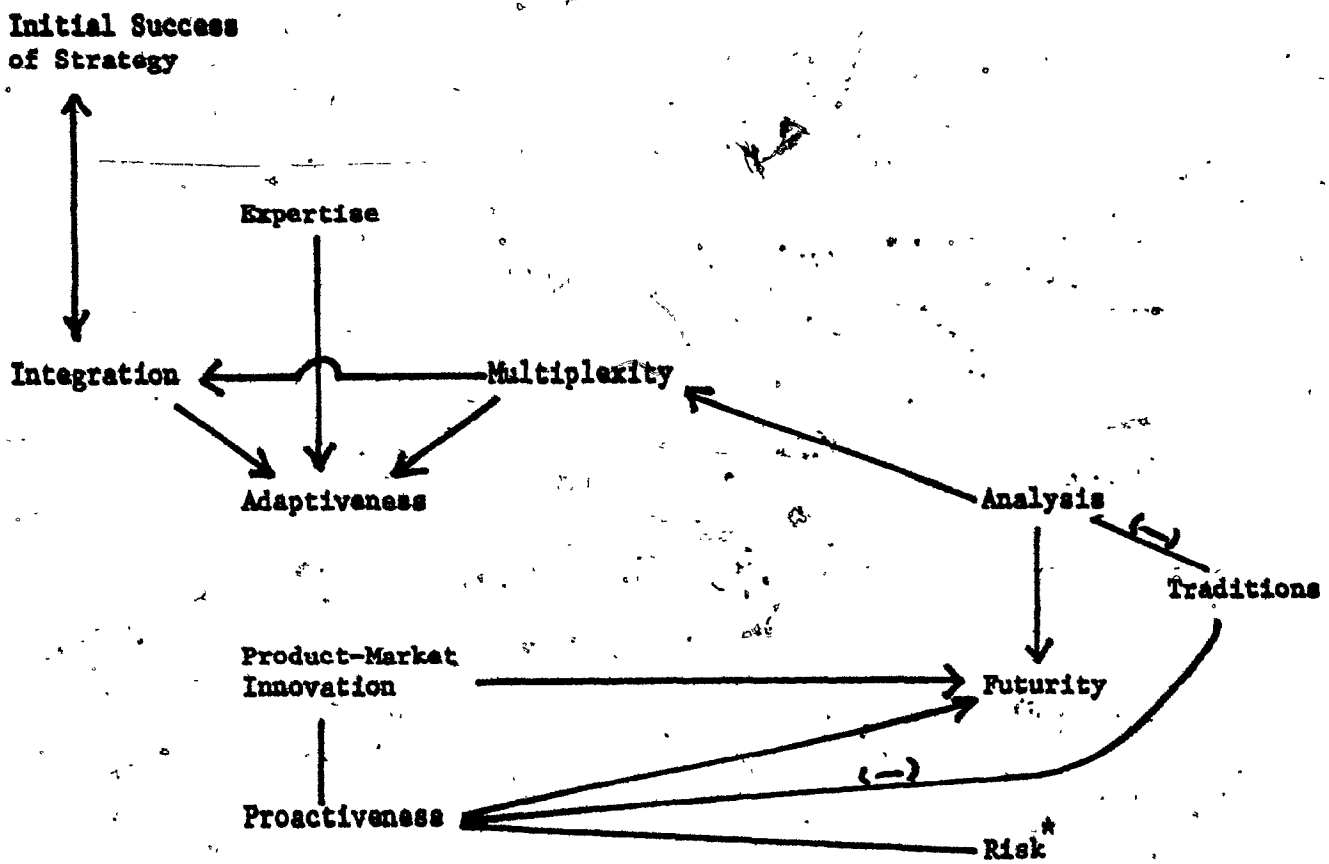
Successful Firm Correlations: Strategy Making Patterns

The final set of Spearman Correlations of successful firm variable scores are shown in Figure 3-8.

There appear to be two 'constellations' of variables. Within each of these groups of variables, interrelationships are very significant statistically and also quite plentiful. We call the first group the 'Rationality-Sensitivity' constellation and the second the 'Boldness-Innovation' constellation (see Mintzberg's 1973 two related modes).

The rationality group includes the dimensions of analysis, expertise, integration, multiplexity, and adaptiveness. Analysis induces more

FIGURE 3-8 STRATEGY MAKING CORRELATIONS: SUCCESSFUL FIRMS



* Where there are no arrow-heads, we are in great doubt about direction of causality.

multifaceted and multiplex judgements as more perspectives are examined and more decision makers get involved. Multiplexity triggers more of an awareness of incongruent points of view or tactics and impresses upon decision makers the need for integration of sub-strategies. It also ensures that the complexity of the environment is mirrored in the conceptualizations and operational decisions of strategists and thereby increases adaptiveness. Industry expertise and a well integrated, internally harmonious strategy also facilitate adaptiveness. It seems that integration is a direct function of initial strategy success (or vice versa) since there is little need to disrupt a consistent orientation with incongruous incremental changes. Were considerable changes necessary because of inadequacies in earlier strategies, it might be different. If it is true that strategies are successful because they are integrated, then the reverse causal direction would hold to the extent that integration scores have been high for a substantial period of time.

The 'Boldness-Innovation' constellation of variables includes variables of product-market innovation, proactiveness, futurity, risk taking and traditions. The causal directions are particularly tentative here since variables seem to have to coexist. Bold innovations naturally imply greater risk taking and are likely to occur in companies which have assumed a proactive competitive posture. Being the first at something usually requires more risk taking and it is natural for such types of firms, if they are successful, to plan long in advance of the commercialization of an innovation. Traditions, almost by definition cannot be too prolific or rigid, or proactiveness (and analytical activity) will be stifled (Normann, 1971).

Unsuccessful Firm's Correlations: Introduction

Table 3-3 describes the significant correlations amongst the 31 variables for unsuccessful companies. It is to be interpreted in the same manner as Table 3-2. The analysis of the 'failure' correlations is divided into four parts: environment-organization, environment-strategy-making, organization-strategy making, and strategy-making.

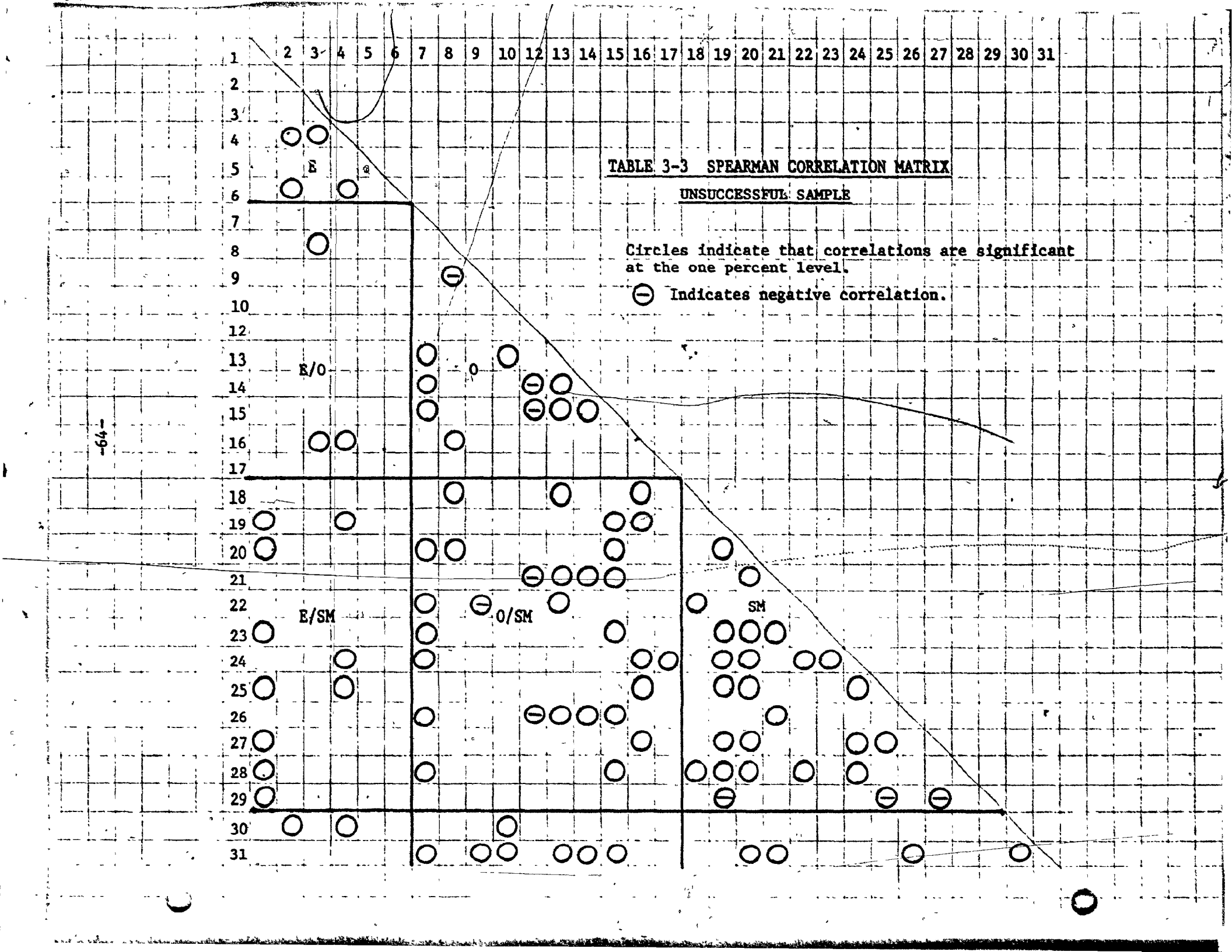


TABLE 3-3 SPEARMAN CORRELATION MATRIX

UNSUCCESSFUL SAMPLE

Circles indicate that correlations are significant at the one percent level.

⊖ Indicates negative correlation.

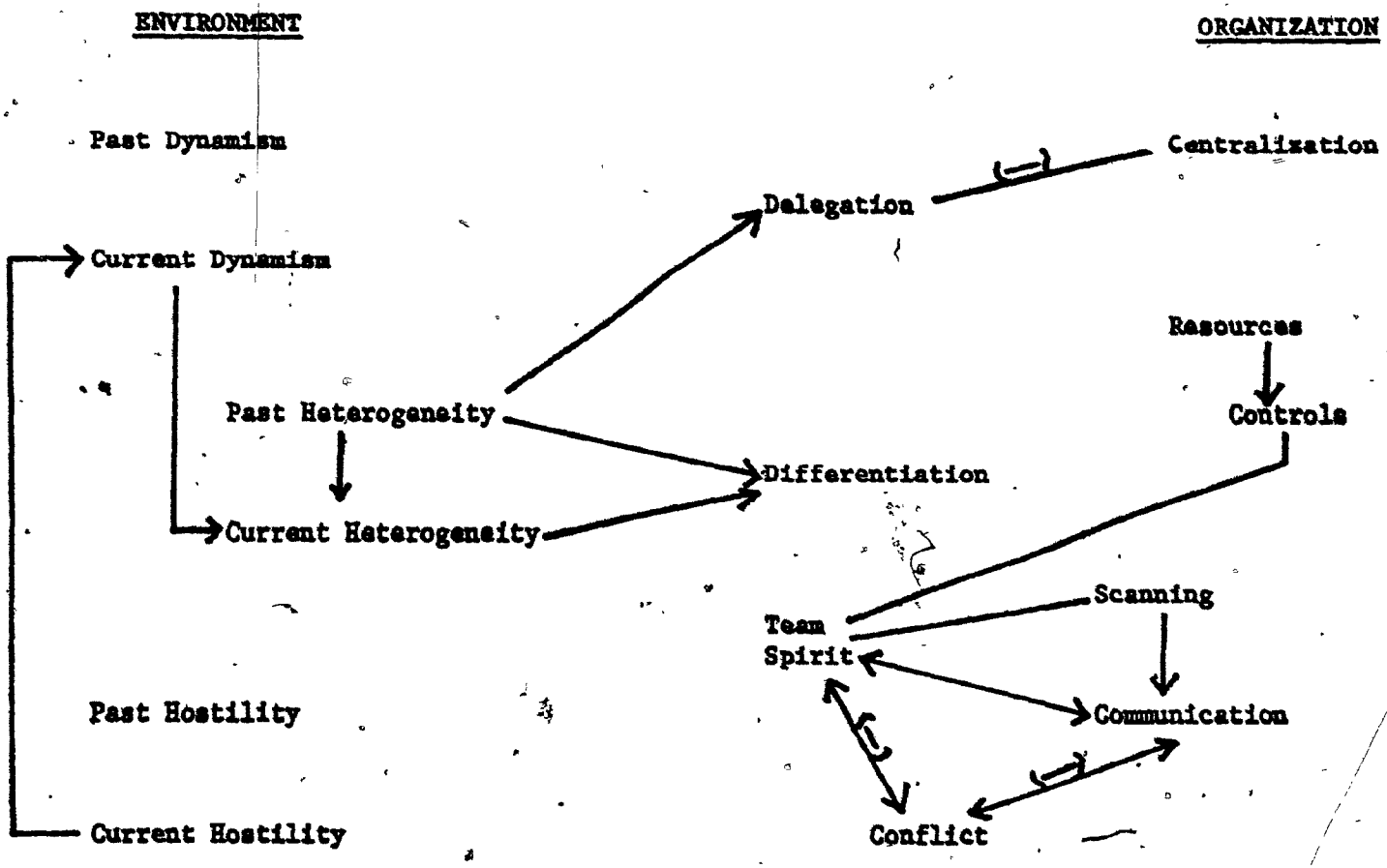
Unsuccessful Sample: Environment-Organization

There seems to be only a very tenous relationship between organizational and environmental classes of variables. Figure 3-9(vs. 3-6) illustrates this dramatically. Dynamism and hostility levels do not seem to influence the organizational structure or the intelligence system. The orientations of firms appear to be independent of current environmental conditions. While the organization does 'adapt' somewhat to heterogeneity, it does so belatedly. Delegation of authority only increases as a function of past heterogeneity, probably because administrative task complexity has become overwhelming to men at the top. Differentiation increases also with heterogeneity but this might be a de facto rather than a purposive phenomenon. For example, if new divisions are set up or if new firms are acquired, it is natural for task and management style variations to grow more substantial.

If we examine the relationships amongst only environmental variables, it seems that past dynamism and hostility scores are not related to current dynamism and hostility scores. A discontinuous change in the environment is, it seems, quite possible. Other relationships amongst environmental variables are like those for the successful samples: hostility increases dynamism, while dynamism increases heterogeneity.

Turning to the relationships amongst organizational variables, we note that delegation of authority for routine decisions is inversely correlated with centralization of strategy-making power. Autocrats in unsuccessful firms are especially dangerous since in addition to hoarding power they are likely to overburden themselves with the minutae of administration and lose sight of the important issues. The intelligence situation is also dismal in that controls are a function of organizational wealth and team spirit rather than environmental uncertainty. Effective communication is hindered by conflict while inadequate scanning provides little incentive to improve this situation (Hedberg et al, 1976).

FIGURE 3-9 ORGANIZATION-ENVIRONMENT CORRELATIONS: UNSUCCESSFUL FIRMS



Unsuccessful Sample: Environment-Strategy-Making

While for successful firms, the environment influences the mode of strategy-making via its impact on organizational variables, here the opposite is sometimes true. Figure 3-10 shows how innovative, risky, proactive, and futuristic strategies may increase environmental heterogeneity. For example, new product introductions, aggressive marketing, and bold acquisition programs may lead firms into new segments of the environment, thereby increasing heterogeneity. Strictly speaking however, it should be noted that there is an important element of reciprocity in relationships between environmental dimensions and strategy-making. In the long run, strategies determine which environments are entered. In the short-run, strategies must be responsive to environmental parameters (Child, 1972).

Another interesting point is that past dynamism influences strategy making adaptiveness, multiplexity, etc., while current dynamism does not. The firm is more responsive to circumstances which no longer prevail than to those which now characterize the external setting. Sluggish adaptiveness seems to be a real problem (Miller & Mintzberg, 1974).

Unsuccessful Sample: Organization-Strategy-Making

Figure 3-11 is reminiscent of a mass of spaghetti or an Indian war with arrows flying everywhere. The number of significant intercorrelations is very great. Rather than discussing each relationship separately it will be more useful and parsimonious to discuss the nature of the phenomenon which gives rise to the relationships, and to highlight the most important causal influences.

The three intelligence variables of scanning, controls, and communication are associated with most of the 'Rationality-Sensitivity' elements of strategy-making: adaptiveness, integration, multiplexity, expertise, and consciousness of strategies. If we view the absense or inadequacy of one of the elements of intelligence as a primary cause for a subsequent and more widespread pathology, it is possible to explain the proliferation of

FIGURE 3-10 ENVIRONMENT-STRATEGY MAKING CORRELATIONS: UNSUCCESSFUL FIRMS

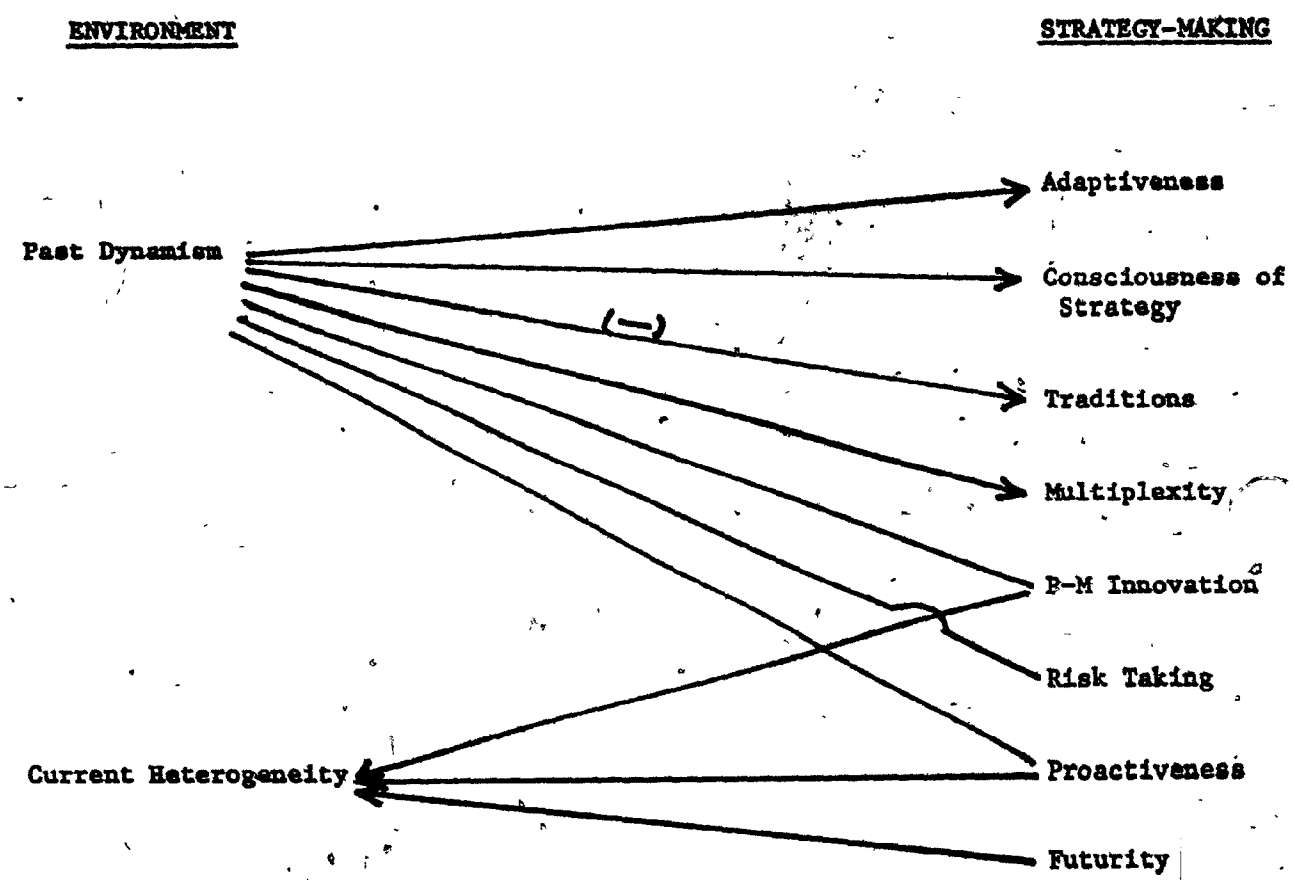
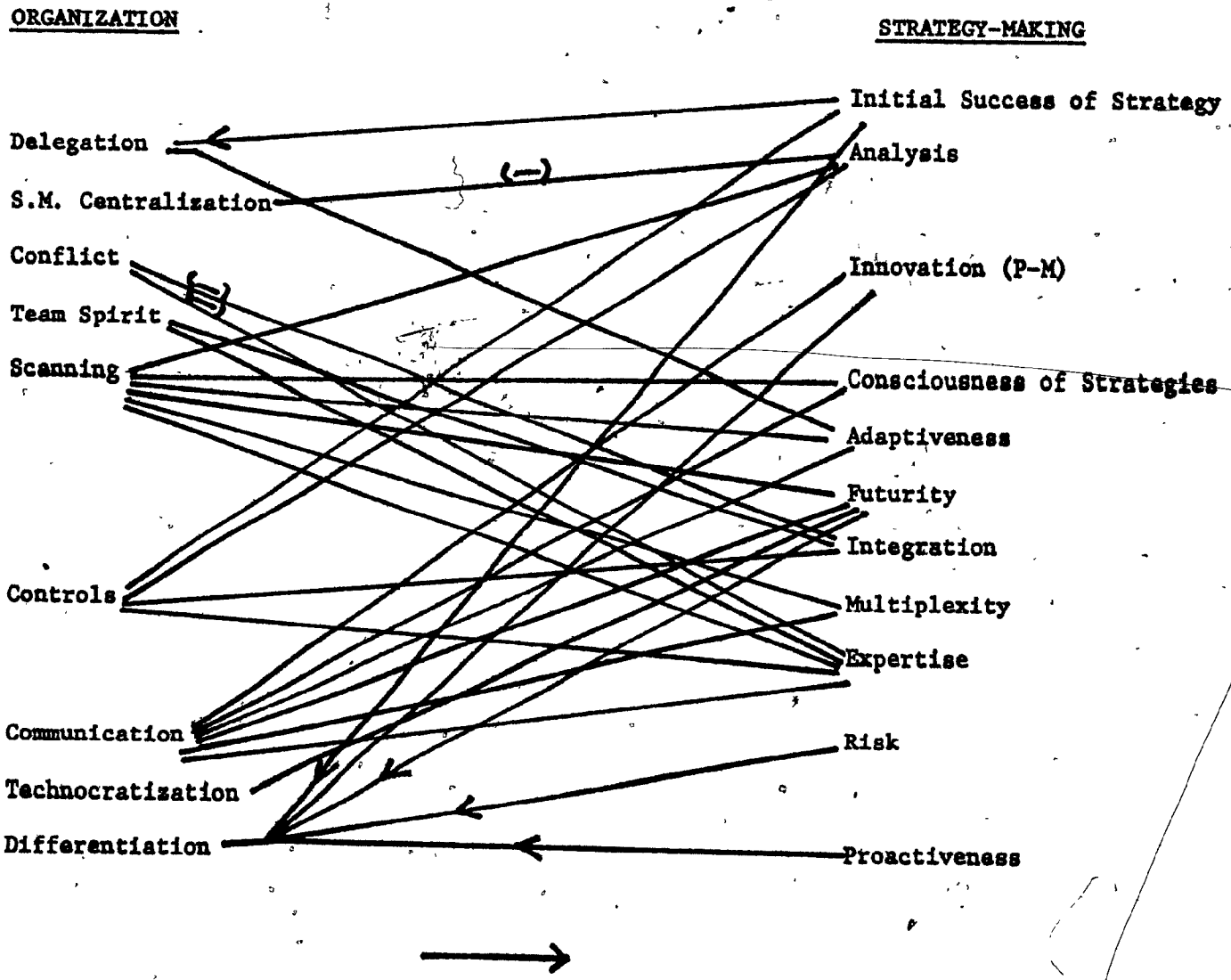


FIGURE 3-11 ORGANIZATION-STRATEGY MAKING CORRELATIONS: UNSUCCESSFUL FIRMS



high correlations. In describing our model for the first R factor from the factor analysis of the total sample (N=81) we showed how 'administrative rationality' could be thwarted by any weak links. Thus scanning deficiencies might, for instance, lead to low expertise, less analysis, maladaptive decisions, etc. Similar pathologies might result from the lack of controls, restrictive communication networks, organizational conflict, etc.

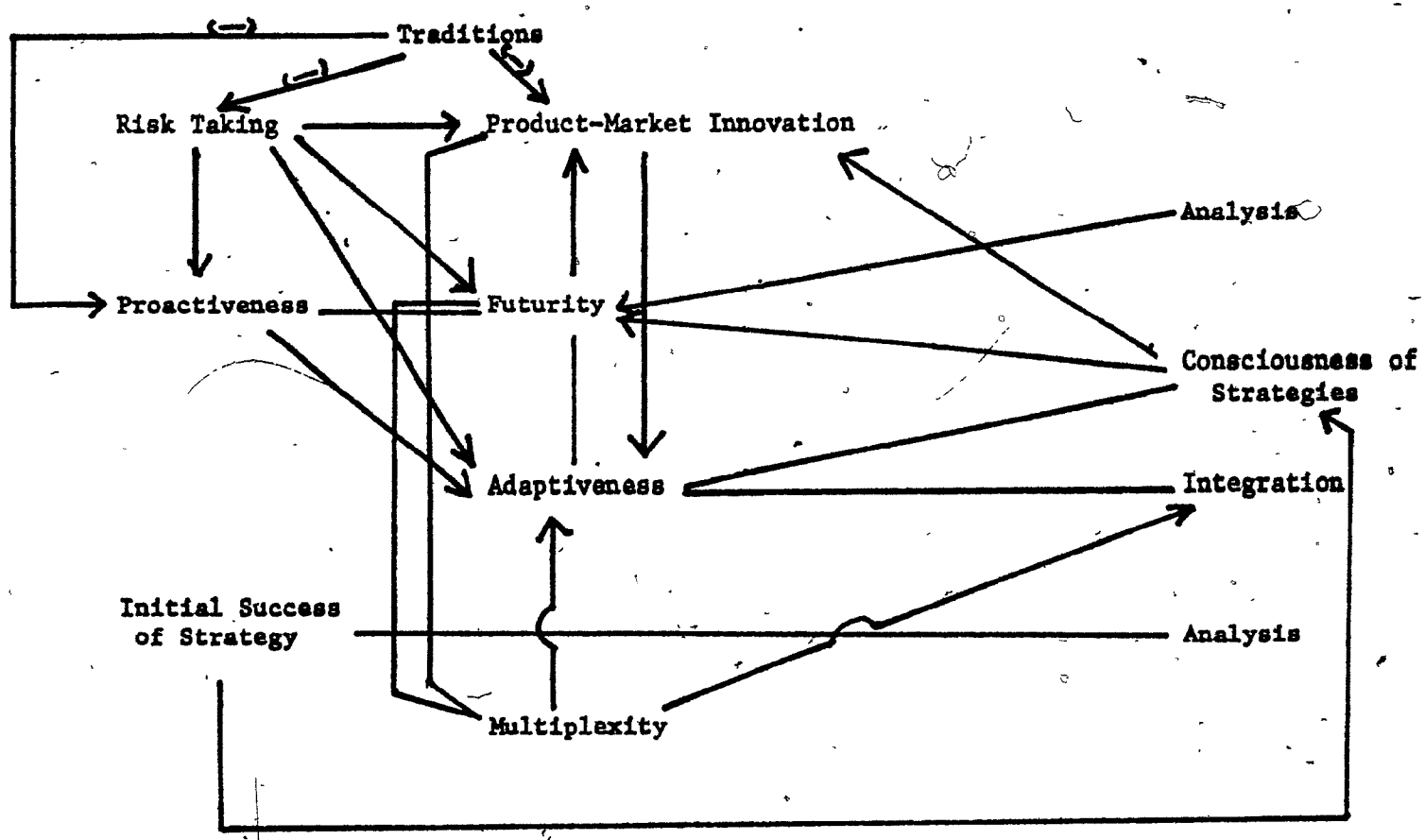
The failure of initial strategies sometimes results in a state of seige atmosphere in which little authority is delegated down the line. A rigidly hierarchical chain of command is followed. The excessive centralization of power to perform both strategic and operating tasks inhibits any meaningful deliberation of issues since top managers are overly pressed for time (Hermann, 1971).

Causal directions are believed to be reversed as risk, futurity, and proactiveness lead to organizational differentiation. As new products are introduced and different markets are entered, there are greater chances for diversity in organizational orientations, credos, and practices.

Unsuccessful Sample: Strategy-Making

Figure 3-12 discloses another very densely populated array of significant correlations. Strategy making qualities are highly interdependent for unsuccessful companies. Again, the dynamic nature of pathologies is suggested. Recall that there were much fewer significant intercorrelations within and across the variable categories of organization and strategy-making for successful companies. If we look at some relationships in the two samples, the underlying causal pattern becomes a little more clear. Without adequate integration or decision making multiplexity, it is difficult to imagine how strategies could be adaptive. Similarly, without risk taking, there would be little latitude for innovation or proactiveness. In contrast, for successful firms, high integration scores do not necessarily lead to a more adaptive strategy nor must risk taking result in more successful product-market innovations. This might help explain the relative preponderance of correlations for failure firms.

FIGURE 3-12 STRATEGY MAKING CORRELATIONS: UNSUCCESSFUL FIRMS



Causal directions are in much doubt

The nature of intra-strategy-making correlations are similar for both sub-samples and the Rationality-Sensitivity and Boldness-Innovation configurations do seem to exist for unsuccessful companies. For example, the lack of analysis prompts shorter time horizons and impedes the development of an explicit and conscious strategy. The lack of a clearly defined strategy hampers the integration of diverse, piecemeal orientations, and low multiplexity limits adaptiveness since a number of relevant perspectives or dimensions are neglected.

For the Boldness-Innovation constellation, it seems that rigid and widespread traditions reduce innovation, risk-taking and proactiveness. Low scores on these latter variables impede adaptiveness and this is an especially severe problem when one considers the rapid rate of environmental transition (Hedberg & Targama, 1973).

Comparison of Spearman r's for Both Sub-Samples

There are two key differences between the correlation matrices of the successful and unsuccessful sub-samples. Firstly, in the E-O sector of the matrix, successful firms have by far the greater number of significant correlations, particularly those relating current environmental to organizational factors. Unsuccessful firms do not seem to adjust organizational attributes to existing conditions in the environment. They are less adaptive.

The second major distinction is that organizational, strategy-making, and O-SM correlations are more significant and abundant for unsuccessful firms than for successful ones. This was explained in the previous section.

We are now in a better position to explain the proliferation of significant r's in the correlation matrix of the total (N=81) sample. There are a host of co-requisites to the success of an enterprise. The administrative task must be broken up in a manner that allows executives with the most expertise to make decisions regarding their jurisdictions. Top level people must not be overburdened with trivial (or even strategic) tasks. Organizations must scan their environments, controls must provide

information or important performance trends, and a sensitive and open internal communication network should ensure that critical information goes to the concerned employees. Ample resources are of course necessary to construct and maintain some of these organizational features and to carry out company plans and day to day operations. In addition, decision making styles must be such that complex issues are well analyzed, that expertise from different points of view allow for adequate multiplexity, that decisions are relevant and responsive (adaptive) to the environment, and that decisions complement rather than conflict with one another. Each of the factors just mentioned are more critical and must be better developed as the environment becomes more dynamic, heterogeneous, and hostile. It is not so surprising then, that successful firms tend as a rule to score fairly high in all or most of the organizational and decision style variables just discussed (Thompson, 1967; Ansoff, 1965).

Unsuccessful corporations on the other hand tend to score low on the majority of these variables. The failure to gather organizational intelligence by the use of scanning and control procedures may have detrimental repercussions on many of the elements of decision style. Poor internal communication, little delegation of authority, a monolithic strategy making apparatus and inadequate resources might also have many harmful side effects. As is the case with most organic pathologies the collapse of one support system tends to induce the weakening of surrounding organs. Thus, in a 'failure' firm it is rare for an inadequate intelligence system to be combined with an adaptive mode of decision making. Similarly the absence of cues from scanning or control devices will reduce the likelihood that important issues will be analyzed. The same influence will also inhibit the development of industry expertise. Excess power centralization and meager delegation of authority can reduce the multiplexity of decisions since only a unitary point of view may be brought to bear.

Because the path to success appears (usually) to be a narrow one, successful firms have many high scores. The failure of the firm to adequately perform certain functions leads to failures in a host of other realms, and so unsuccessful firms have a lot of low scores. The opposite nature of the two constellations on <u>many</u> dimensions, coupled with the considerable inter-group score ranges involved, provide the basis for a very great number of significant correlations.

A second possible explanation of the prolifiration of significant r's is far less flattering to the research. It involves the conceptual similarity amongst certain variables, and the inability in some instances to rate separate variables using distinct facts from the case. For example, occasionally, nothing is directly said in a case study that describes the scanning or monitoring procedures used. Perhaps however an example is given of a critical incident in which the firm becomes aware in good time of a key trend and is able to act appropriately in response. In the instances where it is not clear if the information had been gathered by exceptional scanning of the outside environment and/or by the use of a routine internal monitoring system, both scanning and monitoring variables would receive high scores. We should emphasize however that this sort of blurring was quite unusual and that raters tended to have confidence that they had scored variables independently. Where explanations for scores were requested, supporting arguments were usually strong and called upon a number of facts directly related to the variable in question.

There is support for our contention that the first explanation is more relevant than the second in that the number of significant correlations is substantially reduced in considering unsuccessful and successful sub-samples separately.

R-type Factor Analysis.

We noted certain distinct groupings of highly intercorrelated variables in the Spearman matrices and thought it might be interesting to determine if some of these variables could be collapsed into a smaller set of more parsimonious factors (Pugh et al, 1968). This was possible, as it turned out, and the respective factors for successful and unsuccessful firms are often quite different. The differences provide a further basis for distinguishing between the two sub-samples. We attempt to explain the nature of the factors below.

Successful R Factors

F_1 Organizational Diversity

Past and current heterogeneity, differentiation, and the absence of industry expertise load highly on this first factor. Possibly this is because when firms enter a diversity of environments, the organization becomes more differentiated to cope with different sub-segments of the external setting. The top decision makers of the firm simultaneously become less expert in their knowledge of the environment because of the greater complexity.

F_2 External Intelligence

Scanning, decentralization, adaptiveness, integration and multiplexity are comprised by Factor 2. The relationships hypothesized are as follows. Scanning the environment identifies important trends which influence the performance of the firm. The greater the decentralization, the more individual managers at lower levels will scan. The greater the percentage of the workforce involved in scanning, the higher the scanning score and the greater the incentive for managers to get together to discuss and jointly decide upon important issues. The joint decision making facilitates multiplexity in the sense that a number of different perspectives are brought to bear on the decision. Integration is enhanced as divergent directions are brought out in group meetings and pressure for reconciliation emerges. Adaptiveness is facilitated by scanning, multiplexity, and decentralization.

F_3 Product Strategy

Innovation, resource availability, technocratization, and the absence of past hostility load highly on F_3. Firms tend to devote more effort to product-market innovation if they have ample resources and a well developed team of technocrats or professionals. Thus, innovation is attempted when there is the greatest probability of success thanks to skilled personnel and ample financial and physical facilities.

F_4 The Environment-Task Structure Relationship

Past and current dynamism and hostility and delegation of authority load highly on F_4. As the environment becomes more challenging due to dynamism and hostility, the administrative tasks are handled by delegating

more authority to lower and middle level managers. This reduces task complexity for top executives who continue to administer the 'big picture'.

F_5 Success

Past and current corporate success and the success of past strategies load highly on F_5. There is a close relationship between the utility of past strategies, and the past and current success of the firm. This factor mainly serves to highlight the continuity of success and the fact that few abrupt failure-to-success transitions occur.

F_6 Aggressiveness

Proactiveness, risk taking, the absence of traditions and power centralization load highly on F_6. Successful companies tend to be more proactive and to take greater risks as power becomes more centralized and traditions fall by the wayside. Few individuals in a firm are sufficiently influential to prevent a powerful entrepreneur from taking bold risks.

F_8 Internal Intelligence

The absense of conflict, controls, communication and analysis load highly on F_8. The flow of information in successful firms is facilitated by appropriate and sensitive control systems, and open, two way communication systems which are unimpeded by organizational politics (conflict). Information which goes to managerial personnel often prompts them to initiate further analysis of trends and issues reported.

Remember that successful factors have been largely construed from scores which are heavily biased toward the high end of the scale (4-7). They reflect the interrelationships amongst variables which are particularly integral in successful companies. Now we shall look at the other side of the coin: the interrelationships amongst variables which occur for unsuccessful firms. The reader should bear in mind that most of the structural and decision making variable scores occur on the 1-4 range of the scale.

Unsuccessful R Factors

F_1 Organizational Diversity

Past dynamism, current heterogeneity, differentiation, product market innovation, proactiveness, risk and the absence of traditions load highly on F_1. Rather than attempting to diversify gradually some unsuccessful firms very aggressively pursue an expansionary strategy while others remain completely stagnant. This tends to be a function of past environmental dynamism. In formerly placid environments, highly traditional and conservative strategies are pursued and there is virtually no attempt at diversification. Where dynamism has prevailed in the past, aggressive and risky product-market innovations are launched. A proactive stance is assumed even though firms may lack the capability of safely carrying out this strategy. What is more, current environmental heterogeneity increases as new markets are broached and organizational differentiation increases. (These hypothesized relationships amongst these Factor 1 variables derive in large part from an examination of unsuccessful firm's actions over time. Without referring back to the original accounts interpretation would have been particularly difficult.)

F_2 Internal Communications

The absence of conflict, and the strength of team sprit and communication scores load highly on F_2. Communication in unsuccessful firms tends to be distorted, restricted, and mainly in a top-down direction. The distortion may arise chiefly as a result of the absense of common objectives (low team spirit) while the restricted nature of the system probably derives from the lack of mutual trust (much conflict) amongst executives.

F_3 Leadership Style

Delegation, the absence of centralization, technocratization and the past success of strategies load highly on F_3. In unsuccessful companies, the more power for strategy-making is centralized, the less there is delegation of authority for the performance of routine tasks to lower levels. When firms are dominated by bold entrepreneurs, these

men tend to overburden themselves with the minutae of operations. They are forced as a result to give inadequate attention to critical corporate decisions. Seldom do expert-professionals or technocrats enter the decision making process. The failure of the firm's strategies in the past seems not to deter the leader who remains free to direct the enterprise as he pleases.

F_4 Resource Legacy

This is an obvious factor comprising resource availability and past success.

F_5 Organizational Intelligence

Scanning, controls, communication, adaptiveness, integration, analysis, multiplexity, futurity and success load highly on F_5. The model already outlined for the Factor 1 of the total sample adequately describes this factor. The essential theme is that any weak links in the information processing model of the firm gives rise to further weak links.

F_6 Environmental Turbulence

The significant thing about this factor, which comprises only the variables of current dynamism and current hostility, is that it is quite alone and independent of structural and decision making parameters. There are no significant relationships between what is currently going on in the environment (in terms of dynamism and hostility) and the organizational and operating characteristics of the firm. Recall that for the successful firms, organizational and environmental variables often loaded on the same factor.

Key Differences Between Successful and Unsuccessful R Factors

Successful factors are more plentiful, and explain on the average less variance than do unsuccessful factors. The discussion of correlation matrices which portray more intercorrelation amongst variables for unsuccessful firms than for successful ones explains why this might be the case (less variance amongst successful company variable scores).

Unsuccessful factors reveal a schism between organizational and decision making variables and current environmental variables. The two variable classes load on distinct factors. Past environmental conditions, on the other hand, do influence organizational and decision making styles of unsuccessful firms. Often, an anachronistic posture is the result. Some dysfunctional relationships reveal themselves in unsuccessful factors. For example, centralization is inversely related to delegation. Innovation takes place without regard to resources or technocratic skills.

SUMMARY

For the total sample of 81 firms, mean scores on variables tended to cluster about the midpoint of the scale. Many scores were slightly above this point, perhaps because of the greater impact of cases with many high scores. Environmental scores tended to vary the most from the scale midpoints since there was a relative increase over time for most firms in environmental dynamism, hostility, and heterogeneity. This had to be reflected in below and above midpoint scores for past and current dimensions respectively. Rating difficulties caused standard deviations for environmental and success variables to differ from those of the other parameters.

The Spearman correlation matrix of the total sample was densely populated with extremely significant r's. It was hypothesized that this could have been due to the tendency for successful firms to require a lot of high scores on many variables, while unsuccessful firms could be afflicted by a pathology in which 'disease' spreads as a result of initial deficiencies. The most significant r's concerned organizational intelligence, structural and decision making rationality variables, and demonstrated integral relationships within and across these categories.

An R-type factor analysis revealed that 85% of the variance in the data could be accounted for by four factors: administrative rationality, corporate temperament, organizational heterogeneity, and environmental turbulence. Models postulating relationships amongst the variables loading highly on each factor were presented.

An interesting picture started to emerge with the examination of successful and unsuccessful sub-samples. Means revealed that scores of both groups differed almost across the board. Of particular interest was that environments of unsuccessful companies had changed much more dramatically over a five year period. Also, while successful firms had high scores along most variables, the opposite was true for unsuccessful companies. The standard deviations of variables for unsuccessful firms were almost universally greater than those of successful firms along organizational and decision making parameters. Perhaps the path to success is narrow whereas there are a number of routes to failure.

Another, complementary theory, is suggested by the Spearman correlation matrices for the two sub-samples. There are, for most categories, far more correlations amongst variables for unsuccessful firms than there are for successful firms. One reason might be that there are only minute score ranges along many variables of successful firms so that correlations have less of a chance to emerge. An alternative explanation is that for failure companies, one deficiency tends to lead to a good number of others, resulting in many significant r's. For successful firms, the existence of positive traits does not necessarily lead to other positive traits since there are a series of quasi-independent hurdles to overcome before success can accrue. Spearman matrices also point out that for successful companies, there are a good number of strong relationships between current environmental traits and organizational attributes. For unsuccessful companies, there are no such relationships though occasionally one can see significant links between <u>past</u> environmental conditions and organizational variables. Thus, unsuccessful companies not only face challenging environments which have changed markedly, they also have not adapted to these.

The R-type factor analysis for both sub-samples disclosed factors which were somewhat similar to those derived from the analysis of the total sample. There were a greater number of successful firm factors which each explained, on the average, less variance than those of unsuccessful firms. The fewer correlations amongst variables in the successful sample might account for this. Another difference was that for unsuccessful companies, environmental variables loaded on distinct factors whereas in the successful sample, environmental and other variables could jointly load highly on the same factor.

THE SEARCH FOR MORE REFINED CAUSAL MODELS

The analysis of the total sample revealed much less information than that of the two successful and unsuccessful sub-samples. The sub-samples portrayed a much richer causal texture and as much could be learned by comparing the two sub-samples as by examining each individually. We noticed that there were striking differences in the scores and relationships of variables between successful and unsuccessful firms. The question this suggested was--if the two sub-samples vary so greatly from one another might there not be substantial variations within each group of firms? If 'success' discriminates causal patterns, why not other variables as well? The greater amount of variance for the unsuccessful sub-sample also indicated that perhaps there were several 'modes' of failure, quite different from one another.

Another set of more common-sense factors also indicated there might be substantial differences amongst companies within sub-samples. In the first place, case studies presented different situations and different problems. It became obvious in reading cases that it is difficult to make broad generalizations about sub-samples without observing vital differences. It was equally certain however that there were basic similarities amongst many firms along most attributes. For example, some failure firms were extremely conservative and were characterized by many attributes (scores and relationships) which made them extremely similar to other conservative firms. Other failure firms were run by a bold entrepreneurial "acquisitions man". These were extremely different from the unsuccessful conservative firms but very much like other entrepreneurial firms in the failure sub-sample. A third reason for suspecting broad differences within sub-samples came from perusing company scores. These often suggested very different administrative situations within a sub-sample, but again there were incredibly marked similarities within certain 'subsets' of firms. A whole new area of research interest opens up. If there are different modes of maladaptiveness, what are they? How do they differ from one another? Why do they arise? The same set of questions can be asked about the modes of success.

It would be desirable to identify homogeneous groups of firms which portray common modes of success and failure and are described using our 31 variables. Hopefully, a small number of such 'archetypes' would capture

the essential relationships of the majority of administrative situations addressed by the case studies, subject of course to the limitations of our variable types. The additional 'refinement' afforded by these archetypes may give the analysis a level of detail that would help to avoid hiding important co-conditions or contingencies which negate or facilitate the grosser relationships. Since archetypes portray relationships within an integral context, all co-conditions are specified, and so all associations are taken to be 'qualified' by each of the other relationships in the model. There exists less danger of over-simplification by relying on simple bi-variate associations which may do much to disguise the underpinnings of an administrative situation. Before proceeding any further, let us explore the relevance of this direction to the data we have gathered.

Chapter Two describes how we proceeded to discover and test the significance of our archetypes. Ten statistically significant archetypes were found. In order to examine the extent of the differences in the tentative underlying causal relationships of the various archetypes, we performed an analysis of the Spearman rank correlation matrices. To have a sample size sufficiently large to allow for the emergence of meaningful correlations amongst our 31 variables, we combined archetypes SIA and SIB to form one group of firms (N of 21), and archetypes S2, S3, S4, and S5 to form another (N of 20). Archetypes were combined on the basis of the likeness of their raw score patterns, though obviously there remained substantial intra-group differences. We found remarkably few similarities between the correlation matrices of our variables for the two groups. About twenty percent of the total correlation coefficients for each group were significant at the five percent level. Of these, only about twenty-five percent were common to both groups. In other words, seventy-five percent of the significant correlations in each group, were unique to that group. Almost identical, but even more impressive results were obtained when a similar analysis was performed for failure archetypes (only twenty-four percent of the significant correlations were common to the two sub-groups F1 & F4, N of 18, and F2 & F3, N of 16). We conclude that not only are score patterns very different amongst archetypes, but also, that the tentative underlying causal models vary substantially.

The following two chapters present the archetypes which have been discovered.

CHAPTER FOUR

THE SUCCESSFUL ARCHETYPES

OVERVIEW

S_{1A} THE ADAPTIVE FIRM UNDER MODERATE CHALLENGE

S_{1B} THE ADAPTIVE FIRM IN A VERY CHALLENGING ENVIRONMENT

S_2 YESTERDAY'S SUPERSTAR - THE DOMINANT FIRM

S_3 THE GIANT UNDER FIRE

S_4 THE ENTREPRENEURIAL CONGLOMERATE

S_5 THE INNOVATORS - THE ENTREPRENEUR AND THE CREATIVE GENIUS

OVERVIEW

There are six successful archetypes which have been identified. The process of deriving these and establishing their statistical significance was discussed earlier. Our prime concern here is to describe and analyze these archetypes. Before presenting each of the archetypes in detail, we shall provide an overview.

Table 4-1 introduces some of the most important features of our successful archetypes. Because we have dealt with so many variables in the research, it is necessary to summarize our results in order to make them more salient. An R-type factor analysis, using orthogonal varimax rotated factors for our total sample (N=81), revealed that some of our 31 variables loaded very highly on the same factors. We look at only the variables which have loadings of $\geq$ .75 on our first five factors. The resultant "factors" or variable groupings are: Intelligence-Rationality, which comprises scanning, controls, communication, adaptiveness, analysis, integration, multiplexity, and industry expertise (55%* of variance explained); Temperament, which comprises proactiveness and risk taking (15.7% of variance); Heterogeneity, which concerns current heterogeneity and organizational differentiation (8.4% of variance); Current dynamism (only this one variable loads > .75 on the factor, 6.4% of variance is explained by factor); and finally, Centralization of strategy making power (again one variable, 3.6 of variance).

We have used these variable groupings to calculate average scores for the variables in each group and to rank all archetypes, successful and failure, in terms of their average group scores. Individual scores for each of the 31 variables for each archetype are presented in Table 4-2. Table 4-1 presents both group scores (on scale of 1-7) for each of our five factors for successful archetypes and also the relative rank of each archetype (compared to all other archetypes) for each of the factors.

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*Strictly speaking, the ordinality of our variables does not permit us to speak meaningfully about an interval concept such as variance. However, we include these figures to show that the factors do collectively account for much of the information contained in our data.

A rank of 1 indicates the archetype scored lower than any of the other archetypes on the factor variable while a score of 10 means it scored the highest.

TABLE 4-1

MEAN SCORES AND RANKINGS OF SUCCESSFUL ARCHETYPES ALONG R FACTORS

#	ARCHETYPE	HETEROGENEITY		DYNAMISM		INTELLIGENCE/ RATIONALITY		CENTRALIZATION		TEMPERAMENT	
		SC.	RK.	SC.	RK.	SC.	RK.	SC.	RK.	SC.	RK.
S_{1A}	Adaptive-Moderate Dynamism	4.5*	5	5	2	5.4	7	6	4	6	6
S_{1B}	Adaptive-Extreme Dynamism	4.5	5	6	7	6.1	10	5	3	6	6
S_2	Dominant Firm	3.5	3	3	1	5.1	6	6	4	4.5	3
S_3	The Giant Under Fire	6	8	6	7	5.6	9	4	2	4.5	3
S_4	Entrepreneurial Firm	6	8	5	2	5.5	8	7	8	6	6
S_5	The Innovators	4	4	6	7	4.0	5	7	8	6.5	9

Taking the archetypes in order, we notice significant variations amongst them. Archetype S_{1A}, the adaptive firm under moderate dynamism, faces an environment which is not all that challenging. Heterogeneity and dynamism are relatively low so that the intelligence effort can be comparatively modest (though it is still very substantial compared to that of unsuccessful firms). Power for strategy making remains quite centralized and temperament,

* Calculated by taking average of scores on variables 4 and 16 for S_{1A} from Table 4-2.

TABLE 4-2 SCORES* OF SUCCESSFUL ARCHETYPES

	S_{1A}	S_{1B}	S_2	S_3	S_4	S_5
Environment						
1. Environmental Dynamism-Past	4	5	2	4	4	5
2. Environmental Dynamism-Current	5	6	3	6	5	6
3. Environmental Heterogeneity-Past	2	4	2	6	4	3
4. Environmental Heterogeneity-Current	4	4	3	6	6	4
5. Environmental Hostility-Past	5	X4	2	3	4	5
6. Environmental Hostility-Current	6	6	3	7	4	X5
Organization						
7. Scanning of Environment	5	6	5	6	6	4
8. Delegation of Operating Activity	6	6	4	7	6	5
9. Centralization of Strategy-Making Power	6	5	6	4	7	7
10. Resource Availability	5	7	6	6	X6	5
11. Management Tenure	2	2	2	2	2	2
12. Conflict	2	2	X3	3	2	X4
13. Internal Controls	6	7	5	6	6	3
14. Team Spirit	5	6	4	4	4	X5
15. Internal Communication System	5	6	4	6	6	4
16. Organizational Differentiation	5	5	4	6	6	4
17. Technocratization	3	6	X7	6	X4	X6
18. Initial Success of Company Strategies	6	6	6	5	5	6
Strategy-Making						
19. Product-Market Innovation	5	7	6	5	5	7
20. Adaptiveness of Decisions	6	6	6	5	5	4
21. Integration of Decisions	5	6	6	5	5	5
22. Analysis of Decisions	5	6	X4	6	6	3
23. Multiplexity of Decisions	5	6	X4	5	4	3
24. Futurity of Decisions	5	6	X4	5	5	6
25. Proactiveness of Decisions	6	7	5	4	6	7
26. Industry Expertise of Top Managers	6	6	7	6	X6	6
27. Risk Taking	6	X5	4	5	6	6
28. Consciousness of Strategies	6	6	6	6	6	6
29. Traditions	X4	1	5	5	2	4
Success						
30. Past Success of Firm	X7	X7	7	7	7	7
31. Current Success of Firm	7	7	7	6	7	6

*Scores are those most common or representative of firms within archetypes. These are not means but modes, or where there are two modes, the average of the two. An X indicates that the score in question is unreliable since the range of scores on the variable within the archetype is greater than 3.

at least as manifested by risk taking and proactiveness is quite substantial. The firm beats its less ambitious competitors to the punch at most things. In contrast, the adaptive firm under extreme dynamism (S_{1B}) must cope with a very turbulent environment. To do so, it adopts sophisticated scanning, controls, and communication devices and engages in much analysis of decisions. The substantial intelligence activity is carried out by many individuals in the organization, and power to make key decisions is not all that centralized in the hands of the top executives. Many persons tend to get involved in strategy making. Finally, the firm's temperament is quite bold. Innovation takes place frequently and companies are often leaders in forging new product-market and technological orientations. In comparing S_{1A} and S_{1B} firms, it appears that a more challenging environment requires greater intelligence activity and substantial innovation and less centralization of strategy making power.

The dominant firm, S_2, is quite different from the former two types. Tremendous past growth and success have made these firms the strongest organizations in their markets. Heterogeneity is low and environmental dynamism, while it may manifest itself in some product changes, does not present any serious challenges. Thus firms can afford to gather less intelligence data on the environment and needn't devote as much attention to internal communication systems, analysis, and other 'uncertainty reduction' devices. Delegation of strategy making authority is perceived to be somewhat optional, and those responsible for the brilliant past successes of the firm are allowed to retain control of the reins. The temperament of the firm is one that fosters related technological advancement and innovative progress, but because of its size, projects that represent substantial risks to the firm are quite rare.

The giant under fire, S_3, faces the most difficult environment of all. With powerful competitors and a vigilant government to deal with, firms must strive desperately to adjust to their quite heterogeneous environment. The diversity of markets and products does much to increase the complexity of the administrative task. A sizeable and concerted intelligence effort takes place in order to facilitate adaptation. Power is more decentralized than in any other successful firm because of the diversity and difficulty of the overall management task. Temperament is relatively timid as gradual,

incremental change takes place to cope in piecemeal fashion with the overwhelming environmental complexity.

Archetype S_4 describes the entrepreneurial firm which grows by acquiring other companies. Acquisitions cause the environment to be relatively heterogeneous. Fortunately, the amount of environmental dynamism is fairly manageable given the limited administrative resources of the companies. Intelligence activity is quite well developed but is carried out principally by the entrepreneur himself. Power for strategy making resides almost exclusively in the hands of this individual who is not at all averse to taking substantial risks.

Our final successful archetype, S_5, illustrates a set of firms which have been very successful because they possess an overwhelming strength in a certain area of operation, usually product design. While the environment is quite challenging, there is, surprisingly, a relatively lacklustre intelligence effort. To add to the dangers of this situation, power remains concentrated in the hands of the entrepreneur who appears to have little recourse to others with managerial talents. It appears however that the resident genius of the firm (this may or may not be the entrepreneur himself) always comes to the rescue with another brilliant and bold innovation.

Archetypes appear to represent a set of relationships which are in a temporary state of balance. The administrative situations which are described seem to form a number of 'gestalts'. As we shall see in the detailed archetype discussions, there is something wholistic and ordered about the patterning of environmental, organizational, and strategy making behavior attributes.

To make more explicit the differences amongst the six successful archetypes, we compare them graphically in the next series of Figures. Each diagram employs two of our five factors as axes along which archetypes can array themselves. Archetypes are plotted according to their average variable scores on each factor. These scores were presented in Table 4-1. While all R factors are orthogonal for the <u>total</u> sample, Spearman correlation coefficients for the successful sub-sample have indicated significant relationships between some variables which load highly on different factors. For example, communication system sophistication and decision analysis,

integration, and multiplexity (all intelligence rationality variables) were all positively related to current environmental dynamism at about the 5% level of significance. Also, centralization of strategy making power was positively related to proactivity and risk taking (both temperament variables) at beyond the 1% level of significance. Our figures, which are crude approximations to scatter diagrams, reveal these relationships. However they also point out interesting exceptions to the rule where a reverse relationship might hold true. The fact that these exceptions occur within separate statistically significant archetypes indicates that they are common, consistent, and plausible in the light of their contexts. The limits of bivariate analysis become plain as does the value of the archetype technique in helping to avoid oversimplification.

Figure 4-1 relates environmental dynamism to the intelligence/rationality scores of archetypes. As we can see, archetypes S_{1B} and S_3 have very dynamic environments and do perform a very great deal of intelligence activity in order to cope. Archetypes S_2 and S_{1A} are fortunate to face a less demanding environment and can afford to be slightly less vigilant. Basically then, there appears to exist a positive relationship between dynamism and intelligence. However archetypes S_4 and S_5 must be viewed as exceptions which can be subsumed under an alternative rationale. Readers of the cases which fit the S_4 archetype will probably conclude that the high intelligence/rationality scores stem more from the environmental heterogeneity and the expansion and growth program being pursued by data hungry entrepreneurs. The S_5 firm, because it possesses the capacity to devise important product-market innovations, does very well in a dynamic environment with very little intelligence or analytical activity.

Even a relationship as strong as the one between temperament variables and centralization of strategy making power conceals some interesting subtleties (Fig. 4-2). Temperament, as manifested by proactiveness and risk taking behavior, increases, as a rule, with the centralization of strategy making power. Archetype S_3 is relatively conservative and decentralized, while S_4, S_5, and S_{1A} are bold and run by one or two very powerful leaders. S_{1B} is an exception to the rule in that the turbulence and complexity of the environment has prompted both decentralization and an innovative orientation. There is a need to split up the administrative task of the firm and also pressure to

FIGURES 4-1*

MEAN SCORES OF SUCCESSFUL ARCHETYPES ALONG

DYNAMISM AND INTELLIGENCE/RATIONALITY FACTORS

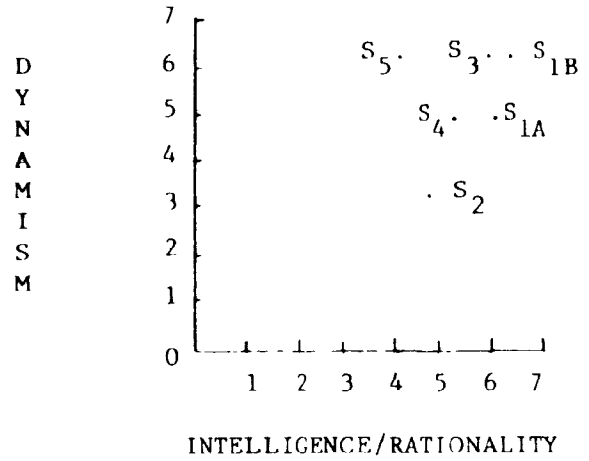
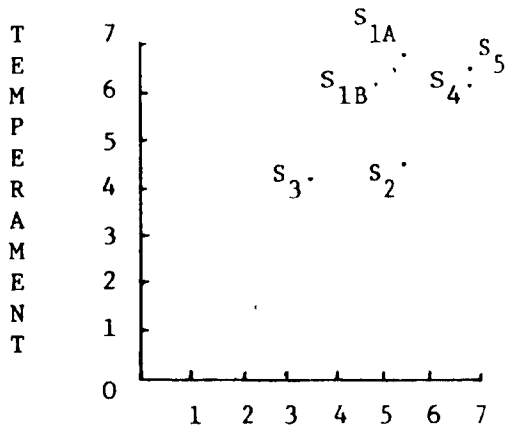


FIGURE 4-2

MEAN SCORES OF SUCCESSFUL ARCHETYPES ALONG

TEMPERAMENT AND CENTRALIZATION FACTORS



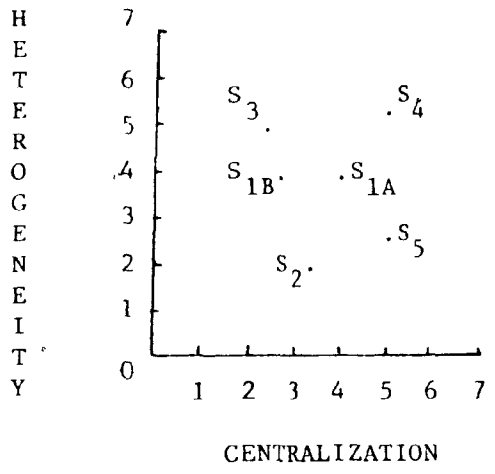
* Our figures are merely crude approximations to scatter diagrams since the data "points" are really averages of modes of scores distributed around these points. Since score ranges of archetypes are so limited (usually plus or minus one rating point, except where indicated in Table 4-2), our plot does distinguish the relative position along the factors for the vast majority of firms.

take risks in attempting to cope with technological and product-market change. S_2 firms are another sort of exception in that they are very centralized because they are run by leaders who have wrought tremendous past success. However, since companies are so dominant, they feel little pressure to dramatically change their previous orientations and so become increasingly conservative.

It makes some intuitive sense to hypothesize that the level of environmental heterogeneity will be inversely related to the degree of power centralization (Fig 4-3) After all, heterogeneity does often entail additional complexity in the administrative task and it would seem reasonable, at least within successful firms, to deal with this in part by increasing the decision making discretion of lower level managers. An examination of the archetypes reveals that things are not so simple. It seems, according to Figure 4-3, that S_3 has tried to decentralize to cope with substantial heterogeneity . . (Continued on next page)

FIGURE 4-3

MEAN SCORES OF SUCCESSFUL ARCHETYPES ALONG HETEROGENEITY AND CENTRALIZATION FACTORS



whereas S_{1A}, S_2 and S_5 are more centralized, perhaps, in part because they face less heterogeneous settings. Archetypes S_{1B} and S_4 present a different picture. In S_4, centralization of power in the hands of an aggressive entrepreneur has allowed this man to enter new markets thereby increasing environmental heterogeneity. In this case centralization has fostered heterogeneity rather than heterogeneity causing decentralization. S_{1B} has both moderate heterogeneity and moderate centralization scores. Perhaps substantial environmental dynamism has induced greater decentralization and also restrains managers from straying too far afield in their pursuit of markets.

Indeed the exceptions seem to present as many insights into administrative behavior as do the general tendencies.

We shall now turn now to a more detailed description and analysis of each of the successful archetypes. The presentation is structured as follows. First, some case summaries and the essential features of the archetype are briefly highlighted. Then a causal model is hypothesized to explain the relationships amongst the most important features. For the most part, this model derives from a careful analysis of each of the cases which are comprised by the archetype. These cases provide clues on the time order of change for certain variables and also supply rationales for the existence of certain environmental, organizational, and strategy making attributes and associations. A detailed discussion of the archetypes follows the presentation of the causal model. This discussion provides more information on the hypothesized causal links and the essential features of the archetype. To give the reader a deeper appreciation of the more concrete and specific manifestations of archetype characteristics, a good number of quotes from the sample cases are inserted. This adds vitality to the exposition and moderates the negative effects from the use of abstractions and jargon. The headings used in the discussion section are a function of the nature of each individual archetype. However, the initial causal model establishes in advance the sequence of arguments to be followed. A very brief conclusion section sums up the most important points of the discussion. Finally, a series of hypotheses are generated at the end of the archetype discussion. These pertain only to the archetype in question and are supplied mainly to serve as a focus of investigation for subsequent researchers.

It is important to note that the causal models which are suggested for our archetypes were not derived through the use of correlations, or any other quantitative technique. This would have been impractical because of the relatively small sample sizes. Also, and perhaps more important, critical features of archetypes showed a tendency not to vary a great deal from one member firm to another. The relative paucity of variance on the most significant variables might impede the emergence of significant intra-archetype correlations. Until very substantial samples are collected for each archetype, it is unwise to attempt to use simple measures of association.

S_{1A} THE ADAPTIVE FIRM UNDER MODERATE CHALLENGE

Sample Case Summaries

Mills B. Lane Jr. has for many years been the CEO of the Citizens and Southern National Bank of Georgia. Lane is a strong executive and his focus has been the marketing end of banking. He has emphasized extra service at slightly higher prices and has been able to attract many new customers because of his willingness to take more credit risks. Certainly, the technology of banking is quite stable. The only real threat comes from competing banks who seem to be much more conservative than C & S. The Bank's major competitive advantage is that it has studied its customers and their businesses quite carefully and is thus in a position to offer very quick service to its clientele. The substantial discretion at the disposal of credit officers in no small way facilitates this approach (November 1969).* The Union Bank is incredibly similar to the C & S and does not warrant separate discussion (March 1974).

Sam Marshall's large Ford Dealership is one of the most successful in the U.S. Its owner competes with his many counterparts on the basis of price and service. Again the method of doing business is well established and so the basic strategy revolves around building up a favourable public image and controlling expenses to the last penny (December 1972).

Burlington Industries, one of the largest textile firms in the world, also deals in established markets. The price competition from the many other firms in the industry is quite intense however. To cope, Burlington has attempted to make operations as efficient as possible and to discover the product features which are most desired by the market (June 1964).

Cincinnati Milacron is slightly different from the other firms in the S_{1A} archetype. Its quite innovative product market orientation makes it similar to S_{1B} firms. Still, the firm finds itself in the machine tool industry which is often characterized as being staid and stuffy and is "more frequently known for parochialism than for technological innovation". Cincinnati itself however, has become a daring competitor. It has introduced many new types of machines, and has sometimes done this incorporating many ideas previously tried by competitors. Careful to hone its marketing effort and broach new markets, Cincinnati has become one of the most successful firms in the industry (December 1970).

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* Date of case. For details see Appendix I.

We should note that we do not always discuss all of the firms in an archetype. We have space to present the features of, and quotes from only those cases which best illustrate the characteristics of the archetype.

Essential Features

While the degree of environmental dynamism is currently, and has for quite some time been, only moderate, hostility is and was somewhat more substantial. The management tends to be concerned about the intelligence function, and controls, scanning efforts, and open internal communication systems are very much in evidence. There has been much delegation of authority to perform routine administrative duties to lower levels of management and the expertise of middle managers in the various functional areas is quite high. The firm is guided in its strategic orientation by a quite powerful chief executive who focuses on the appropriateness of long term objectives and strategies. The efforts of departments are integrated. There is a strong tendency for the firm to take sizeable risks and lead the competition. However, most decisions are backed by a substantial analytical effort, are responsive to objective external conditions, and reflect a broad host of opportunities and constraints.

Hypothesized Causal Links

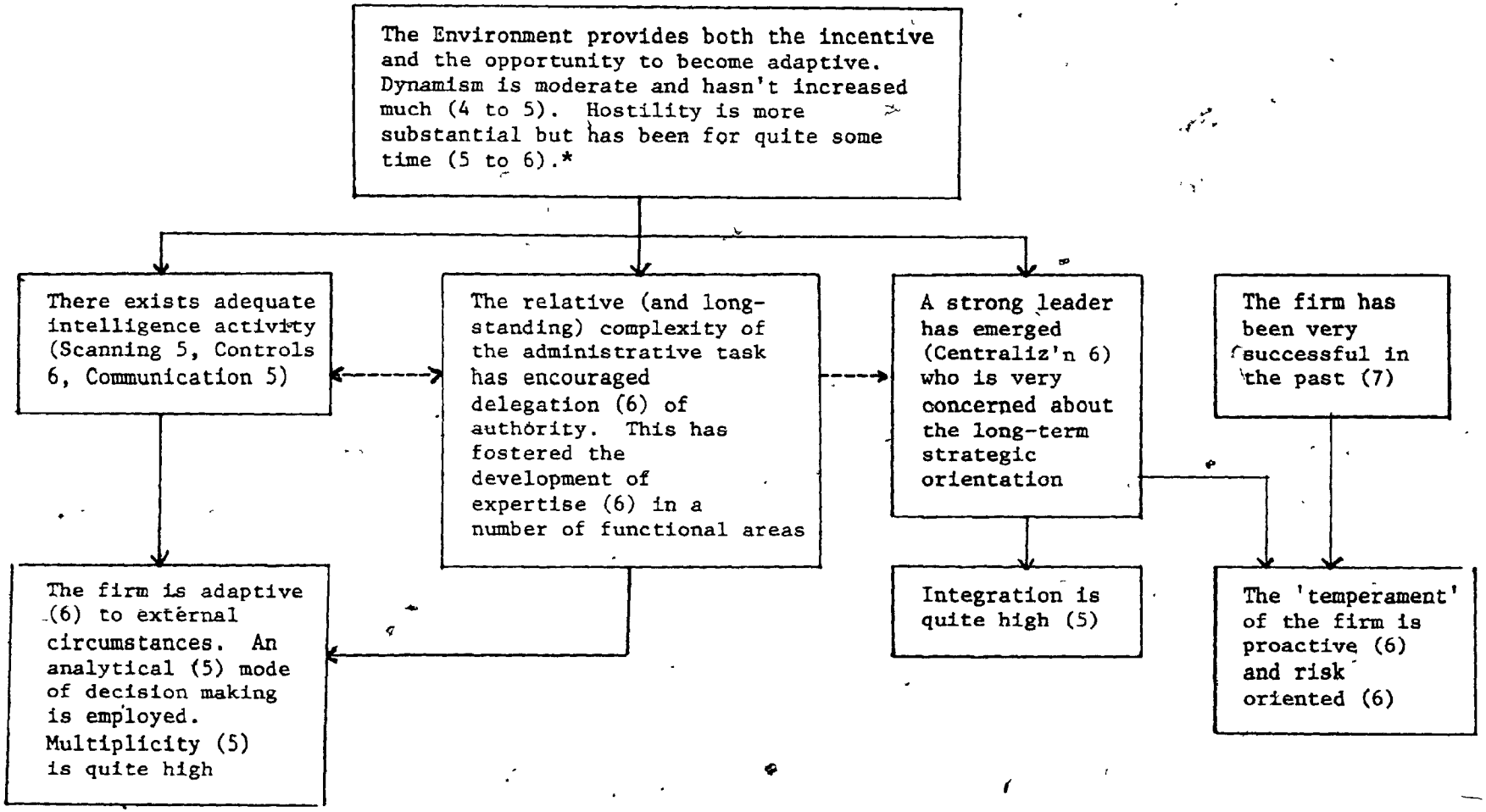
Figure 4-4 portrays our putative model which describes the Adaptive Firm Under Moderate Challenge. Perhaps the most salient quality of this archetype is the ability of member companies to 'match' or adapt to their environments. While it is sometimes difficult to establish the causal directions which are actually operative, we hypothesize that the environment represents an important 'starting point' in the model. The most significant aspects of the environment are:

(a) the fact that there have been no great or sudden changes over the past 5 or so years in the levels of dynamism and hostility, and,

(b) the level of challenge in the environment is fairly substantial - particularly in terms of competition and other factors related to hostility.

The implications of these environmental features seem to be quite important. Firstly, the environment has not 'pulled any fast ones' so

FIGURE 4-4 THE ADAPTIVE FIRM UNDER MODERATE CHALLENGE



* Numbers in brackets are modal scores as portrayed on Table 4-2. Arrows portray hypothesized causal directions. Dotted lines indicate the hypothesized association is doubly tentative.

that the ground rules did not change in a discontinuous fashion. The firm has had a chance to acquaint itself with the features of its setting and to understand or learn the sorts of responses which are called for. Secondly, the environment has been challenging enough to prompt the adoption of more sophisticated organizational intelligence and structural devices.

There are about three crucial features which have been taken on by S_{1A} companies to help them cope with the environment. Perhaps most important, there is a fairly well developed intelligence set-up. Internal communication networks appear relatively open, efficient, and unbiased, financial and quality controls are good, and much effort is devoted to tracking the environment and interpreting external trends. Also, the firm's power structure is such that middle and lower levels of management have been given much authority for routine administrative decision making. This has helped to develop lower level managers to have greater expertise in their areas of responsibility. Finally, the challenges in the environment have caused the firm's leaders to recognize the need for corporate strategies and plans. The need for centralized direction to help carry out reorientations and coordinate the efforts of the middle managers has also been perceived.

The strategy making attributes seem to follow to a large extent from the structural devices which have been employed to adapt to the environment. For example, the analytical quality of decision making may be viewed as an outgrowth of the intelligence system which has 'flagged' issues that require more intensive investigation. The multiplexity of decisions/strategies may stem from the contributions of a number of decision makers, each with a slightly different orientation. The adaptiveness of strategies can be due to the intelligence activity, the relatively high levels of managerial expertise, and the analytical/multiplex character of decisions.

The integrativeness of the firm's orientation is helped by the strong leadership and the attention given to the development of conscious strategies. The proactive, risk-taking philosophy may be attributed in part to the confidence derived from past successes as well as the unified and powerful leadership which is free itself to initiate provocative moves.

Discussion

A Stimulating, but Manageable Environment

The environment is becoming more hostile and dynamic but only quite gradually. In fact, firms have become used to a relatively challenging setting, especially in terms of competition. What is of prime significance however is that there have been no really major structural changes in the environment in terms of the types of competition, the nature of the determinants of demand, or the principal production/service technologies. There may have been changes in the degree of competition etc., but for the most part these have been quite moderate and do not entail discontinuous changes in the rules of the game. Nonetheless, the environment does pose some challenges and these have prompted the firm to adopt certain structural devices and modus operandi.

> Burlington Industries:
>
> In an industry as volatile as textiles ... [there are] a great many independent operators with lots of capacity and ... the problem of foreign imports. Thus the business is fiercely competitive and the net effect is to hold prices down. p. 218
>
> Marshall Ford:
>
> Increasingly, dealerships in urban and suburban areas are becoming large, complex, and highly competitive businesses. p. 121 ... The average car dealer earns less than 1% on his volume ... Competition keeps the real price of most cars quite close to their wholesale cost and far below their presumptive list prices. p. 126

In order to cope with this competition, the firm has had to become aware of the strategies of competitors, the desires of consumers, the best ways to control costs and enhance profit margins, etc. The incentive to become a responsive organization in these respects is quite strong.

An Earnest Intelligence Effort

A good deal of effort is expended in an attempt to effectively process information which may be germane to the companies' success. The need for intelligence activity has been made clear by events in the environment.

Union Bank:

[As one customer puts it:] 'They understand the deal as well as you do.' Union therefore sometimes makes loans other banks won't, lends higher percentages on a project, and readily puts up 'front money' to get projects started. p. 125

Intelligence is strengthened also by a set of sensitive financial controls and open internal communications.

Cincinnati Milacron:

A Baker Scholar at Harvard Business School, Phil [Geier] modernized management techniques, set up profit centers throughout the company, and began looking more aggressively at diversification opportunities. p. 73

Marshall Ford:

The Marshall store has the informal atmosphere of a closely knit small business, but his sophisticated financial controls would do credit to a much larger enterprise. p. 123

Delegation with Strong Leadership

Environmental hostility complicates the administrative task and so it becomes imperative to delegate parts of that task to middle and lower level managers. At the same time, it appears necessary to have a decisive leadership which has the power to reorient, develop, and adapt top level corporate strategies to keep them in tune with external conditions, and to coordinate and integrate the efforts of the lower level administrators.

Burlington Industries:

President Myers, while very much Burlington's chief executive, concentrates on broad policy decisions and on administering the company's over-all affairs ... Instead of ... intervening personally in matters of small detail, he leaves that to others. p. 108 ... Myers puts great stress on divisional autonomy in manufacturing and sales. p. 111

Union Bank:

Volk moved to establish a few 'regional' head offices to do business with businessmen with the same authority, speed, and service of a headquarters bank. In short, he borrowed the ... idea of decentralization. p. 180

C & S Bank:

Until recently Lane ran the bank as a one-man show ... Although he is still very much in charge, Lane is delegating more and more decision making to his top officers. That comes about partly because C & S has grown too large for one man to run everything. p. 137

An Informed and Adaptive Decision Style

The strong intelligence system and effective power structure of the firms seem to foster an adaptive, multiplex, and analytical decision making style. The free communication amongst managers, active scanning, and sensitive controls may ensure that critical issues come to light quickly and are brought to the attention of the most relevant parties. The power structure encourages involvement in decision making by the most informed managers, irrespective of their levels in the organization hierarchy, while at the same time ensuring that adequate decision making power can be marshalled by top executives to effect coordination of major changes in short order in cases of emergency.

Burlington Industries:

'Myers ... is willing to prolong discussion [of problems] ... we've got more teamwork now. We arrive at decisions jointly.' p. 110 [He] has tried to make Burlington more market oriented than most textile companies. p. 111 Confident, expert, and extremely flexible in its adjustments to the volatile textile market, Burlington under its new team of managers appears to be in extremely good shape. p. 219

Cincinnati Milacron:

In one year, beginning in late 1967, Cincinnati designed from scratch a line of eight injection-molding machines, incorporating the best features of several competitors ... Demand has exceeded even Cincinnati's expectations ... and the business made a profit in its first full year of operation. 'Call it a hedged bet' says Jim Geier, who

> knows that the economic advantages of plastics will increasingly push Cincinnati's customers into plastic processing. pp. 77 and 114.

A Bold Temperament

The S_{1A} firms have been very successful in their recent past. They are quite confident in their ability to understand their environment and do what is 'right'. Firms are not at all reluctant to take major decisions, even where these are fairly risky and entail leadership in the industry. Another factor besides past success which seems to account for the decision making boldness is the existence of a powerful leader. The chief executive sees strategic change as a key part of his role. He is also sufficiently powerful to override any objections which might tend to mitigate the thrust of decisions in firms with greater diffusion of strategy making power.

> C & S Bank:
>
> [Citizens & Southern Bank] has found ingeneous ways to expand despite one of the more restrictive branch-banking laws in the country. It has introduced new banking methods and philosophies. It helped pioneer the bank credit card and 'instant money'. C & S is not above alluring its customers with gimmicks that shock its competitors. p. 135
>
> Cincinnati Milacron:
>
> At the moment, Cincinnati is out on a limb trying to crack into the wildly unsettled small computer market. This adventure, the outcome of which is still in doubt, follows hard on a swift, successful move into plastic processing machinery [and other venturesome gambits]. p. 73

Conclusion

The S_{1A} firm seems to have had both the incentive and the opportunity to adapt to its environment. Management has apparently made the best of the situation by employing the most appropriate intelligence and structural devices. Strategies are adaptive and analytical but also can be bold and proactive. As we shall see, archetype S_{1B} is very similar to this one except that the environment is more dynamic and hostile and even more

effort is devoted to innovation, intelligence and analytical activity in an attempt to adapt to the turbulent surroundings.

Relationships Suggested by Archetype S_{1A} (these apply only to the archetype in question).

1. Gradual change in the environment allows the firm to adapt much more readily than if transitions were more dramatic. This relationship might not hold unless there has, for quite some time, been a reasonably substantial degree of dynamism or hostility. Failing this, little attention would be given to the adaptive process and gradual change would not be noticed. Thus there may be two concurrent co-conditions in the environment which facilitate or impede organizational adaptiveness the degree of change and the 'starting conditions'.

2. The amount of organizational intelligence effort and the diffusion of the distribution of organizational power are directly and positively related to the levels of environmental dynamism and hostility in the successful organization.

3. The more open the internal communication system and the greater the number of participants of lower levels in decision making, the more multiplex the decisions.

4. The more sensitive the intelligence system, the more analytical the strategy makers. The system of scanning, controls, and communication identifies important trends and facts which stimulate further thought and analysis. It is believed that organizational adaptiveness is also facilitated by a sophisticated intelligence system and by the analysis of key issues.

5. In the successful firm, environmental dynamism and hostility will provoke a reaction which reduces administrative task complexities and simultaneously increases organizational flexibility. For example, delegation of authority to middle and lower level managers sometimes lightens the administrative burden of top management where divisionalization is

used. The performance of managerial personnel can be evaluated and monitored by using operating controls. Top managers thus need not get personally involved in every problem or decision. At the same time, organizational flexibility may be increased because top management has the opportunity and scope to focus mainly on strategic-corporate matters. These involve assessment of product-market postures, long-term financial plans, and other global issues which prompt consideration of major reorientations and corporate adjustments. Similarly, top managers are free to pay more attention to coordination of the various departments of the firm so that a well integrated and complementary corporate effort is ensured.

6. Delegation and decentralization is most useful where there is an adequate system of organizational communication and controls and where a strong coordinative force prevails. The intelligence devices are required to ensure that managerial performance is up to par and to indicate in timely fashion the areas in which corrective action is needed. A strong coordinative force counters the tendency for lower level managers (who may now have considerable independence) to work at odds with one another (Khandwalla, 1972). The types of coordinative 'devices' which produce a better integrated effort are strong leaders who focus on overall objectives and plans, and a communication system which provides departments with relevant information on what other units are up to (this may be through committee meetings, formal reports, or informal contacts 'in the hall').

7. Proactivity and the proclivity to take risks are both promoted by past successes (provided that a previous state of conservatism did not exist). Success inspires the sort of boldness necessary to continue to evolve and change. A strong leader can overcome resistance to change and can induce the type of coordination necessary in any major alterations.

S_{1B} THE ADAPTIVE FIRM IN A VERY CHALLENGING ENVIRONMENT

Sample Case Summaries

One of the most interesting new companies in the technologically turbulent and intensely competitive semiconductor industry is Intel Corp. When Intel commenced operations, there was no real market for its product. The company's pioneering efforts in the development and manufacture of complex semiconductor memory components, coupled with its ability to tailor products to the most critical and widespread needs of the marketplace, propelled the firm to success. Founded by two vererans of the advanced electronics field who themselves were scientists, the company had an 'organic' and loose management style in which scientists and marketing and production people were given a great deal of decision making discretion. This allowed lower levels to stay in close touch with trends in the market and gave them the latitude to adapt quite rapidly (November 1973).

Surprisingly, DuPont (in 1950) was like Intel. The chemical giant placed an incredible amount of effort on product-market innovation, particularly regarding the fibers end of the business. DuPont made use of its basic research on the polymerization process to invent new materials, figure out a way to manufacture and use them, and build up a market in which to sell the products. DuPont did this in many areas of its business. The risk taking was of a calculated nature however since a great deal of analysis and intelligence gathering went into each major decision. Also, the extensive use of committees ensured that as many experienced perspectives as possible could be brought to bear in considering the very major projects.

There are quite a few other firms in this archetype which are similar to DuPont and Intel. Hughes Aircraft has consistently battled other high technology firms to come up with a steady stream of technological firsts in the defense and electronics areas (April 1963). Monsanto, a firm which has had to deal with DuPont, has not innovated as extensively as its large competitor but has come up with particularly appealing and

and efficiently produced chemical products in a tough environment (September 1964). Upjohn, the large pharmaceutical company has, after 15 years of costly research, made one of the most important discoveries in the history of the industry. For all of the above firms, it is not just that they have innovated, often boldly and consistently. They have always held paramount the commercial feasibility of their activities in the light of the needs of the markets. Strategies are developed which assure the relevance and mutual compatibility of research, production and marketing orientations. The final four firms of the archetype illustrate these qualities very well. Though their innovations are not usually of a very major or discontinuous nature, the adaptiveness of these firms in a turbulent and competitive environment is remarkable. Matsushita, the Japanese electrical giant has dealt shrewdly with economic recession, market saturation and intense foreign competition by continually revamping its product line and increasing its efficiency (December 1972). Proctor and Gamble's "thoroughness" in all areas of operation have allowed it to remain the most successful firm in the industry in introducing new products (July 1974). Armstrong Cork has grown to be the most outstanding earner in the feast-or-famine building materials industry by stressing sensitivity to market needs and by developing an uncanny ability to come up with well received products (March 1964). Edward Carlson took over the chief executive's job at United Airlines at a time when the company's fortunes had ebbed to an all time low (March 1972). The United case illustrates a corporate turnaround carried out under rather trying conditions. It should be noted that some of the cases (particularly the latter four) in S_{1B} are in many respects similar to those in S_{1A} and it <u>can</u> be debated just which archetype they do fit best.

<u>Essential Features</u>

Environmental dynamism is very substantial indeed. This situation has become more pronounced of late but the existence of a basically turbulent state is longstanding. The same is true of hostility. Again, management pays a great deal of attention to the intelligence function and highly developed systems are the rule. There is a great deal of delegation of authority to lower levels for all non-strategic matters and power centralization is moderate - there are often several top

executives who jointly formulate strategies. A great deal of effort is devoted to analyzing major decisions and plans and attempting to make these exactly appropriate to prevailing conditions in the environment. Particular emphasis is given to product-market innovation.

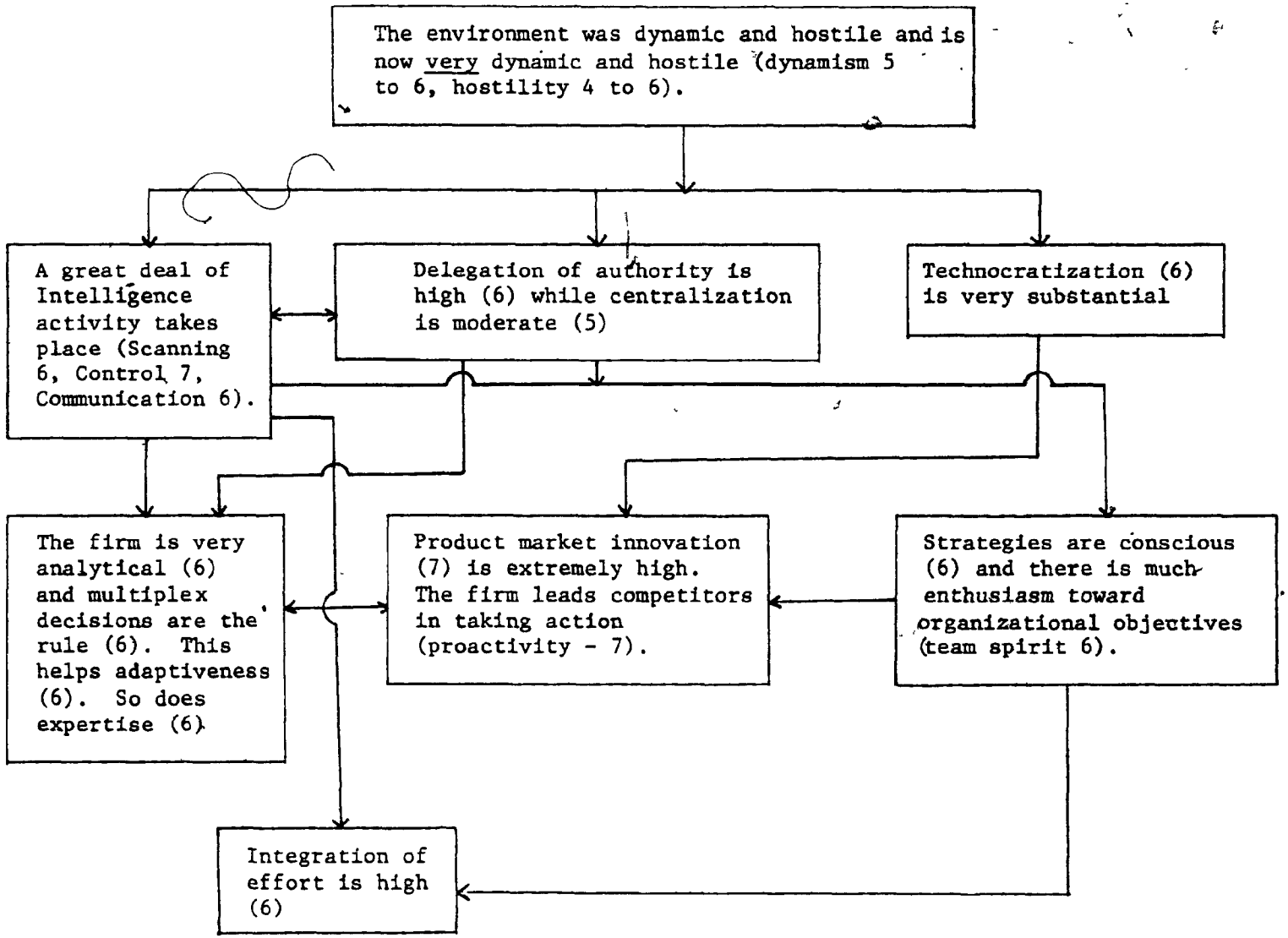
Hypothesized Causal Links (See Figure 4-5)

Our causal model for the S_{1B} archetype is essentially the same as that used to characterize S_{1A}. The only differences worth noting are those of 'degree'. For example, the environment is more dynamic and often more hostile than it is for S_{1A} firms. As a result more sophisticated devices and more concerted efforts are required to cope with the uncertainty. However, just as in the S_{1A} case, firms have had ample time to build up the expertise necessary to deal with the turbulence - the environment has been dynamic for a long duration. Also, the devices used to cope are more elaborate, but very similar in nature to those of S_{1A} firms. Intelligence systems are extremely well developed in terms of scanning, controls, and internal communication flow. Also, the power distribution in S_{1B} firms is more diffuse so that lower levels play greater roles in the adaptive task. Not only are middle managers responsible for all operating decisions, they play roles in strategy development as well. Also, because environmental complexity increases the difficulty of the administrative tasks, power to formulate strategies is often shared amongst a number of top level executives. In short then, the greater environmental challenge is met by a more concerted effort to track the environment and a more decentralized authority structure which better absorbs administrative task complexity and facilitates speedier adjustment to external contingencies.

A device used to cope with uncertainty by S_{1B} firms, which is not used by S_{1A} firms, is technocratization. The use of professionals such as scientists, engineers, and systems analysts is quite prevalent in successful firms facing a technologically dynamic environment. The frequent need for product-market innovation can only be met by having such specialized and skilled personnel on hand.

Just as in the case of S_{1A} firms, the organizational intelligence and power devices contribute to the analytical, multiplex and adaptive

FIGURE 4-5 THE ADAPTIVE FIRM IN A VERY CHALLENGING ENVIRONMENT



nature of strategies. Knowledge of the environment may lead to the analysis of key issues and the ability to adapt to external trends. Decentralization and participative decision making can ensure that the adjustment can take place promptly and that multiplexity emanates from the pluralistic points of view brought to bear on complex decisions. The relevance of analysis is sometimes enhanced by technocratic personnel.

While the S_{1A} firms show a proclivity toward risk taking and boldness, they exhibit only a moderate effort to encourage product-market innovation. Many S_{1B} firms on the other hand, are exceptionally active in this realm due to the technological state of turbulence in the environment. New markets are entered and new products and production technologies are developed at an incredibly rapid rate. The intelligence activity and the knowledge and discretion of technocratic and middle management personnel allow for accurate and speedy development of particularly appropriate innovations. Blatant risks were rare as bold moves seemed to be analyzed carefully in advance. The adoption of a measure on the basis of purely intuitive entrepreneurial impulse by a top executive was nowhere in evidence. The organization is not merely an extension of the character of the leaders but was portrayed as a smoothly functioning machine which reflects the needs of the environment and the competences of the personnel.

Integration of effort is achieved as a result of the attention to explicit overall strategies, excellent communications amongst various sub-units of the organization, and a strong sense of team spirit.

Discussion

Long Term Turbulence in the Environment

The environment has been characterized by rapid technological change, extensive product modifications, and tough competition. These conditions have existed for quite some time so that the organization has had ample chance to develop appropriate devices to deal with the turbulence. However, the incentive is there to remain perpetually vigilant. Any attempt to slow progress in innovation or reduce intelligence activity might soon result in some form of punishment.

Intel:

'This business lives on the brink of disaster', explains Moore. 'As soon as you can make a device with high yield, you calculate that you can decrease costs by trying to make something four times as complex, which brings your yield down again.' ... The market for semiconductors slumped in the spring of 1970, and price competition became intense ... [Intel] was forced to lay off about a seventh of its employees ... The breakneck pace of innovation in electronics makes products - no matter how good they are - grow obsolete even faster than people. The 1103 is only three years old and is just reaching its production peak but the trade press has already called it 'a DC-3'. p. 184

Proctor and Gamble:

As the life cycles of packaged goods grow shorter, manufacturers are compressing the time they spend in developing new products. A new shampoo is introduced about every three months now, for instance, and each new one threatens the market share of all those on the shelves. p. 166

DuPont:

The chemical industry [1950] exists on change, on continually improving older products and regularly introducing new ones. p. 162

Hughes Aircraft:

'We have to carry out efforts [on behalf of customers] where we are not sure what the outcome will be ... The order is to make innovations off the shelf.' p. 183

Armstrong Cork:

So swift are flooring manufacturers to imitate one another's innovations, that lead time on a new product has been drastically cut ... 'styling changes come so fast these days' says one flooring man, 'that sometimes I feel as though I were in the dress business.' p. 154

The firm is required to adapt with great speed and accuracy to survive in such a turbulent setting. Several devices help in this respect. Intelligence networks, a diffuse power structure, and technocratization seem to be of crucial importance.

A Sensitive Intelligence Network

The 'intelligence' devices employed by the organization are: active scanning, sensitive controls, and open internal communication systems. The scanning is done at all levels and functions of the organization and seeks out important trends in market behavior, competitive tactics, sources of supply, economic conditions, and so forth. Controls take the form of timely, objective information systems and 'alarms' which alert managers to conditions which are out of control.

The most effective controls identify problems before they become overly severe and are specific enough to highlight the precise nature of the difficulty by area of responsibility. Internal communications in adaptive firms are frequent, multidirectional (vertical and lateral) informal, and very rapid. Information on the environment is quick to rise to the appropriate decision makers, and policy guidelines and coordinative directives travel down to the relevant parties with a minimum of distortion. Communications are usually on an ad hoc basis and arise smoothly and spontaneously if interdepartmental cooperation is required on any issues.

> United Air Lines:
>
> [In discussions with personnel at all levels of the organization, what President Carlson] really wants is to find out where things are going wrong and where the problems are ... A senior management committee which met every Monday morning [gave] United a sense of organization and momentum as well as perspective about priorities. p. 74
>
> Proctor & Gamble:
>
> To be considered for introduction, [a new] product must win the votes of a majority of consumers in tests against each major competing brand ... p. 77 'When you find a significant body of women who believe the characteristics of what they want are found in a product - this is the essense of consumerism giving them what they want.' p. 75

Armstrong:

'We learned to be market-minded and customer oriented. We learned to live and grow by providing the best solution based on the customer's problem'. p. 129

DuPont:

The Finishes Division, from the manager on down, went into the field to interview dealers and customers, and found sixteen things wrong with the new product or its merchandising. p. 179

To complement this type of scanning activity, S_{1B} firms also have developed sensitive controls.

United Air Lines:

In his most far-reaching departure from air line tradition, Carlson introduced a major organizational feature of the hotel industry - the profit center. p. 75

Intel:

To build up a first-rate production organization, Grove, among other things, introduced what may be the toughest process monitoring and quality control in the semiconductor industry. p. 184

DuPont:

To aid [control and analysis] there is a chart system ... 350 big charts carry a running account of the industrial departments' businesses and of DuPont as a whole ... [At monthly Executive Committee meetings] if the return in any department varies any significant amount from the required figure, the general manager is on hand to explain, and the trouble is traced back to its source through the chart system. p. 169

Finally, the intelligence system is apparently characterized by open and responsive internal communications.

Matsushita:

> Bosses at every level prefer face-to-face contact and rarely write interoffice memos ... Division heads spend only an hour or two a day at their desks; mostly they move about and talk with engineers, middle managers, and production workers. p. 98

Hughes Aircraft:

> 'There is a real incentive-reward system and no civil service type of atmosphere. Things are on the up and up - the hidden agenda isn't so big here. There is a difference in the relationships of people ...' p. 175

Decentralization of Power

Environmental turbulence tends in adaptive firms, to result in a coordinated type of decentralization. The strategy making body at the top provides basic guidelines which supply an 'operating theme' to coordinate the efforts of the various divisions and functions. Much of the adaptive effort is performed however by lower level managers who possess sufficient 'localized' expertise. All routine activities are delegated to operating personnel so that higher level executives are free to deal with more basic considerations. The turbulence results also in the accumulation of highly trained individuals with professional/technocratic expertise. Such persons bring into the organization a more intimate familiarity with certain elements of the environment and the skills necessary to spur required innovations. The adaptive firm often finds itself in doubly good condition since past successes facilitate the accumulation of organizational resources (funds and facilities) necessary to attract the most competent personnel.

Matsushita:

> As president and chief executive, Masaharu Matsushita tells the heads of his thrity-one divisions to run them like independent companies, as long as each produces 10 percent pretax profit ... Matsushita managers and ordinary employees alike are exhorted to exercise individual initiative and to handle problems at the lowest possible level. p. 97

Armstrong:

> ... Administration has been divided among four line organizations ... these are each headed by an operating vice president and general manager with authority and responsibility for all operations and earnings in his field. p. 152
> [The president] is able to concentrate on long range planning and overall policy direction. p. 154

The administrative task is often so complex however, that even policy making must have the input of a variety of functional executives, divisional heads, and staff technocrats.

DuPont:

> [Re. the members of the Executive Committee which along with the Finance Committee represents the interests and perspectives of a host of functions and divisions]: Their collective function is to think; their chief field of action is policy matters. p. 88 ...
> The Executive Committee ... is removed from the battle to deliberate and coordinate over-all strategy, a job in which nine heads are better than one. p. 89

A Well Thought-Out Strategy

The existence of a body of individuals concerned with essentially only strategy making, and the knowledge of the environment provided by the keen intelligence set-up, both seem to cause there to be an explicit attempt to develop a well articulated corporate orientation and 'master plan'.

Upjohn:

> The commanding position held by Upjohn in this new treasure trove of drugs was gained partly through luck but mostly through foresight and perseverance. p. 99
> We take the long term view and work for the long term future. p. 76

Monsanto:

> [Monsanto's top strategists] planned an advance along three major avenues of action ... integration forward, integration backward, and a massive assault on costs. p. 128

The clear objectives, substantial delegation of authority and responsibility to lower levels, and informal and open communication system seem to inspire a high level of team spirit and dedication to the firm. This identification with overall goals and strategies increased the value of explicit plans. Integration of effort is facilitated.

Analytical, Multiplex and Adaptive Decision Making

The acute organizational intelligence system prompts decision makers to become aware of issues which require more detailed analysis and deliberation. The availability of technocratic personnel and the prevalence of organizational intelligence ensure that decision makers are as expert as possible in their areas of responsibility. Thus the quality of analysis tends to be quite high.

Multiplexity is boosted since decision making tends to be participative. A number of different perspectives and orientations tend to be brought to bear upon any critical decisions. This results in a larger and more multifaceted set of factors being considered.

The seemingly high quality of analysis and the multiplexity of decision making, coupled with the fine intelligence network and knowledge resources of the firm, cause decision making to be quite adaptive to the organizational context. Adaptiveness to external conditions is probably the single most critical attribute for firms in a turbulent setting.

DuPont:

> [There is a] wide variety of talent and experience brought to bear on each major decision. In so far as DuPont is credited with top-drawer management [executive teams are] the reason for it, and the teamwork is carefully nurtured. p. 92

The competence of human resources appears to be complemented by the effort devoted to the analysis and deliberation of decisions.

Proctor and Gamble:

> Proctor and Gamble manages every element of its business with a painstaking precision that most organizations fail to approach. Thoroughness extends to the careful and tenacious recruitment of employees, the development of a much admired executive corps, the design of manufacturing facilities, and the creation and testing of products. By the time a product gets to the marketing stage, the thorough preparation through all the prior stages has already endowed it with an edge on competitors. p. 75

Multiplexity is demonstrated by a high-technology innovator in the semiconductor industry.

Intel:

> [Intel] avoided the technology-is-everything trap. Instead they relied on their production, management, and marketing skills at least as much as they did on their technical expertise with striking results. p. 142

Each of the foregoing attributes help set the stage for adaptiveness.

DuPont:

> Sparking new markets are two sections ... a product development group explores a new product on a qualitative basis, finding out how it can be used. Simultaneously a market study group takes a cold, quantitative look - how much can be sold and where - acting as a check on product development's enthusiasm. p. 176

Matsushita:

> [Executives] have begun a remarkable recovery effort. They placated Japanese consumers by cutting prices, and they reduced manufacturing costs by introducing new or improved production machinery of the company's own design ... Matsushita is leaping over tariff and other trade barriers by expanding production abroad, especially inside such key markets as the U.S. and Canada. p. 96
> By moving with the times, the company seems likely to maintain its lofty position in a volatile industry. p. 103

Sprightly Product-Market Innovation

Where the environment is turbulent, adaptiveness implies the need for substantial innovation. The appropriateness and success of the innovation may be bolstered by the analytical and multiplex nature of the decision making process and the availability of expert and technocratic personnel. The orientation of product-market innovations seems prevented from becoming aimless or helter-skelter by the explicit overall strategies and integrated objectives. For S_{1A} firms, innovation is the rule and a proactive stance allows companies to lead competitors in making profitable changes.

> Upjohn:
>
> Our strategy is to get there first and to have support capacity that is adequate to meet any foreseeable demand ... We will therefore be in a classical position of market dominance, having created the market in the first place. p. 98

> Intel:
>
> When Intel went into business, no market existed for its principal product. Today, thanks to the company's trail blazing, no big computer is designed without semiconductor memory components. p. 142

> Armstrong:
>
> Nearly half of all sales were of products developed in the previous ten years. p. 150 .., '[Our] goal is to obsolete our products, our services, and our distribution systems first - not to wait until someone else does it for us'. p. 152

> Hughes Aircraft:
>
> One reason the scientists stay with Hughes Aircraft is because 'the maximum exploitation of technology is a very dynamic game - there is no standing still, no repetition'... the [research] lab has emerged as an exciting generator of technological firsts. p. 176

Conclusion

The scenario is very similar to that of S_{1A}, the causal directions being very closely aligned. The main differences are those of degrees, the responses to the greater turbulence involving a more deliberate intelligence effort, greater decentralization, more technocratization, bolder product-market innovation, and a better defined, more carefully analytical strategy.

Relationships Suggest by Archetype S_{1B}

See 1, 2, 3, 4, 5, 6 and 7 of S_{1A}. Two other hypotheses are suggested as well.

1. Environmental dynamism creates the need for sporadic-substantial and/or continuous incremental product-market innovation. Some firms came out with a few very major innovations (e.g. DuPont's new fibres) while others came up with a fairly constant stream of incremental product-market adjustments (Armstrong's different floor coverings). To the extent that innovation involves complex scientifc problems, organizational power must be shared with technocratic/professional/ middle management personnel.

2. In complex environemnts, even overall strategy making activity cannot be centralized too tightly in the hands of a top executive. Task complexity is such that functional line and staff expertise must be brought to bear on top level decisions.

S_2 YESTERDAY'S SUPERSTAR - THE DOMINANT FIRM

Sample Case Summaries

By 1974, Xerox Corp. had grown to dominate the copier market head and shoulders. In eleven years (ending 1971) their profit had multiplied eighty-fold. Increasingly the environment was becoming tougher because of competition from other firms and because of encroaching market saturation. Still, its size, distribution networks, formidable competence and reputation in the field makes Xerox the most powerful competitor in the market. While there is little evidence to show that the firm gathersa great deal of intelligence on its environment or is highly analytical in formulating strategy, there is no doubt that Xerox possesses a great deal of expertise regarding the production and manufacture of copiers. The company is reluctant to deviate from its past product-market strategy in any very dramatic fashion although serious efforts are being made to devise new and quite different types of copiers and to integrate Xeroxing devices and the organizational communication and document storage system using a very sophisticated new technology.

IBM's dominance of the computer industry is legendary. Led by its powerful Chairman, T. Vincent Learson, the man responsible for much of IBM's past success, the company's sensational past growth rate has begun to slow down (March 1972). Even though IBM is still by far the firm most prominent in the industry, the threat of anti-trust actions, the brilliant innovations of several other computer companies, and increasing market saturation had begun to create some problems. Learson's response was to cut organizational fat and intensify market efforts. Indeed the Chairman's forte did seem to be short-run reaction to problems in a manner that involved the updating, rather than reorientation of previous strategies. This approach has enabled IBM to ensure that its product line remainsquite relevant to the market. Nonetheless the hastiness of some key decisions such as the introduction of the 370 series, did cost the company considerably in lost revenues due to conflicts with its own product lines.

Other firms in this archetype are similar. Avon, the largest cosmetics firm in the world has continued to pursue a very explicit, marketing oriented

strategy as a result of its previous, incredibly successful, sales and profits growth rate (1964). Berenchot, a Dutch management consulting firm dominates its market in Holland and again has a very explicit and longstanding product-market orientation (1960).

Essential Features

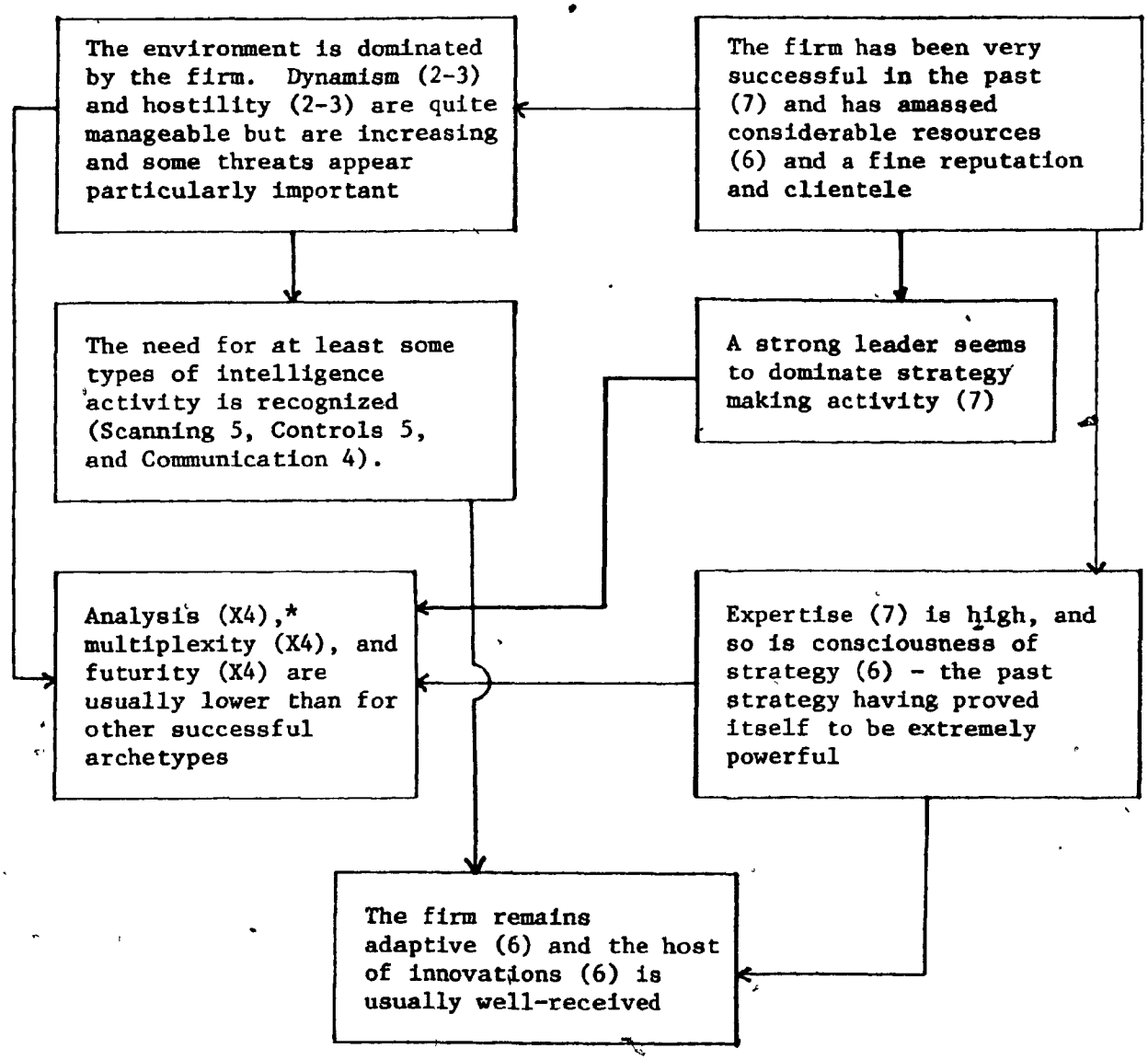
Over the past decade or so, S_2 firms have grown and prospered tremendously. Their past success has been so dramatic and pronounced that, without exception, companies blatantly dominate their markets. The competition is not nearly so strong. The environment is neither particularly dynamic nor hostile. Moderate intelligence activity takes place and the firms are led, for the most part, by rather powerful leaders. To a very great extent, the successful strategy of the past is still pursued. Time horizons seem short and analysis and multiplexity are scored relatively low. Strategies are conscious, traditions linger, and industry expertise tends to be extremely high. The firms remain quite adaptive to the environment and product market innovation is substantial.

Hypothesized Causal Links (See Figure 4-6)

The S_2 firms appear to be in an enviable position. Their excellent reputation and financial and personnel resources give them a loyal market following. No individual competitor poses any truly serious threat. In fact competitors follow the leadership (in pricing, products, and technology) of the dominant firm. The only negative forces in the environment are the activist anti-trust agencies, and, perhaps more importantly, the gradual saturation of markets. The period of rapid growth in sales and profits seems <u>almost</u> (but not quite) over.

To a great extent at least, the encroaching dangers which face the firm are recognized by the top management. In order to combat some of the threats, the firms pay more attention to the needs of the clientele, and, via sensitive controls, attempt to improve the efficiency of operations. These intelligence devices help to keep the firms more adaptive to the circumstances in the marketplace. Much of the direction of the S_2 firms is conducted by powerful top executives. Many of these individuals have had an important

FIGURE 4-6 THE DOMINANT FIRM



* An X indicates that the score on the variable is somewhat unreliable since it varies within the archetype by more than 3 points on the 1-7 scale.

role to play in formulating the initial highly successful strategy, and their power base is extremely solid as a result.

The past 'recipe' for success still comprises the essential strategic orientation of the firm. The traditional product-market scope is broadened but never dramatically reoriented. The ongoing success provides very little incentive to change the operating philosophies or the modus operandi of the S_2 corporation. Because the commitment to an explicit strategy is so strong, there does not seem to be much evidence to suggest that a great deal of fundamental analysis takes place or that the firm thinks far ahead into the future. Also, the skimpy strategy making bodies and the dominance of a strong leader in steering the course of the firm, apparently do little to facilitate more multiplex decision making.

Still, the firms are quite responsive to their environments, at least for the time being. The need for product-market innovations is taken seriously and a new stream of goods and services is constantly being marketed. It is important to note that the new products or markets represent incremental change since no real departure from the existing strategy is apparent. The success rate of the innovations remains quite high because of the tremendous expertise which executives have about the marketplace, the limited intelligence activity which sometimes updates this expertise, and the basic strength of the 'mother' strategy. Occasionally, rather spectacular flops occur, perhaps because of the short-term orientation and the absence of multiplexity and deliberative analysis, or perhaps because of plain overconfidence.

Mintzberg (1975) and Miller (1972) have used the term 'Gestalt Strategy' to describe the orientation of S_2 type companies. The structure, product-market scope and modus operandi form an integrated, mutually facilitating whole which accounts for the firm's success. For example, product features incorporate what is needed by the marketplace and can be produced and responsively altered very efficiently given the skills and procedures present in the organization. The well-knit posture and operating synergy make the firm a formidable competitor. However major changes are discouraged in that any alterations can cause a chain reaction which might largely destroy the complementarities and lead to a troublesome, diffuse posture. Gestalt strategies tend to be most common in functionally

organized firms which are not excessively differentiated or divisionalized. A conglomerate, because of the many directions pursued may have a Gestalt strategy within a division, but is unlikely to experience a similar degree of complementarity in its overall orientation. S_2 firms are not all that diverse.

Discussion

A Glamorous Past; A Dominant Presence

S_2 firms have experienced incredible rates of growth for a substantial period of time. Their strategies have been tremendously successful and over the years companies have come to very forcefully dominate their segment of the market. There is absolutely no question that firms have substantially outperformed competitors and are now in positions of almost overwhelming strength. The resources and skills which they have accumulated in their stellar climb puts them in a doubly enviable position.

> IBM:
>
> Helping keep IBM great today are its immense financial resources and the vastness of its rental base. The company has manufactured a remarkable seventy percent of the world's estimated 142,000 computers and has rented more than half of its production. This gold mine has yielded IBM ... 96 percent of the pretax income averaged during the past six years by the ten big U.S. mainframe manufacturers. p. 145

> Berenscot:
>
> From its beginning, Berenscot had always been the largest and most important consulting firm in the Netherlands ... The Netherlands market offers opportunities to others only to the degree that a local firm, Berenscot, permits ... it dominates by 'head and shoulders' the Dutch market. p. 2

> Avon:
>
> Last year [Avon's] consolidated sales ... were more than the combined cosmetics and toiletries sales of its two biggest competitors.... p. 110

Not all aspects of such dominance are positive however. There are two major threats. The most crucial seems to be that of market saturation or at least market maturity. There are signs that the days of phenomenal growth rates are coming to an end. Also, firms have grown so powerful that they are increasingly being watched by government agencies. Anti-trust suits and charges of cutthroat competition do have a tendency to reduce the operating latitude of top executives.

> Xerox:
>
> With more than 600,000 plain-paper copiers already installed (an estimated 580,000 of them bearing the Xerox name), the saturation point for that particular product cannot be too far off. p. 121 More immediate than any international perils is the many-pronged legal threat at home. The Federal Trade Commission has brought a complaint against Xerox, and the company is engaged in a series of suits and countersuits with four competitors. p. 208

An Increased but Moderate Intelligence Effort

The mounting problems in the environment have not escaped the attention of top managers. These men seem increasingly concerned with the external difficulties and are employing two basic sorts of intelligence efforts to help things along. The first entails greater scanning of the environment to determine how the firm can improve its services and better meet the needs of customers. The other intelligence devices used are controls, particularly those that can help reduce costs, improve quality, and identify future resource needs. It is important to note that intelligence activity seems rather modest when compared to the efforts (and systems) of S_{1A} and S_{1B} firms, but it is greater than that of any of the failure archetypes.

> Avon:
>
> Many executives still sell door to door with representatives frequently, or attend resident managers' sales meetings just to get a feel of the [sales] reps' problems. p. 113

IBM:

> At Endicott, New York, ... the company boasts the most advanced computerized manufacturing operation anywhere ... Another IBM showcase is a $24 million information network that ties together 250 sales branches, nineteen districts, four regional offices, and nine manufacturing plants ... p. 149

Perhaps the tremendously impressive track record of the firm has bolstered its faith in the current strategy to such an extent that intelligence activity of a broader sort is viewed as unnecessary. Whatever the reason, the case data show little evidence of a fully developed intelligence apparatus. Only isolated points on efficiency-mindedness or primitive external scanning seem to appear.

The Leader as Hero

For the most part, top level executives in S_2 firms have played a vital role in developing the past (i.e. current) successful strategy. As a result they have garnered a powerful and secure support base. They have demonstrated their executive capacities to everyone's satisfaction and delight and are regarded by some managers and shareholders as 'heroes'. The support or power base of these executives is so substantial that strategy making authority becomes centralized in the hands of the top men.

IBM:

> At IBM, [Chairman] Learson is known as a demanding, domineering and direct man given to calling people anywhere in the company to find out firsthand what's going on. p. 56

Berenscot:

> Mr. Berenscot was almost a de Gaulle type of leader ... [and his] firm was a one man show. Several others were second in command, but a very distant second. p. 10

Avon:

> [The current top executives (2)] themselves fixed the basic sales techniques underlying Avon's growth. p. 112

Strategic Continuity - Occasional 'Automatic Pilot'

The dramatic success of the firm employing its modus operandi in its current product-market fields is anything but an incentive for substantial change. One formula has proven to be 'tried and true'. Over the years that formula has been explicitly articulated and ingrained in the organization in the form of traditions, operating procedures, and corporate philosophies. In fact there are many individuals in the firm who have been expert in the development and application of the strategy. The combination of a powerful initial strategy, a host of managers who are totally committed to and adept at applying the strategy, and the powerful leadership which integrates and motivates the adaptive effort, apparently produces good results. Firms continue to thrive.

There is another outcome of this combination which is perhaps less salutary. Analysis of strategic issues, multiplexity in the points of view that go into a decision, and the futurity of the planning perspective each seem to leave something to be desired.

> IBM:
>
> ... in retrospect, IBM made some strategic errors ... Among these miscalculations was the overselling of 360 computers, which created an overcapacity in computing power. The overpricing of peripheral devices invited competitors into the field. Insufficient work was done on advanced applications ... p. 145 [The 370 line took highly profitable business away from the 360 line - which resulted in a decrement to net income]. Observing the 370 versus 360 clash, one executive remarks: 'IBM now has its first real competition in the computer business - and the competition is IBM.' p. 145
>
> Xerox:
>
> Five years ago, [Xerox] bought Scientific Data Systems for stock worth over $900 million - a price that many outsiders have criticized as far too high. McColough has publicly acknowledged losses on computer operations of $25 million in 1972 and 1973. p. 208

These blunders could have been caused by excessive attention to the old ways of doing things. There sometimes lacks an independent consideration of the issues at hand which pays heed to their unique

attributes. Another problem might be the application of a 'group think' viewpoint. The absence of counter-perspectives may lead to overly simplistic judgements (low multiplexity). Berenscot illustrated this trait by having management consultants who were really only industrial engineers and knew little of marketing or top management problems. Avon focussed basically on the marketing side of things. Its top executives were strongly oriented in that direction.

There seems also to be a short-term operating perspective (guided of course by the 'successful formula').

> IBM:
>
> Like [General] Patton, [Chairman] Learson has an uncanny instinct for the tactic of the moment, and also like Patton, he is said to be weak as a long range strategist ... It appears that there hasn't been much time left for IBM executives in recent years to do much long-range thinking. pp. 56-57
>
> Xerox:
>
> In some respects [Xerox] resembles a muscular adolescent who has grown so fast that he finds it difficult to coordinate his newly acquired strength ... Xerography ... is still what the profits come from ... p. 117

Lest we have been painting too pessimistic a picture, it is worthwhile to note that S_2 firms remain quite adaptive. Their orientation is still very relevant to what the environment demands. The managerial talents and financial resources available help considerably; and so do the intelligence activities. Of course, there is the occasional proclivity to let previous strategies act as 'automatic pilot' and problems are sometimes caused by a lack of vigilance.

Forging Ahead with Incremental Innovation

Product-market innovation has been largely responsible for the companies' success and this behavior has been so strongly reinforced that it continues to take place. Strategists have become wedded to the idea of innovation. This is regarded, so it seems, as being important per se. The intelligence activity conducted by the organizations often

points to needs and opportunities for innovations, and there is a strong drive to remain ahead of competitors. Innovations are usually incremental however, in that they relate closely to the existing product market scope.

> Avon:
>
> [Avon] is constantly changing both its product lines and its packaging ... new products have been coming out ... at anywhere from fifty to one hundred annually. p. 238
>
> Xerox:
>
> Within the past eighteen months, Xerox introduced four new copiers ... a telephone facsimile device that receives automatically, and a remarkable new machine that puts Xerox strongly into competition for a share of the multibillion dollar offset-printing market. p. 117
>
> Berenschot:
>
> Dutch industry was expanding rapidly and the demand for trained personnel exceeded the supply. Berenscot responded by locating a Swiss industrial psychologist, Paul Silener, who had developed a method of operator training ... The acceptance of accelerated training by Berenscot's clients provided an impetus for growth. p. 8
>
> IBM:
>
> [IBM is moving into] data communication equipment, office machines such as the recently introduced copier, and point-of-sale terminals. p. 149

Conclusion

The firm has succeeded dramatically in the past and management seems to believe that it is 'on to a good thing'. The strategy which has made the S_2 companies remarkably dominant continues to be pursued by an enthusiastic firm. Power is centralized in the hands of a few top people who are responsible for the development of the successful strategy. Intelligence and analytical activity seem to be quite moderate for a successful company and the occasional blooper is committed. There is little re-thinking of basic strategies, a fairly short planning horizon, and an apparent lack of multiplexity. Still, the combination of management

expertise, a winning initial strategy which is still appropriate, and a commitment to innovation, keeps the firm financially healthy and growing.

Relationships Suggested by the S_2 Archetype

1. Large doses of past success lead to some degree of slackened vigilance. This may be manifested by lower intelligence activity, less analysis of strategic issues, inadequate multiplexity, etc.

2. An alternative hypothesis is that it is not the success that leads to slackened vigilance but rather it is the resultant dominance of markets that has this effect. Thorough dominance reduces the challenges of the environment. When the environment is perceived as simple, less effort may be devoted to tracking and adapting to it. The firms might be able to successfully employ, at least for a time, a 'take it or leave it - it's the only show in town' approach.

3. To the extent that an individual has contributed substantially to a dramatically successful corporate effort - he becomes a persona - one who is an embodiment of organizational achievement. His power base as chief executive may become enormous and strategy making activity could develop as his exclusive domain.

4. The existence of an explicit and 'tried and true' strategy discourages fundamental change. But to the extent that the strategy itself incorporates an ideology which favors innovation, corporate adaptiveness can be maintained for long periods of time. The chief danger results when innovation is prescribed too narrowly and takes place within confines that are dysfunctional.

S_3 THE GIANT UNDER FIRE - HOLDING THE FORT

Sample Case Summaries

International Telephone and Telegraph Corp. has long been noted for its sophisticated operating and financial controls and its efficient internal communication system. It is no accident that the firm has adopted these devices. A diversified and highly competitive environment has made this orientation necessary. With a varied list of acquisitions and the increased interest by the U.S. Department of Justice as well as the Anti-Trust branch in its activities, I.T.T.'s environment has become, to say the least, extremely challenging. Still, the firm's decentralized structure for handling individual divisions, and its centralized orientation in dealing with top level financial, acquisition, and strategic matters, have allowed the firm to cope admirably with the pressures (September 1972).

General Motors is another firm which is run according to a decentralized management structure (set up by the late Alfred P. Sloan). The emphasis is on greater internal operating efficiency to facilitate adapting to a host of very serious environmental pressures. Foreign competition, the trend toward smaller cars, and increasingly stringent safety and anti-pollution legislation are causing G.M. to have to change its strategies. The firm changes only gradually but always in the right direction. The unimpressive speed of change is due in part to an unwillingness to stray very far from the original strategy. The informed nature of changes is largely attributable to the G.M.'s diligent intelligence efforts (January 1972).

The other two firms in this archetype are H.J. Heinz Co. and Dupont. Heinz has very greatly expanded its food and household product lines and sells to 150 countries. The impetus provided by the increased complexity of the administrative task and the accounting orientation of the chief executive, have resulted in a very decentralized though well controlled operation. This has allowed the firm to succeed in the face of very intense competition (October 1971). The more recent case of DuPont (November 1967) portrays a firm which is faced with ever more powerful rivals in an increasingly 'mature market'. DuPont's considerable diversity in its products and markets can only be dealt with thanks to its sophisticated

administrative structure and its considerable financial resources. Both DuPont and Heinz are able to preserve, or to change only gradually product-market strategies because their 'piecemeal' adaptation is often remarkably effective.

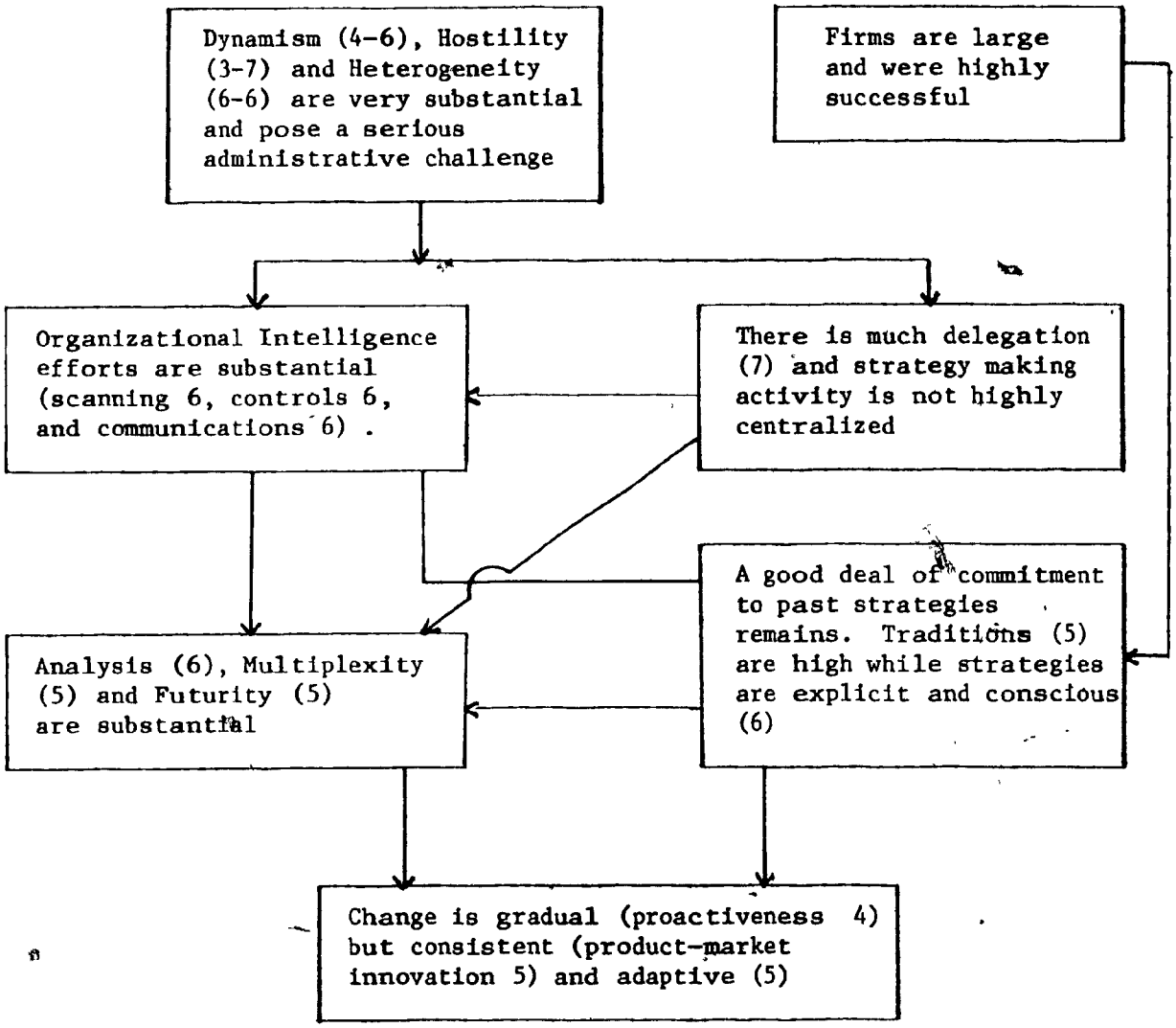
Essential Features

The S_3 firms are well established, very large, and face an extremely challenging environment. Perhaps these firms represent what happens to an S_2 corporation over time as it grows, diversifies, and gradually changes its strategy to be more in line with new external realities. Aside from being somewhat more heterogeneous than S_2 firms, the S_3 company faces a turbulent and complex environment due to a host of threatening trends. Fortunately there is also greater use of organizational intelligence, particularly controls which monitor the pulse of the firm and ensure the mutual complementarity of the efforts of different divisions. At the same time, there is greater delegation of authority to lower levels to handle the onerous administrative task. The companies display a 'muddling through' type of strategy making behavior. That is, adaptation to the environment takes place in gradual, and piecemeal fashion, usually in response to problems. A group of middle and top managers are responsible for steering the firm. Unlike the S_2 companies there is no one entirely dominant strategist.

Hypothesized Causal Links (See Figure 4-7)

There seem to be two basic underlying causal forces for the S_3 archetype. The first is of course the environment which is extremely complex and difficult to cope with. The second is the firm's past strategies which have been very successful and have caused the firm to grow extremely large. The environment is increasingly hostile in that competition is mounting, anti-trust suits abound, and markets are becoming somewhat saturated. Dynamism has grown with changing customer tastes and habits and the need for different production technologies. The third environmental characteristic which really distinguishes the S_3 archetype from most others is the relatively high degree of environmental heterogeneity. S_3 firms

FIGURE 4-7 THE GIANT UNDER FIRE



are not only big, they are also fairly diversified and cater to markets which are different from one another.

Obviously this sort of environment entails a tremendously difficult administrative task. S_3 firms remain quite successful and perform substantial intelligence activity. They have also divided up the job of administration. Knowledge of this environment gathered from scanning, sensitive controls, and internal communications, is well developed. There is also the requisite delegation of all matters to middle and lower management. Even some of the overall strategy making is done by divisional vice-presidents. Power centralization at the top is quite moderate since task complexity dictates that many parties get meaningfully involved in the top level direction of the firm.

The intelligence and power/task characteristics of organizations again appear to influence strategy making styles. Analysis and futurity may derive, at least in part, from the active intelligence efforts which trigger the perceived need for vigilance and investigation. Also, decentralization and participative decision making assure that a heterogeneous body of decision makers are collectively sufficiently multiplex in their orientation to handle diverse and complex issues.

There is another apparent causal influence on the organizational and strategy making characteristics of S_3 firms. The success of past strategies has enabled firms to grow to be industrial giants. As was the case with S_2 firms, the resplendent success of a previous strategy has made the company basically reluctant to abandon said strategy. There remain a number of 'traditional' ways of doing things and a strategic posture which is conscious and well defined. It is important to note that the initial strategies of the firm not only established a certain product-market scope, but also instigated an administrative framework and an associated modus operandi. More specifically, emphasis was placed on decentralization, sophisticated organizational intelligence, and a rather analytical and contemplative (though often reactive) mode of decision making. Also, the initial strategic orientation spelled out the need for expansion, innovation, and external adaptiveness to the setting (marketplace). Each of these traits still serves to characterize S_3 firms.

While strategic change, particularly in the basic product-market orientation, is gradual, it is nonetheless responsive to external conditions. The firm is adaptive to the environment and makes changes in response to external stimuli more often than it leads the way into new areas. In summary, the prime influences or driving forces of the S_3 archetype are current environmental conditions and past strategies. The outcome is a successful organization which remains viable, but also which may be in some danger of losing its growth momentum if competition makes rapid gains. The S_2 firms differ from those in the S_3 archetype in that the former are very dominant while the latter are much less so and have had to cope with market 'maturity' for a good number of years.

Discussion

Company Size and Environmental Heterogeneity

All firms in the archetype are 'household names'. They are extremely well established in their industries, have long standing markets for their products, are quite intimidating to the competition, and can be considered to be industrial giants. The companies also serve quite a diversified array of markets. In the first place different sorts of goods are sold by the firms through different distribution channels. Secondly, there has been considerable geographic expansion so that products are marketed world-wide.

> DuPont:
>
> [The DuPont Strategy] was gradually formulated during the late 1920's and early 1930's, when DuPont turned from growth by acquisition, which got it into a lot of different markets, to growth by innovation, calculated to create new products for those markets ... For a long time its strategy was immensely successful. In the years 1946-65, while increasing sales from $649 million to nearly $3 billion, DuPont did average just about 10 percent on gross operating investment. p. 138
>
> General Motors:
>
> G.M.'s sales last year were some $28 billion, its assets ... some $17 billion, its earnings some $1.9 billion. p. 99

H.J. Heinz:

> Famed for 57 varieties, Heinz now turns out 1,250 products in forty factories in thirteen nations or territories. It employs 30,000 people and sells its goods in 150 countries. p. 77

International Telephone and Telegraph:

> [The total] number of I.T.T. acquisitions during 1961 to 1971 ... was around 250. They helped build I.T.T. into a mammoth company that by last year had sales of $7.3 billion (enough to make it the ninth largest U.S. industrial corporation) and an additional claim to $1.5 billion in revenues from ... insurance and finance subsidiaries. p. 39

All firms are operating in fairly mature industries in which the scope for growth is quite limited. However, past strategies have been very successful and firms remain secure and profitable.

A Threatening Environment

There is no question that the environment has become much more dynamic and hostile. Competition, new social forces, changes in consumer wants, government legislation, and technological problems are all making themselves felt to an unprecedented degree.

DuPont:

> Years of research leadership enabled the biggest chemical company of them all to stay ahead effortlessly. Now the rest of the field is catching up ... in a classic example of what happens when competition speeds up and the economy slows down. [DuPont is getting] the fight of its life. p. 136

General Motors:

> The automobile industry in general, and G.M. in particular, are under fire on a dozen fronts. The industry's product is attacked as unsafe. It is charged with being the principal cause of air pollution, congestion, [etc.]. p. 99. [There are] mounting labour and materials costs and increased foreign competition ... car sales have been below the usual growth trend since 1968. p. 100

H.J. Heinz:

> ... as the structure of the market changes, new products proliferate, and the market power of brand names, vital to the food manufacturers' profits - is threatened by private labels. p. 78 [These new] hazards constitute added risks in what is already a fierce struggle for the $103 billion American food budget ... Every successful food product is almost immediately copied by competitors. p. 80

I.T.T.:

> The [Justice Department] settlement ... permitted I.T.T. to retain its largest subsidiary ... but required it to divest itself of other large units - Avis, Canteen, Levitt, and a portion of Grinnell - and to curtail major acquisitions in the U.S. [its former source of growth]. p. 89

The Past Strategy of the Firm

The operating philosophies of the firm and its product-market scope seem very much an outgrowth of strategies which had been formulated a good many years ago. As mentioned, these strategies were very successful indeed, and contributed to the bold growth the firm had experienced in the past. The result is that executives are still quite committed to the old ways.

DuPont:

> ... in the light of the company's resplendent achievements, it is easy to understand why the executive committee rates DuPont's potentialities higher than mere outsiders do, and why, in the face of its decline, it might still be reluctant to change the company's traditional strategy. p. 138

General Motors:

> Ever since Alfred P. Sloan Jr. and his colleagues reorganized its basic decision-making processes half a century ago, the company has been thought of as the model of a well-managed corporation. p. 99

Fortunately, the 'old ways' have much to commend them. To a large extent they incorporate a modus operandi which allows the organization to evolve along the path which makes adaptation possible.

Task Organization and the Power Structure

The administrative structures of General Motors, DuPont, and I.T.T. are legendary for their emphasis on decentralization and team management at the top of the firms. Delegation of authority to perform non-strategic decision making is very considerable, so that lower levels are charged with most routine and operating functions. Divisional profit centers abound and middle and higher level officers are often completely in control of decision making for their areas of jurisdiction.

At the top echelons of the company, strategy making power usually accrues to a number of individuals (sometimes even, a committee). This more moderate mode of centralization tends to allow operating officers, staff specialists, and top corporate executives to work together to make decisions, determine product-market orientations, and develop long range plans.

> DuPont:
>
> ... venture managers ... are allowed an astonishing degree of freedom in deciding what to do. p. 130
>
> H.J. Heinz:
>
> Each of the company's subsidiaries does its own research and introduces new products independently of other units of the company ... Foreign and domestic [subsidiaries], operate as independent companies and make their own operating decisions. They handle their own purchases of material, do their own pricing and marketing, and conduct almost no intra-corporate trading. p. 80
>
> I.T.T.:
>
> [All of the members of the Office of the President] are today actively involved in the company's major decisions. p. 220

Corporate structures have developed their present form largely as the result of decisions made many years back. In fact, it can be argued that past strategies have played more of a role in determining current structures

than do extant conditions in the environment. This observation notwithstanding the task organization and power structure does seem ideally suited to the turbulent setting. Uncertainty becomes fragmented so that experts are given the freedom to handle chunks of the adaptive task. Integration is achieved by an almost collegial type of decision making/planning body at the top which include representatives with different viewspoints.

A Devoted Intelligence Effort

The proclivity towards intelligence activity also seems to stem both from past corporate orientations and from current environmental needs. There appears to be a tradition of strong financial controls, active scanning efforts, and efficient internal communications. Again, the tradition is particularly suitable to current circumstances.

H.J. Heinz:

> ... the situation in one country is apt to be quite different from that in any other, and Heinz scouts a territory carefully before moving in. One way the company feels out the market potential in a country is by shipping in Heinz goods ... if sales are enough a factory may be built. p. 178

I.T.T.:

> [I.T.T. has a] unique controller set up under which the chief financial officer in each operating unit, though charged with keeping his chief executive officer fully informed of his actions, reports directly to I.T.T.'s controller ... and looks to [the latter] for raises and promotions. The set-up was installed by Geneen in an effort to prevent unpleasant financial surprises. p. 218

DuPont:

> To search out new [product-market] prospects, the Development Department maintains its own research and development division ... p. 180
> ... part of the market planning group's effort is aimed at improving communication between executives by showing them why they must agree on their basic terms and how to agree on them, and helping executives define their problems adequately. p. 182

Thoughtful Decision Making

Analysis, consultation, and deliberation characterize decision making in the S_3 firm. The intelligence activity identifies focal points for analysis while the participative mode of decision making allows multiplex judgements to emerge. Some planning has long been ingrained in the strategy of the firm and represents a well established modus operandi.

DuPont:

> DuPont takes a very long [term] view and has a lot of options ... patience is part of DuPont's way of doing business; be sure you're right, make haste slowly, take a long look before you leap, and give your promising projects time to work out. p. 180

General Motors:

> 'The financial staff has pretty much had its nose into almost every end of the business, and we've continued to run the business on the basis that there should be a strong voice by the financial management ...' p. 101

H.J. Heinz:

> [President Gookin] holds annual planning meetings with the head officers of each company, at which goals set by those officers for the coming one-year and five-year periods are thoroughly discussed. p. 179

I.T.T.:

> Re. a proposed Avis project which required I.T.T. approval: '[I.T.T.] were gun shy of [Avis'] claims', [Avis President Morrow] says, 'and they were totally unimpressed by my feeling that this was going to be good for Avis' image. They were only interested in [practical results] ... We went through more drill and the justification for Wizard over and over for two years before we finally got an okay. I hated it at the time, but if they hadn't made us do that ... we would have been dead.' p. 218

Gradual Adaptation to the Environment

The companies change their strategies gradually in an attempt to cope with new conditions in the environment. Often, such changes are a reaction to external threats rather than an original initiative. For the most part, there are no very fundamental changes in product-market orientations. This may not hurt very much in the short run, but as time passes, the danger increases that some of the markets will dry up and some of the products will become obsolete. In spite of these potential problems, the general direction of adaptation and innovation is apparently sound and well executed. All things considered, once a firm reaches a certain size it seems very difficult to effect dramatic reorientations in short spaces of time.

DuPont:

'One of the penalties of size', observed [Chairman] Greenewalt, 'is that it's now hard to develop a product that can make such a big impact.' p. 138
As one executive in another company has remarked, DuPont's proprietary sense often rubbed off on its sales force. Its rivals, on the other hand, have necessarily been hard, sharp marketers. pp. 138-9.

BUT

DuPont stakes its future on new products [and attempts] to hunt down attractive commercial opportunities in fields not adequately covered by current endeavour ... p. 141

General Motors:

[G.M.] was slow to stake out a position in the growing market for small cars. p. 172

BUT

G.M. is moving to strengthen its position in the low-priced market ... [and] hopes to increase its penetration in ... fast-growing [overseas] markets ... In its effort to deal with air pollution, G.M. has 2000 engineers working full time on emission controls. pp. 172, 4, 6.

H.J. Heinz:

> [To combat private-label goods, Heinz] switched the emphasis of promotion and marketing efforts from providing inducements for retailers to handle Heinz goods ... to advertising ... 'building our franchise with the public and keeping our name before them.' p. 178

Conclusion

The speed of organizational adjustment, and to a lesser extent the efficacy of that adjustment, is somewhat reduced by the commitment to the strategy of an earlier era. However, that strategy and the operating philosophy which it encompasses remain substantially relevant to current conditions. The intelligence systems, structural orientations, and analytical strategy making styles, seem to do much to facilitate corporate adaptation. The size and traditions of these firms may impede them from moving with the grace of a ballet dancer, but most of the moves which are executed tend to be in the right direction.

Relationships Suggested by the S_3 Archetype

1. Strategies which specify only a product-market posture grow quickly obsolete in a turbulent setting. But strategies which invoke an administrative and structural orientation as well (such as those of G.M. and DuPont) can be self-renewing. A modus operandi and structure which ensures sensitivity to external trends and the ability to handle task complexity, can facilitate the adaptive process indefinitely.

2. Past success which is thought to be directly attributable to a particular strategy may invoke resistance to change.

3. The larger a firm gets, the more difficult it is to effect very rapid adjustments and major reorientations in its product market scope and its modus operandi. New directions and projects tend to count for only a small part of the massive business.

4. Environmental dynamism and hostility, particularly when extreme and recent in origin, will prompt intelligence efforts and structural changes only where similar attempts have been made in the past (and have succeeded). S_3 firms have undergone dramatic changes in their environments. It is quite unlikely that they would have been able to cope with these changes as well as they have done had there not already existed an effective intelligence system to determine the nature of the transitions and a task/power structure to facilitate analysis and decision making.

5. Heterogeneity in the environment results in the need for more participative decision making at the policy formulation levels. A variegated environment required multiplex and multifaceted strategies which are better fostered by having an array of talents and interests reflected in top level decision making and planning. Heterogeneity also occasions the need for more decision making authority at lower levels so that those with the most knowledge can adapt their practices to the needs of their own settings. Obviously this will create the need for a greater integrative effort at the corporate level and, as mentioned, it can be facilitated by participative decision making.

S_4 THE ENTREPRENEURIAL CONGLOMERATE

Sample Case Summaries

There is no doubt that the sprawling Gulf & Western industries is completely dominated by its aggressive Chairman, Charles G. Bluhdorn. In one decade Bluhdorn has transformed the firm from a small autoparts business into a billion-dollar conglomerate, encompassing enterprises as diverse as Paramount Pictures, New Jersey Zinc, and South Puerto Rico Sugar. Major policy decisions are made at the top and particular care and thoroughness characterizes the analysis of acquisition candidates. While operations are decentralized, financial controls are imposed from the top. There is no question however that the firm continues to make very bold moves into completely new lines of business and it often does this by leveraging capital with high borrowings (March 1968).

Peter Kiewit owns the massive construction company that bears his name. Thirty eight corporations engaged in heavy construction, manufacture of concrete products, insurance, ranching, coal mining and publishing are tightly controlled by this entrepreneur. The firm's estimating and controls system is second to none. One particular strength of the company has been its ability to identify the most profitable types of construction business and to go after and obtain the biggest contracts in the industry. The nature of the industry was such that the firm had to change the orientation of its construction business about once every decade since the 1920's. Its steady profits testify that Kiewit has done this with great skill (April 1966).

Bob Hansberger of Boise Cascade engagedin 33 mergers and increased the company's sales thirtyfold in 12 years. Hansberger is a dominating president and has singlehandedly taken his firm into the paper, packaging, building materials, office supplies, housing, and mobile homes markets. Healthy profits were maintained throughout (October 1969). J.B. Fugua, the founder, chief executive, and largest shareholder of Fugua Industries has caused his firm to enter more than 15 industries, ranging from photo processing to trucking. His tight financial controls and substantial abilities as a conglomerator has helped the firm thrive and grow spectacularly (February 1972). Textron has also grown via an intense stream of acquisitions and its 27

separate divisions are in so many different lines that the firm cannot be identified by any one of them. The company's emphasis on resource management and a relatively conservative financial policy has helped the firm to remain profitable (April 1964). The final company in the archetype is by no means a standard conglomerate. The Melville Shoe Corp. is not run by an owner-manager either. However, a carefully oriented diversification and decentralization strategy has caused the firm to broaden its lines dramatically. It has gone from the sale and manufacture of pedestrian styled men's shoes into the high fashion ladies' and men's shoes and clothing. The firm has done this by acquiring several retail chains and in some cases, by setting up its own outlets. The reorientation has been achieved very successfully (December 1969).

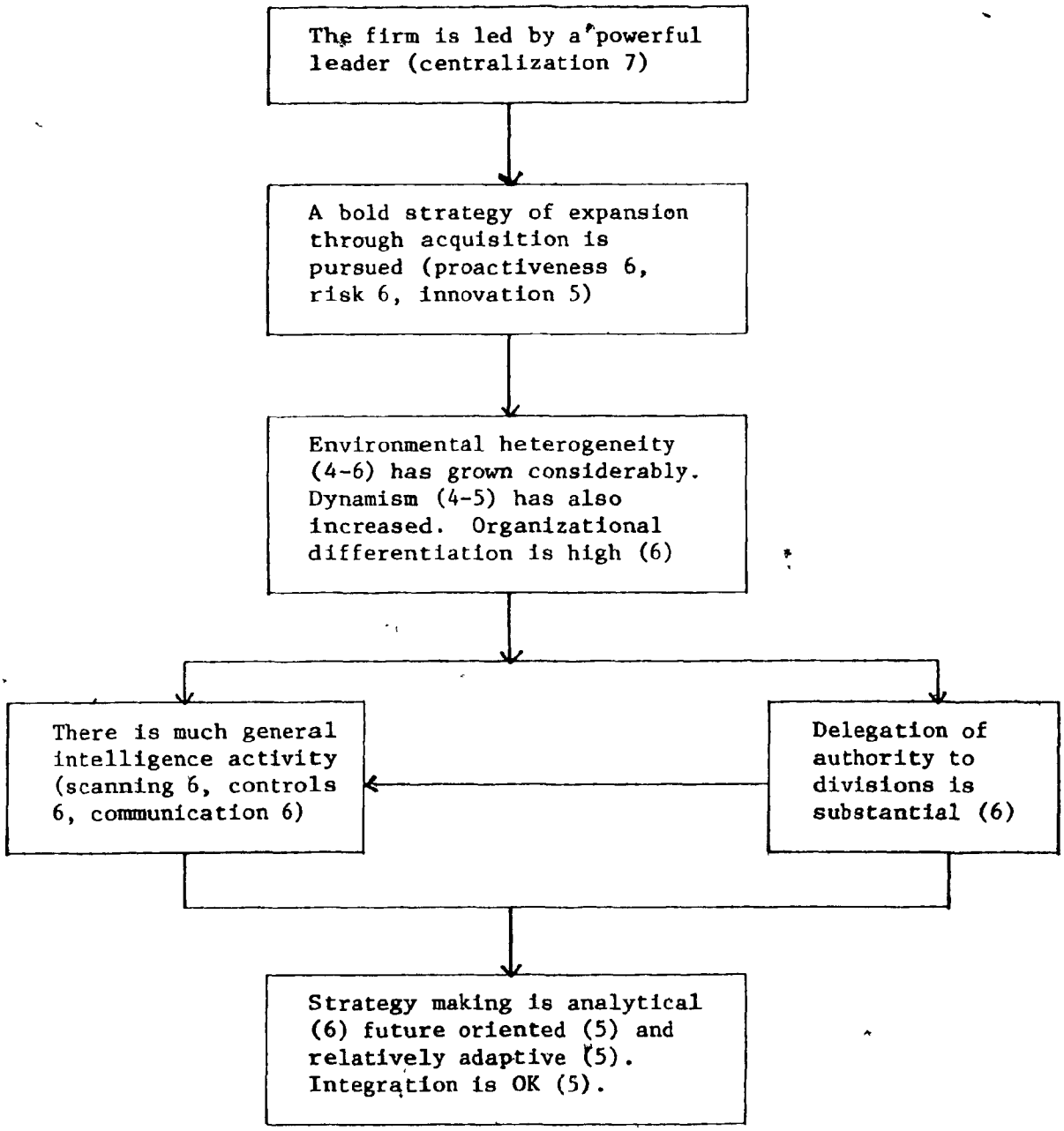
Essential Features

An aggressive entrepreneur runs most S_4 companies. Often a substantial shareholder, this executive is largely responsible for the tremendous past growth of the firm and its tendency to diversify and to continue to acquire new subsidiaries. As for the S_3 firm, there is a great need for controls to track and guide the array of diverse divisions. The S_4 companies that become failures often turn into F_1 firms. This is usually because there has been an overextension of financial and managerial resources. For the most part, S_4 companies are quite aware of the danger and the entrepreneur's boldness tends to be somewhat tempered by this. Still, the emphasis is on the aggressive pursuit of opportunities by a dominant executive, and growth and diversification remain the primary objectives. The threat of too much expansion and too little consolidation is ever present.

Hypothesized Causal Links

So far, all successful archetypes had as their causal 'starting points' the conditions of the environment and/or the nature of past strategies and operating philosophies. The S_4 archetype seems to have most of its essential features derived from the powerful leader at the top of the firm (see Figure 4-8). The current chief executive tends to be an aggressive entrepreneur who is most interested in expanding and diversifying his firm.

FIGURE 4-8 THE ENTREPRENEURIAL CONGLOMERATE



Usually, this individual has a relatively high share of ownership in the company (not necessarily of a magnitude which gives him complete control). A very dominant strategy of the top executive consists of the acquisition of other firms. Sometimes these firms are in 'related' industries but often (in fact, usually, for some companies), they are not.

The most immediate repercussion of this growth/acquisition philosophy is the increased heterogeneity of the environment. There are a multitude of industries which management must cope with and which may be very different from one another in terms of the required methods of operation. Also, because there have been so many acquisitions, inevitably some of the new divisions are in environments which are of a more dynamic sort.

Environmental complexity creates the need for more intelligence activity. There is much emphasis on attempting to monitor the progress of subsidiaries via scanning, controls, and communication devices. Also, the complexity of the administrative task is such that most of the operating functions are delegated to the managers of subsidiaries. However, all the major strategic changes or problems are dealt with by top management.

Finally, the constant preoccupation with acquisitions seems to make the need for planning and analysis very acute and also quite obvious. The environmental complexity and intelligence activity assure that enough problems and opportunities come to the attention of corporate staff to constitute an incentive for planning and analytical activity. The freedom of top level executives to deal mainly with strategic issues (operating responsibilities have been thoroughly delegated) also allows far more analysis and greater attention to adapting to the environment.

Discussion

The Leader and His Strategy

S_4 companies are run by entrepreneurial types of individuals who have set the basic operating philosophies. The prime objective of the firms is to grow rapidly and the principal strategy for doing so involves the acquisition of subsidiaries. It should be made clear that the chief executive is by far the most powerful individual in the company. His power may derive from having controlling ownership in the firm, excellent support from the Board of Directors, past successes, an appealing charisma,

or some combination of these attributes. At any rate, the leader's power is unchallenged and, as chief strategist, he is able to pursue the strategy which he believes to be most appropriate. There are seldom any interferences to prevent this. As a result, entrepreneurial top executives have been able to boldly take risks and aggressively pursue opportunities to induce corporate growth and diversification.

> Fuqua:
>
> Fuqua is the chief executive and largest individual shareholder of Fuqua Industries, which is operating in more than fifteen industries, ranging from photo processing to trucking. His genius for buying and selling companies has made him one of the richest men in the South. p. 194
>
> Kiewit:
>
> For himself, Kiewit has built a vast financial empire that ... is worth at least $200 million. As of last year he owned 38 corporations engaged in everything from heavy construction to insurance, the manufacture of concrete products, ranching, coal mining, and publishing ... the apex of his empire is a holding company ... Kiewit himself owned 80% of the outstanding stock. p. 148
>
> Boise Cascade:
>
> [Hansberger took] the route of merger and acquisition to strengthen and widen the company's position in wood products and related areas. p. 135
>
> '... We have taken some risk in areas of uncertainty that almost bet the whole company. But the advantages if we won were so important that we felt we had to take the chance.' p. 198
>
> Textron:
>
> [The CEO's] eagerness to publicize the company and its stock rests in part on an awareness that more acquisitions are in the works. pp. 226 & 231.

Growing Environmental Complexity

Because firms have expanded so rapidly and have entered new and sometimes strange markets, the environment becomes more complex. The complexity takes the form of increased heterogeneity, and to a lesser extent, greater dynamism. In the first instance, the environment has become characterized

by greater variety as new and different products are sold to different groups of customers. The greater dynamism, on the other hand, stems from the entry into more turbulent markets with more variable technologies, rapid changes in customer wants, etc. A final cause of mounting complexity is sheer company size, which has increased so dramatically and which compounds problems of coordination and control.

> Boise Cascade:
>
> When [Hansberger] took over at the beginning of 1957, Boise Cascade's sales were $35 million. Last year [1968] sales passed $1 billion. p. 138
>
> Melville:
>
> [In only 5 years] Melville raised its sales from $195 million to $293 million. p. 110 ... Because it is trying to be many things to many people, Melville, unlike other merchandisers, is happily fragmenting its public identity. The corporation considers its multiple personality to be vital to its success ... Melville is ready to move into the highly competitive fashion market. p. 112
>
> Fuqua:
>
> In 1966, revenues rose to $19.6 million, ... in 1967 ... to $60 million ... in 1968 they topped $200 million. p. 194
>
> Gulf & Western:
>
> In one decade [Bluhdorn has] transformed Gulf & Western from a small auto-parts business into a billion-dollar conglomerate [via] seventy-two acquisitions. p. 123

Much Divisionalization and Delegation

Environmental complexity causes the administrative tasks facing the firm to become correspondingly tougher. It is no longer possible for there to be a one-man-show. People at the top of the organization cannot be sufficiently familiar with, nor have enough time to deal with, the operating matters of subsidiaries. There develops a cadre of lower level managers and 'experts' who have the skill and authority to handle such issues. The headquarters, or corporate level executives concentrate mostly on planning,

coordination of efforts, strategic decision making, and helping subsidiaries with special problems.

> Melville:
>
> ... the divisions have considerable independence. Each has its own headquarters and its own president. p. 112
>
> Kiewit:
>
> ... a Kiewit executive runs his own show under Peter Kiewit's watchful eye. 'Pete furnishes a lot of leadership ... but he doesn't interfere with his executives - as long as they're right'. p. 151
>
> Gulf & Western:
>
> Gulf & Western has evolved a ... management system based on decentralized operation with centralized financial controls ... [Headquarters] has been enviably proficient at keeping alive, and indeed heightening, the entrepreneurial zeal of [subsidiary] executives without getting bogged down itself in the day-to-day problems of the subsidiaries. p. 125. Major policy decisions remain in the hands of a half-dozen top officers. p. 124.
>
> Textron:
>
> 'We foster the thought of autonomy ... but our association with the divisions is intimate. We manage by exception'. p. 222

A Sharp Intelligence System

Because operations are decentralized, there is a greater need for controls and communication systems to monitor performance and to facilitate corrective action and coordination. S_4 firms do seem to possess such systems. Scanning activity is also quite pronounced especially when it is directed towards locating and evaluating potential acquisition candidates. Another reason for the proliferation of intelligence activity is that the environment has become much more heterogeneous and somewhat more dynamic. It is thus that much more important to become sensitive to the many signals put out by the setting in order to effectively adapt.

Scanning:

Boise Cascade:

'[In assessing a competitor] we weigh all the things he can do. We try to decide what the chances are that he will do any one of them ... We consider his position, his balance sheet, his psychology, his gutty or conservative nature as an individual, and the past patterns of the corporation's behavior.' p. 202

Melville:

Melville's rising share of the market is evidence that it has made a good thing out of a feeling for fad and fancy. The company also has the knowledge of where to buy merchandise, an ability to get it into the stores fast - and the foresight to have its stores in the right places. p. 112

Kiewit:

[Kiewit] has been right just about every time in his anticipation of the way the construction industry would move ... His [construction contract] estimating system is the envy - and despair - of his competitors. p. 150

Controls and Communication:

Textron:

[Textron Chairman] Thompson ... put the finishing touches on his own program of centralized control and divisional operation. Its essentials were frankly copied from General Motors ... relating the profits from any venture to the invested capital it required. p. 157 ... To ensure that the divisions attain their investment objectives, Textron watches over their operations closely. p. 220 ... The divisional reports are detailed ones ... 'I don't like surprises' [says Thompson]. p. 222

Fuqua:

Fuqua gives considerable leeway to the nineteen men who run the company's subsidiaries ... But when a subsidiary gets into trouble, Fuqua moves in fast. p. 194

Gulf & Western:

'We're like an investment company', says [Chairman] Bluhdorn, 'except that they just sit upstairs and watch the horses run. We get down and manage the horses.' p. 123. Gulf & Western keeps close tabs on the financial affairs of all its units. Five-year goals are set for each one. Every three months, each division is required to forecast its sales, profit, cash flow, cash needs, and capital expenditures for the following five quarters ... [The centralized cash management system] quickly alerts management to units that are doing particularly well or badly. p. 202

Perhaps what is most significant about the intelligence systems of the S_4 firms is their 'overall' corporate orientation. Looking at the merits of acquisition candidates, and carefully monitoring divisional performance, are performed diligently. Unfortunately, there does not appear to be much evidence about the use of non-financial controls. The cases often do not indicate that executives have a thorough knowledge of the 'nuts and bolts' of divisional business. It is possible that financial indicators are inadequate in that they tell only a part of the story of what is going on in the firm. A look at some of the failure firms reveals that several might have in the past been categorized as S_4 firms. Perhaps some distinction should be made then in further research about the types of scanning, controls, and communication information which is processed. Our data base was insufficiently detailed to enable us to do this.

An Ability to Analyze, Plan, and Adapt

In spite of the boldly proactive and aggressive strategy which is pursued by the firm, few errors in judgement seem to take place. Most risk taking has been rewarded handsomely and the growth rates in profitability have been nothing less than remarkable. Much of this success is probably due

to financial 'synergy', the acquisition of well managed firms, the decentralized structure, the financial controls and the sophisticated methods of evaluating acquisitions. However, an additional cause may be the analytical framework used by strategists. There is a tendency to plan moves in advance, to thoroughly analyze the most important decision situations, and to attempt to adapt to internal and external conditions in taking any actions.

Boise Cascade:

> Hansberger has put an intellectual stamp on his company ... he has been a recruiter of MBA's and a believer in trying new tools of analysis and decision. p. 134 ... 'We think we're unique in having devised a mathematical way of analyzing the price we should pay for a company. p. 136. We use numerical risk analysis procedures to test major capital expenditures'. p. 198. Our strategy is the blueprint for what we do, the how, the procedures we use to accomplish that. Our strategy sessions are very thorough ... [and] involve not only an analysis of our own actions within our present environments, but also an analysis of the reactions of others to our own actions. p. 200

Fuqua:

> [Fuqua] has an uncanny eye for lucrative business opportunities, and practically all of his acquisitions have panned out well ... [he] has frequently been able to get away with paying bargain prices [and] has shown an extraordinary amount of foresight in his choice of industries. p. 132

Gulf & Western:

> ... Gulf & Western has pretty consistently chosen companies with impressive and underutilized tangible assets ... [and has] focussed mainly on well-established companies in conventional industries. p. 123. For every take-over it completes, the company looks at fifty or sixty prospects ... While Bluhdorn harangues the management and directors about the new world of excitement, challenge, and unimaginable growth that will unfold the minute they join Gulf & Western, other executives begin a more exhaustive investigation of the company's operations, finances, and markets. pp. 125 and 202.

Conclusion

While intelligence cues prompt more thorough analysis and decentralization frees top management and their staff to perform this analysis, the adaptive effort of the firm tends to rely very much on only a few people. Hansberger at Boise Cascade, Bluhdorn at Gulf & Western, Fuqua at Fuqua and Kiewit at Kiewit, are in every respect the dominant strategists. Their organizations are very much extensions of their own personalities. It is conceivable that if any of these strategists were to attempt a blatantly inappropriate move that would seriously jeopardize the future of the company, there would be no one in the organization who could do anything about it. In some of these companies, it is possible that no one would even try. Since many of the firms have been doing well for quite a long time (one as long as 50 years), this danger is not always imminent. However, a powerful leader who has been successful in the past and is strongly convinced of the appropriateness of his ways may eventually become rigid and unadaptive (particularly if our hypothesized bias in the intelligence system does exist). This would not be nearly so severe a threat if there were others in the firm who could hold the man in check. On the other hand, it is unlikely that the firms could have expanded so dramatically under the guidance of a committee of equipotent managers.

Relationships Suggested by the S_4 Archetype

1. Dramatic, aggressive strategies and powerful leaders go together. The chief executive, who is often an entrepreneur, is allowed by others in the firm to pursue the strategy he pleases. If that strategy happens to be bold and expansive, there is no one there to prevent or mitigate it.

2. When the firm deliberately takes action to enter new markets, it is more cognizant of the fact that environmental characteristics change than when external changes occur which have had nothing to do with the actions of the firm. In the first instance, there is greater likelihood that something will be done to gear the firm to the 'new' conditions.

3. The most successful conglomerators are those whose strategy encompasses both a philosophy of management and structure, and a product-market focus (e.g. Kiewit). The best strategies are expressed not only in terms of market share, sales, growth, and profit targets but also in terms of an operating philosophy which establishes a modus operandi for attaining the targets and for modifying the targets when necessary. A clearly defined product-market scope makes over-extension of the firms' resources less tempting since it is conditioned by practical factors such as knowledge of external limitations, and awareness of the types of strategies which may be unduly risky, etc.

4. Controls and internal communications must be highly sophisticated for rapidly growing conglomerates. The more abstract and general the controls, and the less the knowledge of the top managers of the actual operations of the firm, the greater the danger of ultimate failure.

5. A decentralized profit center approach is also mandatory in S_4 firms. Divisional managers who are experts in their business must handle the bulk of operating problems and issues. Top executives must concern themselves mainly with overall strategies, critical divisional problems, and coordination of the activities of subsidiaries and divisions, wherever this is is required.

S_5 THE INNOVATORS: THE ENTREPRENEUR AND THE CREATIVE GENIUS

Sample Case Summaries

William Norris and Seymour Cray of Control Data Corp. together made quite a team. Cray was a virtuoso computer designer who was able to design a system far more powerful than any available from IBM. Norris was a founder and major stockholder of the firm who was willing to bet everything on CDC's ability to defeat IBM and become predominant in a special corner of the scientific computer market. The firm did indeed succeed in making some inroads into their market niche but they badly miscalculated the time and expenses required to carry out their project. Late deliveries and excess down-time due to systems bugs cost the firm dearly. So did IBM's announcement that it would come up with a still more sophisticated computer than Control Data's (April 1966). Still, the strategy paid off in the long run and CDC eventually earned a good deal of money on their big machines. The firm's morale was boosted to such a degree, that less than two years later (February 1968) we find them tackling IBM head-on for a piece of the business applications market. The bold and often impetuous moves by Norris are rarely mitigated by others within the organization. There seems to be no doubt that the Chief can do as he pleases.

Polaroid has also been very much created in the image of its inventor-industrialist-founder Edwin H. Land. A prodigious scientist, Land was personally responsible for some of the important discoveries leading to instant photography. Under his leadership Polaroid engaged in one of the biggest gambles of all time in an attempt to develop the most sophisticated camera and film designed to date. A host of basic scientific discoveries in optics, electronics, and chemistry had to be made en route to the commercialization of the first compact, self-developing, color camera. Over a half-billion dollar investment was made. Land decided this course of action on his own and he did so in the face of great uncertainty about the size of the market and the potential competition from Eastman Kodak (January 1974).

Dansk Design Limited, under the leadership of Ted Nierenberg was enromously successful in making and marketing quality tableware. Thanks

to the talents of master designer Jens Quistgaard, Dansk was extremely successful in its prestigious niche of the market in spite of the firm's internal conflicts, logistical complications, and communication problems. The company was in the process of developing a very different line of products which represented a fairly substantial departure from their previous strategy (November 1971).

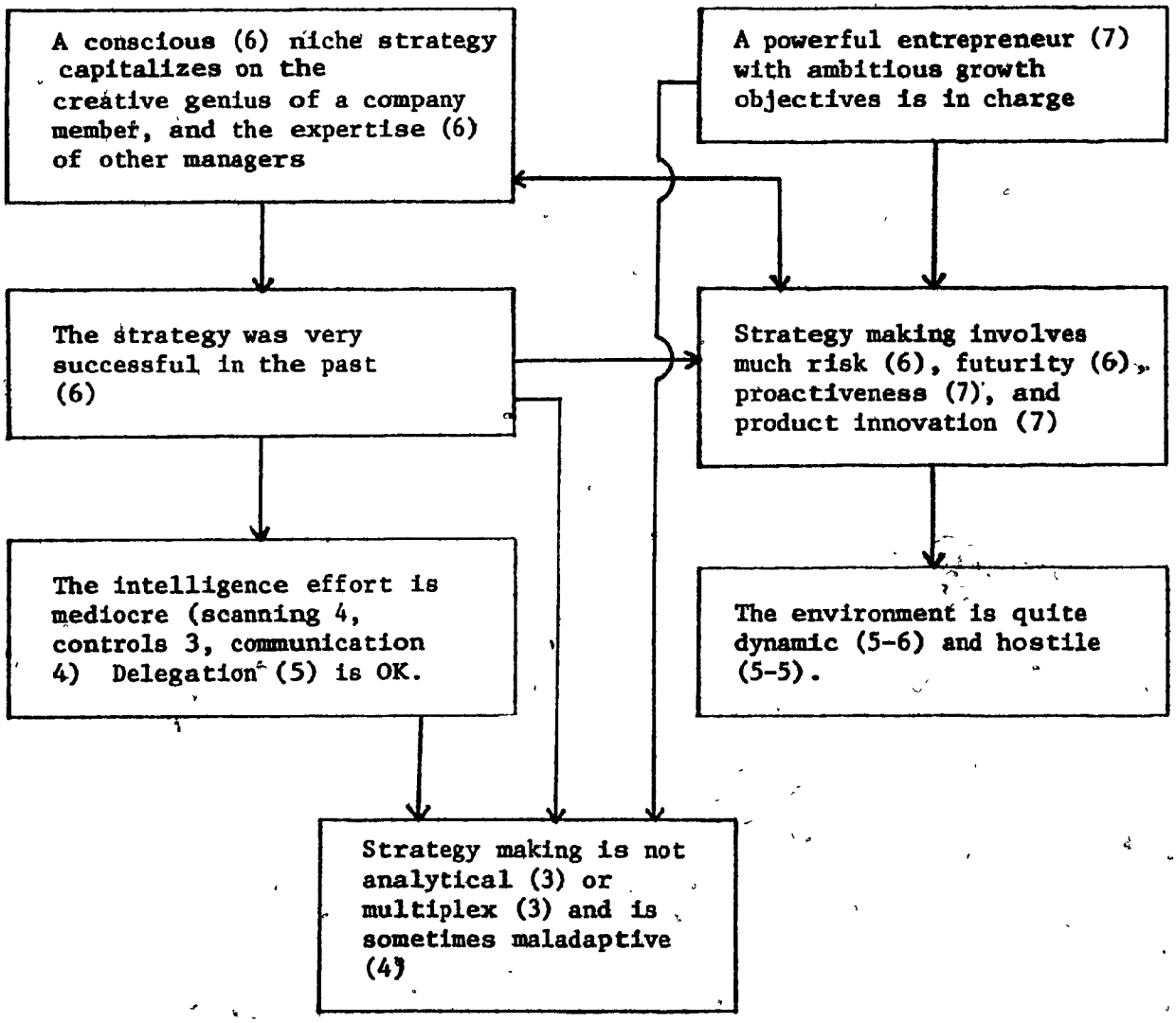
Essential Features

These relatively young (10-20 years) and medium-sized firms each have a very explicit product-market strategy. For the most part, this orientation has been shaped to take advantage of a specific innovative capability available within the company and is aimed at a niche of the market which is not much explored by larger competitors. Firms are still run by their founder who has himself formulated an explicit strategy that is based upon the creation of substantial and often risky innovations. Entrepreneurs, because of their enthusiasm for growth and their confidence in the innovative talents of the organization, occasionally embark upon some very bold, and apparently somewhat impulsive and poorly conceived ventures. Still, the resources and expertise of the companies tend to carry the day.

Hypothesized Causal Links (See Figure 4-9)

There are two critical distinguishing features of the S_5 archetype - the niche strategy built around the genius of one brilliantly creative member of the organization, and a powerful entrepreneur who boldly devises and implements the strategy. The strategy itself strives to take advantage of the talents of the creative genius of the firm. For example Polaroid Corp's founder and chief executive is a scientist par excellence who has alone, and in combination with his technical staff come up with pioneering inventions in the field of photography. Polaroid's strategy is to devise cameras which are of such a level of technological sophistication that they can't readily be imitated by the powerful competition (Eastman Kodak). Dansk Design's quality tableware is successful because of the tasteful original designs of essentially one man.

FIGURE 4-9 THE INNOVATORS: THE ENTREPRENEUR AND THE CREATIVE GENIUS



Seymour Cray, the top technical man at Control Data was the first to be able to design super-computers which were actually beyond the technological reach of IBM, an overwhelmingly powerful competitor. These strengths have served as the 'equalizer' in meeting rough competition and act as the basis for a niche strategy which has allowed firms to survive.

The risks and expenditures necessary to pursue this strategy tend to be substantial. Technologies are unproven and products take some time to be developed and may 'bomb-out' at any stage of the development. No 'rational' conservative firm would pursue this trail. It requires the conviction of a farsighted entrepreneur who takes matters into his own hands and proceeds in do-or-die fashion. S_5 firms are headed by such men who possess virtually unlimited strategy making power and who believe passionately in the ability of the company to succeed at ambitious projects if it makes use of the expertise available.

In all instances, strategies tend to involve a fair amount of risk, a long term time horizon (since product-development takes time), an uncanny ability to come up with masterful innovations, and of course, a proclivity for beating competitors to the punch in any mutual field of endeavour. During the course of the innovative pursuits of S_5 firms, technological problems and obstacles manifest themselves, competitors react, technologies change, and other factors which induce additional environmental complexity (dynamism and hostility) come into play. In other words, the actions of the firm itself cause the external setting to become more dynamic and hostile (Hedberg, Nystrom and Starbuck, 1976).

As it happens, the company's strategy of bold innovation has paid off handsomely over a substantial period of time. This apparently further stimulates the propensity toward the same sort of behavior. Interestingly, strategies are based almost exclusively on some specific skills and a 'progressive' product ideology. The administrative modus operandi is not seen as a very high priority issue. Thus past success may foster the belief that the firm can continue to develop successful innovations, efficiently produce these, and market them at a profit, without devising a different intelligence system, or administrative structure.

Scanning, control, and communication proficiency does not seem very high considering the level of environmental complexity. Analysis of key decisions tends not to be thorough, though informed intuition does much to improve the strengths of decision making. Multiplexity appears low since few people express their points of view on issues pertaining to major decisions. Also strategies are not highly multifaceted but are built on only a few targets, techniques and assumptions. Finally, adaptiveness is not very high and some key blunders are made out of what seems to be ignorance of the environment. The firms remain successful, perhaps because of the constant stream of successful innovations, but several potential weaknesses may be indicated.

Firms do have a tendency to act very boldly and take many risks. Often resources are stretched quite thin in the process. Also it seems that the hunch and past experience of the entrepreneur and innovator are the greatest sources of organizational wisdom. While the expertise and the talents of these individuals are most impressive, the increased complexity of the administrative task has occasionally rendered excessive dependence on one or a very few people quite dysfunctional. (As the firm grows it might be necessary to get more people involved in decision making and perhaps set up more formal or at least broader based intelligence systems which allow a larger number of managers to stay informed.) The Gestalt strategy does however prove to be highly appropriate as long as the firm remains relatively small and undiversified.

Discussion

The Niche Strategy

Companies make use of their peculiar competences to compete against firms that would normally be considered unchallengeable. Control Data competes against IBM and Polaroid competes against Eastman Kodak. In order to survive, firms must select a portion of the market that is relatively ignored by the larger competitors. For example Control Data focussed on large machines and scientific applications, Polaroid on 'instant' photography, and Dansk Design on top quality tableware. These strategies seem conscious and well articulated, and generally, firms have the requisite expertise to carry them out.

Control Data: (1968)

> Control Data is No. 1 in its special field of big computers for scientific uses, designed basically for such non-business customers as government agencies, universities, and private research centers. p. 126

Dansk:

> Dansk [tableware] products were of high quality and were priced accordingly ... [their] greatest strength is marketing and product development. They set their goals and they follow them: 'top of the table', good design, good taste, and good advertising. p. 2

The Ambitious Entrepreneur

Firms are run by individuals who own a substantial proportion of the stock outstanding and who have taken strategy making to be largely their exclusive domain. It is these men who personally decide upon the goals to be attained and the strategies required to reach these goals. There exist no other executives within the organization who are in a position to challenge the entrepreneur.

Polaroid:

> ... one thing about [founder and president] Land - when he is doing something wild and risky, he is careful to insulate himself from anyone who's critical. p. 87 ... Outsiders have long speculated about how well Polaroid would fare without its founder and inspirational leader ... there are no carbon copies of Land ... p. 147

CDC: (1966, 1968)

> Norris ... [is] a tough and opinionated executive who kept a tight grip on every phase of the company's operations. Quietly and forcefully he came to dominate the affairs of Control Data ... the phenomenal success of the company in its first six years effectively dampened the impact of any dissident views. p. 260 'People learn what [Norris] wants to hear ... and then they play it back to him.' Stories are told about [his] overruling or end-running this committee or that task force ... Norris himself ... recently remarked 'My plan is Control Data's plan'. p. 126

Dansk:

> Ted Nierenberg [was] founder, president, and sole owner of Dansk ... p. 1. Until recently, [he] had been the sole contact with the designers [of all Dansk's products] ... and was getting into the ... product development cycle at every step. p. 11

A Very Bold Strategy

Entrepreneurs are keen to pursue a strategy of rapid growth through innovation. Often the innovation requires substantial capital expenditures, takes a long time to carry out, and is of such a novel nature that new technologies are required to produce the intended product. The need for bold innovation is implicit in the niche strategy and fine new products are perhaps the most effective means of coping with the competition. Nonetheless, the strategy does occasion long time horizons, substantial risk taking, a devotion to beating out the design or R & D departments of the competition, and a good deal of confidence and tenacity.

CDC: (1968)

> Computer manufacturers live dangerously, and Control Data Corp. of Minneapolis lives more dangerously than most. Having gained one ambitious goal, its management marches on toward another, still more ambitious, with scarcely a pause for consolidation ... [Norris] smiles gently even as he talks go-for-broke. p. 126

Polaroid:

> ... as founder, chairman, president, and research director of Polaroid Corp. [E.H. Land] has demonstrated over a quarter century the sort of boldness in business that anyone else might well regard as the wildest sort of optimism. p. 83
> Land's own concept is that the company is a problem-solving, research based organization that continuously develops new products to meet important human demands - frequently demands that are not even recognized. p. 147

Dansk:

> [The decision to produce and market a 'Gourmet' line] represented a corporate commitment to increase the number of products that Dansk was selling by 300% in the course of 5 to 10 years. p. 10. [According to entrepreneur Nierenberg]: 'The exciting thing for me is, can we keep Dansk growing at 15% to 20% a year? What other things can be we do without cutting back on our Dansk line? Can we generate the same kind of growth in other areas?' p. 9

Making the Environment More Challenging

The emphasis on growth and innovation has caused the firm to face a more challenging environment. For example, the technology becomes turbulent. There develops a 'pressure' to stay fashionable or to have the most sophisticated product because competitors have begun to respond to the initial innovations. Also, there are the financial risks brought about by development costs, and the chances of running up against insoluble technical problems. Not all of the dynamism or hostility in the environment stems from the actions of the firms themselves. In fact, the existence of powerful and innovative competitors was one of the initial reasons for the niche strategy. These competitors provide a great incentive for the S_5 firms to stay on their toes.

Polaroid:

> Even assuming complete success in increasing production and cutting costs ... Polaroid's profits will depend on two closely related imponderables: the size of the market for SX-70 cameras and film, and Eastman Kodak's long-awaited decision on whether to enter the instant-picture market. p. 83 ...
> The [SX-70] project involved a series of scientific discoveries, inventions, and technological innovations in fields as disparate as chemistry, optics, and electronics. Failure to solve any one of a dozen major problems would have doomed the SX-70. p. 85

CDC: (1966)

The mere announcement [by IBM of its competing] 360-90 series put a great deal of extra pressure on Control Data and on [its] 6600 [computer project] ... R.C.A. announced that it was reducing some of the fees associated with its computers. IBM immediately cut too, and in addition, eased its leasing terms. Control Data obviously had to cut prices on its smaller computers and did. Financial pressures on the company were raised still further in 1965 by a steady shift toward leasing. p. 264

CDC: (1968)

As it is, Norris says, IBM has the power to put Control Data out of business. 'We are now living at IBM's sufferance'. p. 128

A Selective, Intuitive Intelligence System

The initial niche strategy of the firms resulted in spectacular success. Companies have triumphed at bold innovation and fearless risk taking and this is the course that continues to be pursued with more enthusiasm than ever. It seems however that the focus of this strategy is quite narrow. The vast proportion of resources and attention are devoted to product-development. There is little to show that much heed is paid to ascertaining whether the products can be effectively marketed, produced, and financed. Also, there does not seem to be very much scanning of the environment, particularly considering its high level of dynamism. Controls (financial, production, and quality monitors) tend to be inadequate at times and internal communication systems seem to inform only relatively few members of the organization. The major informational resource remains entrepreneurial intuition.

CDC: (1966, 1968)

[CDC] panicked at a crucial moment, as Norris now admits, and they made some gross miscalculations about the computer market and their own

capabilities. p. 165. [The computer industry is] so fast moving and fluid that decisions often spring more from managerial intuition than from market analyses ... p. 179

Dansk:

Dansk did not know very much about [their strong following of] customers. No market polling, panels, or research had ever been attempted. p. 2 'Although there are not very many people in Dansk, they are very much apart geographically. The communication problems that are caused by that kind of distance are much larger than you expect ...' p. 7. 'At present there is a fury of small little slips going back and forth. The telex bills are astronomical ... The people here spend most of their time writing letters ... people's time is taken by the wrong things.'

The Hazards of Success - A Simple Strategy

Strategies are based, to a large extent, on the educated judgement of the top man in the firm. Most decisions have the benefit of only one perspective and tend not to be very multifaceted or multiplex. The selective and informal nature of intelligence activity coupled with the substantial turbulence in the environment tend to occasion some maladaptive decisions. Major issues are decided by impulse rather than by deliberation. The man at the top who makes all the strategic decisions hasn't the time or inclination to embark upon lengthy marketing, financing or production studies. The major focus is on product design, and here the gut feel of the entrepreneur usually saves the day. This is all the more remarkable since he receives so little support from other members of the firm.

Polaroid:

Production difficulties remain, and they are not trivial. Current output, averaging 5,000 cameras a day, is only half of what Land had hoped for by this time, and the national introduction was nine months behind schedule. p. 83

CDC: (1966)

> All during the period in the early 1960's when the 6600 [computer] was being designed and developed, the company's assumptions about the machine's manufacturing costs, about the time required to get it on the market, and about its reliability in operation were extremely optimistic. p. 166 ... In retrospect, Norris admits that the decision to reprice the 6600, whose problems had nothing to do with its price, was irrational and panicky ... [Also] a number of [Norris's] 1963 acquisitions were not proving profitable; furthermore, they were not providing the engineering support for the 6600, that they were supposed to. p. 264

Except for the talents of a creative design genius and a devoted and savvy entrepreneur, the company's store of talent and competence may be pretty thin.

Dansk:

> Design activity at Dansk was dominated by Jens Quistgaard. Quistgaard - designed products accounted for 75% of Dansk's dollar sales. p. 3
> 'I realized our survival depended on Jens - we had no depth of design resources.' p. 12
> 'I have the feeling that everybody wants to hide under the table when they know I'm about to ask about [any strategic issues or matters beyond managers' immediate roles', says entrepreneur Nierenberg]. p. 14

The marketing effort is sometimes the weakest link in the strategy.

CDC: (1968)

> To get very far in the business market, Control Data will have to beef up its marketing force ... [and] an important drawback of Control Data's 6000 series in the business market is that it wasn't designed for business applications. p. 176.

Conclusion

A focussed and relevant strategy has enabled S_5 companies to exploit their own strengths and to take advantage of their competitors' oversights, or product line gaps. It took the keen perception of the entrepreneur to discover a profitable market niche, and the talents of an innovative designer to harvest and extend the rewards forthcoming from that niche. There is a dominant element to the strategy since everything seems to revolve around product design and innovation. Perhaps because of the lack of diversification and the relatively small size of the firm, extreme power centralization and a very selective and informal intelligence system appear usually to serve their purpose. The occasionally serious mistakes committed by management as firms grow larger may however indicate the need to get more individuals involved in decision making and the need to establish more sophisticated and broad-based information networks. As competitors become more knowledgeable and time wears on, it might also be useful to become more concerned with resource management and to mitigate the go-for-broke attitude of entrepreneurs.

Relationships Suggested by the S_5 Archetype

1. Great success is possible even where the environment is dynamic and hostile, intelligence efforts are selective and strategy making is intuitive and sometimes very narrowly focussed. All it takes is an excellent product idea and the ability to implement it. In corporate strategy formulation a chain can be much stronger than its weakest link. It is possible to build on strength and succeed handsomely (at least for a while). There is of course some danger that the "weak links" can become serious should environmental conditions change or strengths diminish.

2. Previous success with a narrowly focussed strategy may be more dangerous than previous success with a well balanced (S_1) type strategy. In the former case, the positive reinforcement can act

as an obstacle to organizational learning, removing the incentive to devise a more adaptive administrative structure, intelligence effort, or strategy making style. In the latter case, a system has been set up according to a specified strategic modus operandi (as well as a product-market scope). This modus operandi delineates structural and procedural features which help the firm to adapt over the long run. There is always the danger however that success will breed complacency in areas which are not believed to be directly responsible for such success.

3. Power centralization such as that found in an entrepreneurial situation, when coupled with an explicitly defined strategy which is both risky/innovative and successful, will prompt even bolder actions on the part of the firm. The feeling of optimism, and perhaps to an extent omnipotence, gives way to a very daring set of tactics.

4. The greater the degree of power centralization, the more intuitive the mode of strategy formulation. The top level entrepreneur believes in himself and is also very busy. Thus deliberation and consultation are not viewed as very pleasant or useful activities.

5. A niche strategy strives to be strong in areas where potential competitors are weak. Once there has been an initial adaptation to the environment by finding an unexploited product or market, there may be a tendency to ignore the moves of the competition who are all operating in spheres which are essentially peripheral to the firm's interests. This can be dangerous if external changes should catch the firm by surprise.

CHAPTER FIVE

THE FAILURE ARCHETYPES

OVERVIEW

F_1 THE IMPULSIVE FIRM - RUNNING BLIND

F_2 THE STAGNANT BUREAUCRACY

F_3 THE HEADLESS GIANT

F_4 SWIMMING UPSTREAM - THE AFTERMATH

OVERVIEW

Four failure archetypes have been identified using our methodology. Each was found to be statistically significant. Before analyzing these archetypes, we shall again present an overview.

Table 5-1 ranks the failure archetypes according to their most prominent features. We employ the same dimensions as in Chapter 4. As we have explained before these are composites of some of our original variables and may not reflect the exact rankings of every component. The composites comprise the same variables as was the case in the last chapter. Recall that the highest ranking (10) indicates that the archetype scored higher than all other archetypes on the composite dimension. A rating of 1 indicates that the archetype scored lowest.

TABLE 5-1

MEAN SCORES AND RANKINGS OF FAILURE ARCHETYPES ALONG R-TYPE FACTORS

	HETEROGENEITY		DYNAMISM		INTELLIGENCE/ RATIONALITY		CENTRALIZATION		TEMPERAMENT	
	SC.	RK.	SC.	RK.	SC.	RK.	SC.	RK.	SG.	RK.
F_1 Impulsive Firm	6	8	6	7	2.1	1	7	8	6.5	9
F_2 Stagnant Bureaucracy	2	1	5	2	2.3	2	6	4	1.5	1
F_3 Headless Gaint	5	7	5	2	2.4	3	1	1	2	2
F_4 Swimming Upstream	3	2	5	2	2.9	4	6	4	5	5

Original scores on each of the 31 variables for the failure archetypes are contained in Table 5-2.

Successful archetypes, as we have seen, are very different from one another. This is also true for failure archetypes. The first archetype, F_1 is perhaps the most dramatic. A powerful, entrepreneurial chief executive very boldly enters new and dynamic environments. He creates,

TABLE 5-2 SCORES* OF FAILURE ARCHETYPES

	F_1	F_2	F_3	F_4
Environment				
1. Environmental Dynamism-Past	4	2	3	3
2. Environmental Dynamism-Current	6	5	5	5
3. Environmental Heterogeneity-Past	3	2	3	2
4. Environmental Heterogeneity-Current	6	2	5	3
5. Environmental Hostility-Past	3	2	3	X4
6. Environmental Hostility-Current	7	6	6	6
Organization				
7. Scanning of Environment	3	2	3	3
8. Delegation of Operating Activity	X4	X3	6	4
9. Centralization of Strategy-Making Power	7	6	1	6
10. Resource Availability	X4	X4	X5	1
11. Management Tenure	2	2	2	2
12. Conflict	5	7	4	4
13. Internal Controls	1	2	2	2
14. Team Spirit	3	1	X4	4
15. Internal Communication System	2	1	2	3
16. Organizational Differentiation	6	2	X5	3
17. Technocratization	3	3	X4	3
18. Initial Success of Company Strategies	X4	1	4	2
Strategy-Making				
19. Product-Market Innovation	X4	2	2	5
20. Adaptiveness of Decisions	2	1	2	3
21. Integration of Decisions	2	3	1	2
22. Analysis of Decisions	2	2	4	X3
23. Multiplexity of Decisions	2	2	2	3
24. Futurity of Decisions	4	3	3	3
25. Proactiveness of Decisions	6	1	2	X5
26. Industry Expertise of Top Managers	3	X5	3	X4
27. Risk Taking	7	2	2	5
28. Consciousness of Strategies	X3	3	3	4
29. Traditions	X4	6	6	X3
Success				
30. Past Success of Firm	X6	X4	5	X3
31. Current Success of Firm	1	1	3	1

* Scores are those most representative of firms within archetypes. They are modes (or an average of modes where there is more than one). An X indicates the score is unreliable since the range on the variable for the archetype is greater than 3.

in the process a setting more turbulent and heterogeneous than any other unsuccessful archetype must face. What's more, environmental transition is rapid. The weak intelligence system of the organization just can't keep up, one prominent reason being that the entrepreneur tries to do everything himself.

In direct contrast to F_1, the stagnant bureaucracy, F_2, hardly changes at all. Even though conditions in the environment have been radically altered, the firm does not realize this and of course does not adapt. The same narrow product line is sold to the same markets, accounting for the relatively low heterogeneity score. Power remains centralized, but the leader is quite conservative and is very committed to the 'old ways'. A lacklustre intelligence effort (even less well developed than for other firms) does little to induce the firms to revitalize.

The headless giant, F_3, has another problem. No really strong leader has emerged and the organizational sub-units act in a quasi-independent manner. The diffusion of power makes it difficult to take any decisive actions and one finds the firm muddling-through; usually very timidly. Because the environment has changed rather markedly and the intelligence effort remains poor, the decisions which are taken are often misdirected.

Our final unsuccessful archetype, F_4, is making some effort to recover, but the odds are badly stacked against its success. The firm has initiated some, albeit inadequate, efforts to improve organizational rationality. A strong leader tries to change the company's orientation to ameliorate its performance. However a hostile and complex environment, coupled with an organization which has been severely damaged by past failures, make any sort of turnaround unlikely.

Again to highlight the differences amongst archetypes, we portray diagramatically how firms vary along our five key dimensions.

There is no apparent relationship between dynamism and levels of intelligence/rationality amongst failure archetypes (Fig 5-1). Most firms are so oblivious to their environments that their behavior does not seem to be greatly influenced by the external setting. In fact, F_1 performs the least amount of intelligence activity and analysis in spite of the fact that it is in the most dynamic environment. One fact is particularly worthwhile noting. That is that the highest intelligence/rationality score amongst

the failure archetypes (that of F_4) is lower than the lowest intelligence/rationality score amongst the successful archetypes (that of S_5 as per Figure 5-1). The intelligence factor discriminates perfectly amongst failure and successful archetypes.

FIGURE 5-1

MEAN SCORES OF FAILURE ARCHETYPES ALONG DYNAMISM AND INTELLIGENCE/RATIONALITY FACTORS

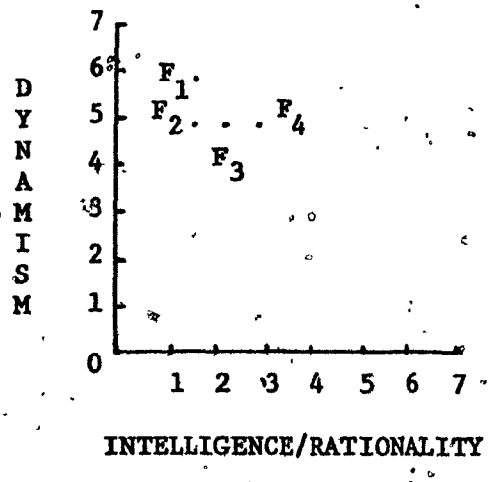
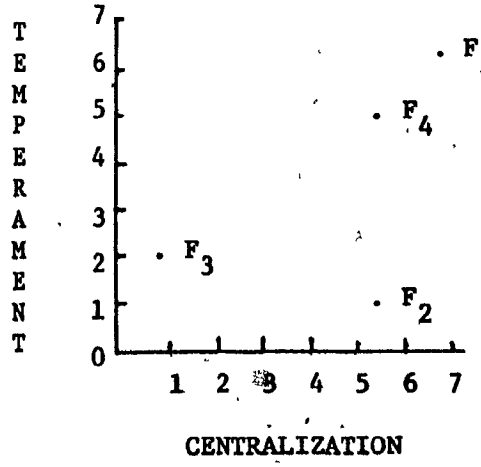


Figure 5-2 reveals there to be a somewhat more discernable pattern to the association between temperament and centralization of strategy making power amongst failure archetypes. As was the case for successful archetypes, there seems to be a positive relationship between temperament and centralization. The F_1 firm is dominated by a powerful chief executive who is unimpeded in his ability to make bold moves by other managers who might tend to be more cautious. At the opposite end of the spectrum, the F_3 firm has no leader with sufficient power to embark upon a decisive course of action. Decisions tend to be incremental since bold moves could be vetoed by other managers. The F_4 firms falls somewhere between these two extremes. As usual, there is an exception. The stagnant bureaucracy, F_2 is dominated by a powerful leader. This leader however is a bastion of conservatism who is committed to the old ways and effectively damps any innovative initiative.

FIGURE 5-2

MEAN SCORES OF FAILURE ARCHETYPES ALONG TEMPERAMENT AND CENTRALIZATION FACTORS



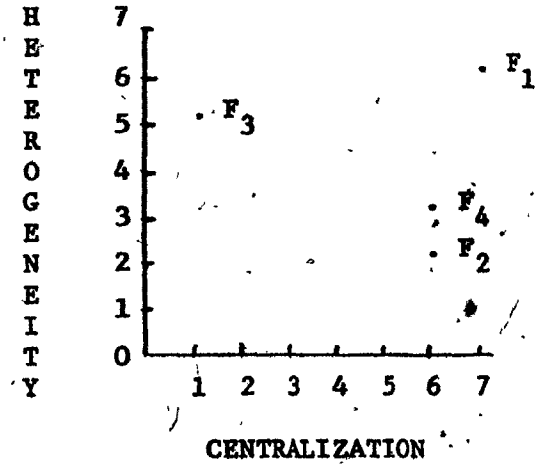
A plot of the failure archetypes along the heterogeneity and centralization factors discloses no visible relationship (Fig. 5-3). It is necessary to look at individual archetypes to explain any association between the two factors. Archetype F_1 has high heterogeneity and centralization scores mainly because powerful entrepreneurs have increased heterogeneity through an aggressive growth, diversification, or acquisitions programme. The low heterogeneity in the environments of F_2 and F_4 firms is one of the factors which allows executives to hoard strategy making power. The F_3 archetype suffers from a leadership gap. Substantial and long term heterogeneity has allowed competing power factions to grow up in the organization. The absence of an overwhelmingly dominant coalition results in the wide dispersion of strategy making power.

The fact that broad generalizations cannot be made about the relationships of variables across all archetypes, reinforces the utility of using archetypes as a basis for a more refined method of investigation.

The following sections present our four failure archetypes in detail. These sections are structured in the same manner as those which dealt with the successful archetypes.

FIGURE 5-3

MEAN SCORES OF FAILURE ARCHETYPES ALONG HETEROGENEITY AND CENTRALIZATION FACTORS



F_1 THE IMPULSIVE FIRM - RUNNING BLIND

Sample Case Summaries

Babcock and Wilcox was an old and respected manufacturer of large boilers. It sold in a very stable market and employed quite a traditional technology. Then, in a sudden and dramatic break with the past, the firm's powerful CEO decided to enter the nuclear energy field by proposing to build pressure vessels for atomic reactors. The production technology here was in a state of turbulence and the firm's expertise in the area was dismally low. In attempting to construct a new plant to handle the nuclear business, and in marketing the new products, B & W committed every mistake in the book. An uninformed top management tried to make all the decisions about the project by itself. The individual "in charge" of the nuclear division became so frustrated with head office that he committed suicide (November 1969).

Automatic Sprinkler was run by an aggressive entrepreneur named Harry Figgy. This conglomerate acquired new companies so quickly that careful scrutiny was impossible and unpleasant surprises were inevitable. Sales increased fourteenfold in 5 years. Most of the merger partners were in unrelated fields of endeavour (May 1, 1969). An extremely similar situation is presented in the U.S.M. case. After having acquired 52 firms in completely unfamiliar businesses and running up a very sizeable amount of long term debt, U.S.M. remained a very unprofitable enterprise. It still earned most of its income from the old shoe machinery business (October 1972).

RCA over four years had been building itself into a conglomerate. While it still carries on its radio and television business, it has also entered the car rental, real estate, food, home furnishings, and computer fields. The new CEO, Bob Sarnoff (the founder's son) was largely responsible for the corporate reorientation. An ignorance of some of the new markets and industries and a communications gap within the firm caused a good deal of trouble (September 1972). The Volkswagen situation was quite similar to that of RCA. After almost 20 years of little product innovation the firm's new managing director, Kurt Lotz, simultaneously

and with little past experience, began to introduce a large number of completely new automobile lines. The disregard for internal economies and the ignorance of consumer tastes assured that the strategy would fail (March 1972). Another German company, Krupp, though financially controlled by family interests was run by an aggressive, marketing oriented, professional manager. While tradition forced the firm to retain its unprofitable coal and steel lines, the powerful director boldly went after new export markets and badly overextended the company in the process (August 1967). Levi-Strauss Europe was the foreign subsidiary of aSan Francisco based jeans and casual-wear manufacturer. The faddish European market was entered without any real knowledge of high fashion buying behavior. Inventory problems resulting from poorly coordinated marketing and production tactics also contributed to the subsidiary's demise.

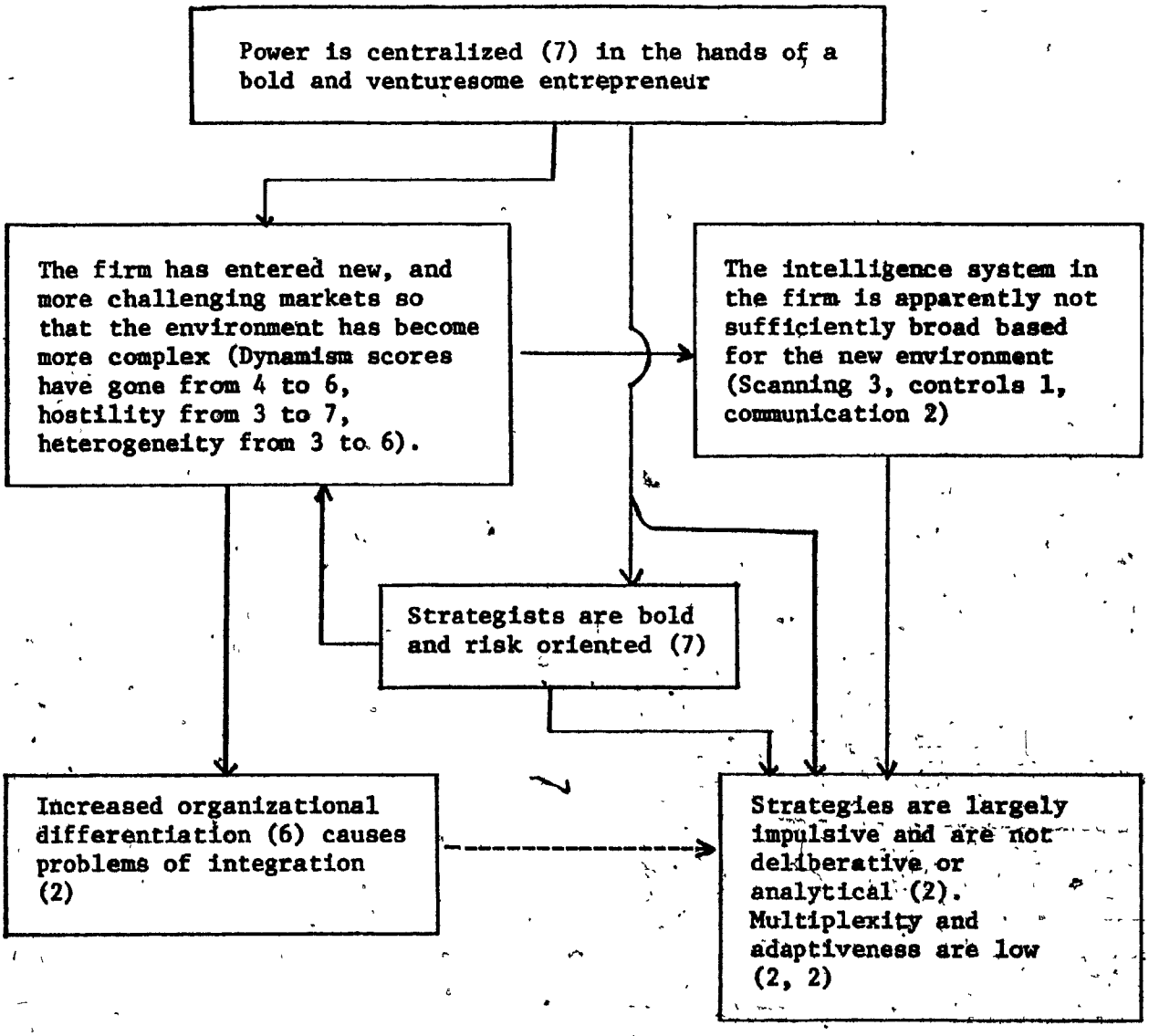
Essential Features

An aggressive, growth oriented manager, almost single-handedly attempts to pursue a bold strategy of diversification. There does not however seem to be an explicitly defined scope to the strategy. Expansion proceeds somewhat aimlessly and wrecklessly without many attempts at consolidation or integration of postures. What is more the ambitious strategy has dramatically changed the firm's environment and the impulsive unilateral decisions of the chief strategist are not informed by a knowledge of relevant factors. Little attention is paid to the need to gather and analyze information, focus strategies, and delegate authority for decision making to better qualified subordinates.

Hypothesized Causal Links

Figure 5-4 illustrates the causal links which are hypothesized to characterize the impulsive firm. If there is one critical attribute which serves to distinguish this archetype from all others, it is the dominance of firms by an extremely bold, powerful, and venturesome entrepreneur. The remaining characteristics of the archetype seem to stem to a large extent from the temperament of the men at the top.

FIGURE 5-4 THE IMPULSIVE FIRM



The most prominent action of the entrepreneurs is to enter new markets by acquiring subsidiaries, introducing new products, expanding geographically, etc. The net effect of these moves is to make the environment of the firm much more complex. The new settings are often more dynamic and hostile and they also encompass much more heterogeneity in consumer tastes, production technology, and competitive tactics.

Unfortunately, the entrepreneurs apparently do little to gear their firms to meet these new challenges. The intelligence system remains more suitable to much simpler conditions and the authority structure seems such that lower levels have inadequate discretion to run their departments. Top executives become overloaded with work. What is more, the increased organizational differentiation which results from greater environmental heterogeneity poses more severe coordinative/integration problems which seem often to be ignored.

In spite of the growing complexity of the administrative task, strategists continue to embark upon more risky and complex projects. They devote little attention to the appropriateness of their moves and appear to rely mostly upon their untutored intuition and feel. Often, executives seem far too hasty and uninformed to make the right decision. The maladaptive behavior and low multiplexity which appear to be by-products of inadequate analysis cost the firm dearly.

Discussion

Environmental Transition

The firm's environment has changed markedly over the past five years. Reasons for the changes stem from (a) the actions of the firm's managers as they enter new markets by adopting new product lines or acquiring subsidiaries, and (b) changes in the firm's old markets as a result of the actions of governments, competitors, and shifts in consumer tastes. The F_1 firm characteristically starts off in an environment in which there is low to moderate technological dynamism, competition, and required diversity in marketing and production tactics. Subsequently, there occurs a rather dramatic change. Some firms commence product lines which are very different from those they sold in the past (e.g. in terms of required

production technologies which tend to be more complex and troublesome and consumer characteristics which are less predictable to the firm's managers). In other instances, competition accelerates in more established product lines or the government legislates against a monopolistic market situation. The most pronounced transitions in the firm's environment occur where there have been many mergers and acquisitions. The resultant increase in heterogeneity as well as the strange new markets and products which are subsumed impose very quickly a substantial amount of uncertainty and dynamism.

> RCA:
>
> Sarnoff ... has been building the company into what can fairly be described as a conglomerate. p. 123. [His strategy has] reshaped the company in ways that no one would have imagined a decade ago. p. 131
>
> USM:
>
> [USM went, via acquisitions, from a monopoly producing only shoe machinery to a] globe-girdling, debt-ridden, diversified company. p. 124

Other examples are Levi StraussEurope which had to cope with an environment which was transformed from conditions of stability and munificence to those of dynamism, rapid changes in fashions, and intense competition. Automatic Sprinkler aggressively acquired a multitude of subsidiaries in very different businesses. Krupp expanded to Eastern countries in which cutthroat competition prevailed. Babcock and Wilcox became pioneers in the building of pressure vessels for atomic reactors and faced a highly uncertain and undeveloped technology. Volkswagen converted from a model monoculture to a firm producing a very broad and diverse range of cars. All of thesetransitions took place extremely rapidly and, as it happens, taxed the firms considerably.

Differentiation, Integration and Conflict

Environmental transition causes the firm to find itself in more dynamic, diverse, and hostile environments. Usually, the firm becomes fairly differentiated since it requires new and different sub-units to cope with the altered environmental conditions. For example, often

subsidiaries are acquired whose operating procedures and styles bear little resemblance to those of the parent company. Other times, new departments or divisions are set up to handle a new product-line. The increased differentiation amongst sub-units in terms of time horizons, goals, operating characteristics of personnel etc. is not usually, for F_1 firms, counterbalanced by integrative devices. Top management apparently fails to realize the need for new controls, information systems, and sundry communication techniques. Different units operate at cross purposes and new departments or subsidiaries are poorly understood by the parent. Occasional conflict develops because of the absence of cross functional and divisional committees and because the new endeavours are sometimes so different from the old that management has little expertise and sometimes imposes uninformed edicts. Conflict is also facilitated when there is a change in power amongst organizational sub-groups (marketing vs production) due to a new orientation.

> Automatic Sprinkler:
>
> [The president's acquisition strategy] posits no optimum corporate size, and there is nothing in its internal logic to forbid the acquisition of any imaginable company in any industry. p. 90 ... The fast pace of acquisitions was partly responsible for the failure to forge better links to the divisions ... [Subsidiaries were granted] tremendous autonomy. p. 91
>
> Levi-Strauss Europe (L.S.E.):
>
> In 4 years [L.S.E.'s] staff increased to nearly 3,000, its subsidiary companies from one to thirteen, its plants from one to nine, its warehouses from one to twelve. But meshing the acquired firms with L.S.E. proved to be unexpectedly difficult. Their presidents were long-established businessmen in their own countries, and they resisted changing their methods ... Each new subsidiary operated differently, with its own accounting and inventory control systems. p. 133
>
> USM:
>
> USM ... repeatedly found itself unable to make use of the special marketing or product knowledge of [their subsidiaries] p. 127 ... Having bought a company, we expected it to operate automatically. p. 130

When subsidiaries or divisions are asked to change and/or make requests of the head office, differences of opinions often result in conflict and disenchantment.

> RCA:
>
> [Sarnoff's switch from a technological to a marketing orientation] has torn at RCA's most cherished traditions and met embittered resistance from many old-timers. p. 123

> Babcock & Wilcox:
>
> Nielsen created an atmosphere in which engineers and technical people just didn't feel at home. Their ideas were not treated with respect. They felt top management didn't understand ... p. 125

Centralization of Strategy-Making Power

F_1 firms tend to have powerful leaders who alone, or in combination with only a very few number of people (usually a head office staff) determine the direction of the firm. That is not to say that managers fail to delegate routine operating decisions, but rather that they appear to decide major issues and corporate orientations on their own. They seem to rely little on feedback from boundary spanning units or from functional heads and adopt a fairly autocratic tone. While the power centralization was quite feasible in the formerly stable environments of the firm, it becomes dysfunctional under the new conditions. Individual managers find themselves ill equipped to handle the far more complex administrative task.

> Volkswagenwerk:
>
> Lotz's tone of command unpleasantly reflected his wartime career as a major on the Luftwaffe general staff. p. 102

> Krupp:
>
> It was becoming increasingly obvious that a company of Krupp's size and nature required sophisticated team management; it is simply too much for one man, however brilliant to handle [as was the case]. p. 75

Babcock & Wilcox:

> [The Vice President who was supposedly in charge] couldn't bear to sit in Barberton and have all the shots called from N.Y. - and then be expected to take responsibility for not producing. p. 168

Automatic Sprinkler:

> It is humanly impossible for so compact [an executive] group to oversee the detailed operations of more than a small part of a multidivisional company. p. 90

Centralization is quite significant to the scenario in that poor organizational intelligence and high proactivity and boldness can result. In contrast, if a team of executives would discuss strategic matters, more informed views of problems and opportunities might be elicited from the larger number of perspectives considered. Group discussion could also inhibit bolder, purely intuitive sorts of decisions if some 'rationale' were demanded by the executive team.

Poor Organizational Intelligence

Power centralization seems to result in far too large an administrative task for the chief executive. The increased environmental dynamism and diversity make it impossible to adequately direct the firm. Also, because environmental transition has been so rapid, there is usually insufficient realization that scanning, controls, and internal communication systems must become more prevalent. Executives continue to do things the 'old way' and usually fail to track important new trends and variables. Also, where new subsidiaries are acquired, they tend not to be integrated with a basic corporate direction and are inadequately controlled. Firms often run into trouble as things progressively deteriorate at subsidiaries or new divisions; management's lack of expertise causes belated recognition of the deterioration; and finally, top management begins to pay attention to stop-gap measures to solve highly pressing problems in the division which is in trouble. This detracts attention from long range orientations in the firm's older lines and a general performance decline gets underway.

F_1 firms seem to have a downward biased communication system as a result of their past experiences in stable, homogeneous environments.

Messages flow mostly in a 'top-down' direction and there is little provision for detailed feedback about the performance of new operations. There is little evidence of 'bottom-up', lateral, or informal communications.

RCA:

> Speaking of the inadequacy of RCA's financial controls, Donegan recalls: 'I hadn't seen what was happening. The group staff hadn't seen it.' p. 131

Babcock & Wilcox:

> As the bottleneck at Mount Vernon grew worse, Craven came to feel that ... corporate headquarters in N.Y. [did not] fully appreciate the difficulties ... [Customers felt that the President] did not appreciate just how serious the pressure-vessel delays had become. p. 168

USM:

> [After acquiring firms, USM] discovered that it did not understand how to sell in an industry with which it was unfamiliar. p. 126 ... Management and operating controls of USM itself were inadequate for a company bent on diversification. Indeed ... USM had no internal audit staff, and its internal controls are still sketchy. p. 130

Automatic Sprinkler:

> At Automatic Sprinkler ... there had been no serious, consistent effort to put [a financial reporting system] into operation. As a result corporate management had to accept pretty much on faith such data as the divisions were able or willing to supply. p. 91

L.S.E.:

> [At L.S.E.] it took months before top company executives realized that they faced a serious problem. p. 131 ... Only [one subsidiary] was computerized, and its system didn't fit with L.S.E.'s. p. 133 ... Once goods did reach Europe, L.S.E. couldn't keep track of where they were ... Unfortunately [the] chaotic and out-of-date records gave its managers no inkling of the [fashion] change. p. 134. Belatedly aware of the upheaval in fashion ... L.S.E. continued both to import and to manufacture pants that were hard to sell. p. 135

Impulsive and Maladaptive Strategies

Power centralization allows decision making styles to relate rather closely to the personality attributes of the chief executive. Top managers tend to be somewhat specialized in that they are familiar with the nature of only one or so of the lines of business conducted by the firm. They thus tend to make decisions which take into account only a fairly narrow range of factors (i.e. their decisions are not highly multiplex). For example, one manager was very much concerned with marketing problems but neglected financial considerations. Another was somewhat sensitive to the home entertainment industry but completely at a loss when it came to directing a newly set up computer division.

> Krupp:
>
> [Beitz was] a salesman rather than a financial man with an eye out for profitability. p. 74
> [Instead of weeding out unprofitable operations] to counteract the gathering weaknesses in domestic markets, Beitz pushed exports ever more feverishly ... [to areas] where cutthroat international competition existed. p. 75
>
> Babcock & Wilcox:
>
> [The new division head] was a stranger to the problems of the power generation division and to that division's big corporate customers. p. 168

Executives tend to be very impulsive and somewhat closed-minded in their decision making. They spend precious little time investigating problems and opportunities and their intuition is too untutored to carry the day. Because the environment has changed and the administrative task has multiplied in complexity, intuitive conceptions of reality are obsolete. Unfortunately these are not updated by attending to new conditions.

> RCA:
>
> [In entering the computer market no one] calculated how much the strategy would cost or how long it would take to reach a profit ... the decision to plunge into computers had more a touch of ... gut feel and leap of faith as [its] main ingredients. p. 128

Volkswagenwerk:

> [The ambitious investment program] would have strained the group's financial resources at the best of times, let alone in a period of soaring costs, shrinking profits, and dwindling markets. p. 102

Babcock & Wilcox:

> ... management made too little provision for the time it would take to get the new plant operating at full capacity. p. 164

Restricted decision time horizons also seem to be the result of power centralization and increased environmental complexity. The principal 'coordinative directive' which the manager bears in mind may be a fairly simplistic one, often based very much on personal aspirations. It may not be sufficiently rich or detailed to serve as a long term guide for the enterprise or to establish a temporally consistent growth direction. The lack of a long term orientation may stem as well from past environmental stability in which shorter perspectives were perfectly adequate.

USM:

> There never was a long range plan of acquisition, ... in its haste to diversify, USM seems to have come up with more than its share of losers. p. 124. It is now evident, says a USM director, that many of the early acquisitions were made 'in a certain sense of panic' about the need to diversify. p. 127

Automatic Sprinkler:

> The pace was too fast to allow for thorough investigation of merger partners ... or for proper assimilation of newly acquired companies before management's attention was diverted to other negotiations. pp. 88-89.

Perhaps because little thought is given to major decisions, F_1 firms tend not to be very adaptive (though of course, they are changeful). There exist either tardy or minimal responses to most environmental or internal trends. Also the leader does not appear to be sensitive to the consequences or soundness of his actions. This is doubly true when the firm has entered new and unfamiliar terrain and signals from the new business are that much harder to interpret.

Volkswagenwerk:

> Lotz's basic strategy of model diversification was sound, but the practical application had an air of uninspired improvisation. Not a single one of the new VW models was an unqualified success. p. 102

Krupp:

> Krupp invested $300 mm. in coal and steel [the first sectors of the economy to go sour] ... by that time, the German market ... [was] burdened with overcapacity. p. 75

L.S.E.:

> ... with ... long lead times and a complete distribution network, the company could not readily shift its output to conform with such swings of fashion. Despite this handicap [it] decided to compete in the high fashion business with faster moving local rivals. p. 134

An Extremely Venturesome Orientation

For the most part, managers are very bold and proactive. They beat competitors in diversifying into new lines and embark upon costly ventures even though they are well aware that a substantial risk is involved. This is not surprising since power is centralized. No one can stop the manager from adopting a bold course of action. Also, since the decision making style is quite impulsive, there is little time to develop "cold feet" from the advice of staff analysts and technocrats. Because the amount of feedback is so limited, the executive often progresses very far before he becomes aware of the red flag that ultimately mitigates his boldness. This form of overextension is characterized by expansion without consolidation and the lack of integration or focus in strategies.

USM:

> Throughout the Sixties, USM made acquisitions at a great rate - often two in a single month ... [Such] frantic acquisitiveness put a heavy strain on USM's financial resources. p. 127

Volkswagenwerk:

Ambitious investment commitments eroded the company's cash reserves. p. 83. Lotz was determined to pursue a policy of model diversification much wider than Nordhoff had ever envisaged. p. 98

Krupp:

Beitz sold like a demon. Beating out competitors not only from the Ruhr but from Britain, France, Italy, and Japan ... [while this] was crippling Krupp with financial costs. p. 75

Automatic Sprinkler:

[The company's failure resulted from] growing explosively by means of multiple acquisitions in industries new to its management. ... The pace was too fast to allow for thorough investigation of merger partners. p. 88

L.S.E.:

[The executives] decided that Levi Strauss should expand rapidly in time to grab as large a market share as possible. Only later would the company impose its usual financial and management controls. p. 133

Conclusion

Entrepreneurial top executives with substantial decision making power have caused the F_1 firm to enter a much more dynamic and heterogeneous environment. This is apparently dangerous in that little has been done to prime the intelligence and power structures of the firm to make them more suitable to the more complex conditions. Instead of attempting to reduce uncertainty, consolidate operations, and rationalize the administrative structure, top managers continue to make bold and rash moves which get the firm into further trouble. No one is there to prevent entrepreneurs from indulging their temperaments. There is little time or inclination to study the situation in depth, and so maladaptive and simplistic decisions appear all too common.

Some readers might have noticed the similarity between the Impulsive firm and the Entrepreneurial conglomerate. F_1 is like S_4 in many ways.

An entrepreneur dominates, a bold diversification strategy is pursued, risk taking is substantial, and decision making is proactive. Also, the environments have become heterogeneous and the levels of organizational differentiation are substantial. This however is where the similarities end. While S_4 firms are quite careful to investigate the soundnesss of their moves, F_1 executives are shown to be unduly hasty and impulsive in taking actions. Also, there is much delegation of operating responsibilities in S_4 and just the opposite in F_1. The result is that the levels of industry expertise of management is much lower for the failure archetype. The successful conglomerates are preoccupied with gathering, analyzing, and discussing information about proposed acquisitions and operating problems and seem to enter relatively munificent environments thanks to their diversification programs. F_1 firms on the other hand are dominated by individuals whose intuition no longer suffices to make enlightened decisions and, as an apparent consequence, companies have entered very hostile settings during the course of their expansions. It seems that in one case a controlled and deliberative sort of boldness prevails whereas in the other, an unmitigated and untutored aggressiveness is manifested.

Relationships Suggested by Archetype F_1

1. Increased heterogeneity in the environment creates the need for, and usually the fact of, greater organizational differentiation. The differentiation and proliferation of specialized organizational sub-units often makes coordination of effort and integration of purpose much more difficult.

2. Environmental change, especially when it is very rapid or discontinuous, makes adaptation very difficult. There is usually insufficient time to set up appropriate intelligence and power distribution systems since the organization is in a state of flux and executives may be concerned with other matters. Also, few managers may realize the need to establish better organizational coping devices.

3. When there is only one individual who makes the strategies for the company, strategies will probably be more simplistic, less multifaceted, and less multiplex than if a team of executives with different ideas and perspectives were involved.

4. To the extent that the firm has only one key decision maker at the helm, the felt need for sophisticated organizational intelligence systems is likely to be quite low. Where there exist a team of top executives who occasionally do battle with one another to resolve an issue, there will be demands for more information, analysis, and deliberation. If the man at the top is unencumbered, he may just as soon give way to intuition and instinct while disregarding the facts.

5. Extreme power centralization also facilitates the making of bold or risky decisions. There are no other organization members to deal with who might attempt to criticize, point out the risks or block the proposed decisions.

6. The absence of adequate intelligence may give top executives a false sense of security and cause them to unwittingly initiate bold and risky moves. It may not be necessary to use the most sophisticated scanning and controls techniques or to hire a group of systems analysts to gather useful organizational intelligence. Nor is it inappropriate to use intuition and 'feel' in making decisions. What does seem to be required in a dynamic environment, particularly where rapid diversification is under way, is for decisions makers to continually update their perspectives of their tasks and to remain open-minded when their judgements are challenged by those who have 'conflicting' information.

F_2 · THE STAGNANT BUREAUCRACY

Sample Case Summaries

For the 24 years beginning in 1935, Eastern Airlines was completely dominated by the strong-willed Captain Eddie Rickenbacker. The emphasis on cost cutting, the disregard for customer desires, the failure to go after more profitable routes, and the very belated adoption of jet transportation, all weakened the firm considerably. Over the long run, the failure of the airline to change and adapt to the new modes of transportation made it impossible for it to compete with other carriers for customers (July 1964). United Airlines in the early and mid 1960's experienced a somewhat similar situation.

Leathercraft sold shoes designed for an essentially rural world. The very substantial population shifts away from farms and towards urban centers coincided with the increased style consciousness of customers. The "any-color-as-long-as-it's-black" merchandising philosophy caused the firm to produce pedestrian styles at a time when there was very little demand for them. Management's stubborn resistance to change lasted for many years and the company finally found itself in grave difficulties (1955). The history of Melville Shoe Company (about 1950-1960) is almost identical.

The Caterpillar Tractor Company has for many years produced heavy construction equipment particularly well suited for road building. With the long term decline in this market in the U.S. other equipment manufacturers had begun to reorient their product lines into light-construction, farm equipment, etc. Caterpillar's management, with their very traditional orientation, had not made many moves in this direction (May 1972). Amtrack was an enterprise set up by Congress to take over most of the nation's passenger service. In spite of the great demand for rail service, Amtrack succeeded in alienating most of its passengers with incredibly poor service. The organization took over a poorly maintained and fragmented rail system and did virtually nothing to improve it (May 1974).

Essential Features

What was once a very stable and munificent environment has become more dynamic and hostile. The organization is not geared to the new setting. There seems to exist a notoriously poor intelligence system, much concentration of strategy making power, and little delegation of authority to carry out even fairly routine activities. Often there is a great deal of conflict amongst managers and organizational sub-units. Strategy making activity is extremely conservative and tradition-bound and apparently ignores many factors which influence the success of the firms.

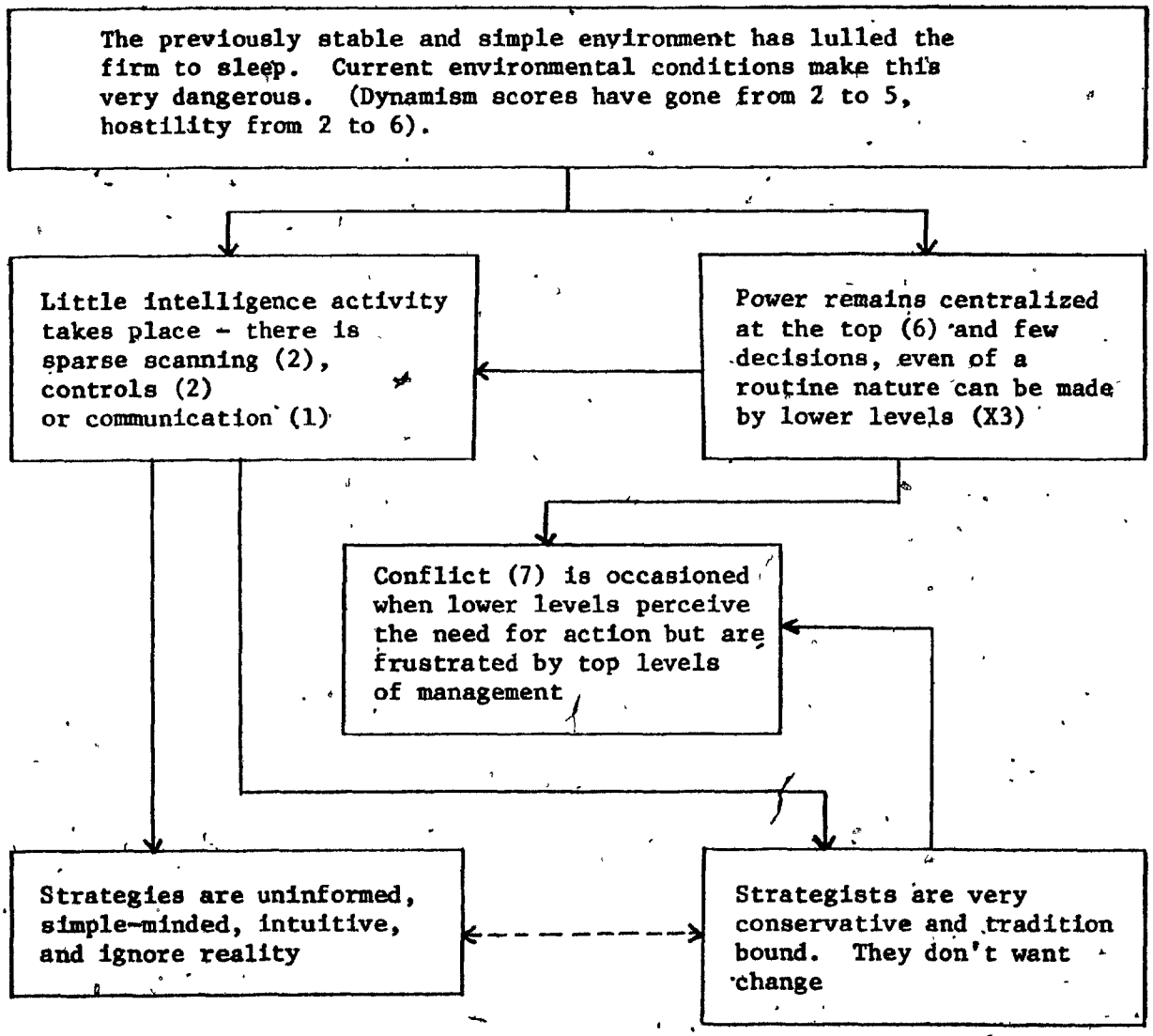
Hypothesized Causal Links

Figure 5-5 illustrates the causal links which are hypothesized to underly the Stagnant Bureaucracy. The external environment of the firm had been quite placid and simple. Product lines and production technologies were stable, market tastes changed only very slowly, and the moves of competitors were predictable. There was no great hostility caused by government regulations, resource shortages, cutthroat competition, etc. This stable and munificent state seems to have lulled the firm to sleep. There had been no real or perceived need for vigilance and so the use of uncertainty reduction mechanisms is now uncommon. Thus one or two men continue to make all the major decisions and little effort is devoted to the use of sophisticated scanning, control, and internal communication techniques. Because of this primitive organizational orientation, top levels of management in the firm seem not to perceive the changes in the external setting. Thus the need to reformulate product-market strategies and organizational structural attributes escaped them (a catch-22 situation).

Lower levels have become increasingly aware of the need for change since they are closer to the markets of the firm. Unfortunately their limited power and the bureaucratic ways of operating serve to frustrate these individuals as they press for change.

Strategies tend to be extremely rigid and conservative. This is mainly because top management are not convinced of the need to change. Thus the old ways of doing things are usually preserved even though they may no longer be appropriate. Also, strategies tend to be simple, and are

FIGURE 5-5 THE STAGNANT BUREAUCRACY



founded on the often untutored intuitions of executives, rather than on any considered deliberation or probing analysis. The poor intelligence system and the fact that one or two executives 'call the shots' assure that this must be the case.

Discussion

The Passing of the Stable State

What was once an extremely stable and uneventful environment has begun over the last 5 years to become more dynamic and hostile. Consumer tastes shift, competitors are bringing out new offerings, the legislative climate is changing, new organizations begin to enter the competition, and changes in production technology are called for.

> Leathercraft:
>
> [There was a] dwindling farmer market caused by the shift of population from rural to urban areas ... The heavy-type work shoe produced by Leathercraft was not suitable to [non-farm workers]. p. 457

> Caterpillar:
>
> The market for earth-moving equipment is changing. The [former] era was the era of the mammoth highway project. In the 1970's the emphasis ... is apt to be less on big highways and more on urban demolition and reconstruction. This work will require smaller and less costly kinds of machinery [which Caterpillar cannot produce]. ... [Also] the gap between the quality of Caterpillar products and that of its U.S. competitors has also begun to narrow. p. 161

Somnolent Intelligence System

The F_2 firm does not fully recognize that its environment has been transformed. It seems to operate under the delusion that the previously stable state of affairs continues to prevail. Managers are often not aware of the need forsubstantial intelligence activity. They have been successful in the past without it. In any event, the environment has changed too quickly for the firm to be able to readily structure its intelligence system to match the new conditions. As a result, the little

scanning activity which does take place is performed by high level executives and is usually narrowly focussed upon parameters which have been tracked in the past. Control systems can be sluggish and apparently are not sufficiently broad-based to inform management of the changing conditions in a timely fashion. The internal communications network is often biased and quite retarded. The bias exists in favor of top-down communications, usually in the form of directives. There seems to be too little information exchanged amongst sub-units or flowing from boundary spanning units to upper echelons.

> United Airlines:
>
> ... George Keck's [CEO of United Airlines] aloofness separated him from those below ... Keck is an introvert and he worked as a loner, seeing little of the troops or the public. p. 74
>
> Amtrack:
>
> [Amtrack's CEO] Lewis gets little real feedback on these and other problems, because he doesn't get out and tour the system. p. 282
>
> Eastern Airlines:
>
> [Eastern Airlines' CEO] Rickenbacker was brash, opinionated, intermittently explosive, a hard man to argue with. p. 174
>
> Melville Shoe:
>
> The Melville Company ... continued to turn out pedestrian styles [at a time when they would no longer sell]. And too many of its shops were in the decaying city centres; the company had failed to recognize that much of the future lay in the suburbs. p. 112

Tight Power Centralization

Under earlier environmental stability, munificence and homogeneity, it was feasible for the enterprise to be directed by one or a very few top managers. Basically, the administrative task was a simple one in that firm policies and programs could be established at the top, carried out by lower levels, and rarely needed adjustment or intervention. The few changes that were required could thus be made by a small executive group.

Unfortunately, the transformed environment seems to have rendered the centralization of strategy making power dysfunctional. The situation has become too complex for one individual to handle. This is doubly true since the chief executive fails to delegate even many of the more routine tasks.

> Melville Shoe:
>
> Ward Melville [CEO and majority shareholder] didn't understand the art of delegation. His idea of taking life easier was to retain the chairmanship, and to hand over the presidency to a man who would accept responsibility without claiming too much power. p. 112
>
> Eastern Airlines:
>
> For the next two decades [Rickenbacker] completely dominated the airline, hand-picking most of its board members ... Even when he had over 17,500 employees, he ran a one-man show. p. 174
>
> United Airlines:
>
> The company was very centralized ... It took so long to justify things that by the time you could get it justified you didn't need it anymore. p. 72

The firm not only has a very thin layer of managers concerned with strategy making, it also apparently lacks an adequate professionalized technocratic corps. This may stem from the unwillingness of management to assimilate and effectively use such individuals, and from the acclimatization to a formerly stable environment in which high levels of technocratization would have been superfluous. One reason why technocrats are not deemed useful may be that existing executives are thought to possess the requisite skills. In any event, much conservatism, dwindling profits and inadequate resources render the company unattractive to many professional employees.

Internal Conflict

The centralization of decision making power in the hands of a small group of conservative executives often frustrates lower levels who are aware of the need for action but are quite powerless to do anything. United Airlines

and Eastern Airlines had marked morale problems which permeated each organization. An unchanging and rigid stance by higher levels often caused considerable consternation to employees with gripes.

> United Airlines:
>
> So low had [morale] sunk by the summer of 1970 that United's pilots, the highly paid junior executives of the airline industry, were staging a slowdown. All too often, ground crews and even passenger service agents and stewardesses were demonstrating their low spirits through a listless, uncaring attitude towards passengers. p. 72

Interdepartmental conflict is also common. The constraints on the authority and decision making powers of functional areas reduced their role at times to justifying their failures rather than striving towards success. It is not surprising that one department manager blames another.

> Amtrack:
>
> ... discord remains. Lewis' penchant for having his lieutenants argue causes and debate ideas tends to pit officers and departments against one another. 'This has got the middle management protecting its ass', says one former middle manager. The marketing and operating departments often strive to make themselves look good at each other's expense. p. 82

Obviously the high degree of conflict limits the integrativeness of the organizational effort.

> Leathercraft:
>
> [Top management] had difficulty in agreeing on company policy. Within the company organization individuals tended to operate independently of each other generally with little regard to cooperative effort. p. 484

The conflict and lack of integration which characterize F_2 firms is remarkable when one considers the relatively low levels of organizational differentiation. If anything, we would have expected the commonality of orientations to have discouraged conflict.

Strategies as Products of Casual Ignorance

Recall that the intelligence activity of the firm seems to focus on a narrow array of variables: apparently, those which appeal to the few persons in charge of making key decisions, and which may have been more relevant to the past than to the present. Thus multiplexity of strategies seems low and, perhaps as a result, the firm is not very adaptive. Management may not become alerted quickly enough to important trends which require adjustments in strategies.

United Airlines:

> Decisions were made from the top of a long, vertical chain of command. Employees down in the ranks were often discouraged from making suggestions. p. 72

Eastern Airlines:

> While Rickenbacker's cost consciousness helped profits during the monopoly years, it became a problem when Eastern had to compete. It was hard to compete for customers while economizing endlessly on equipment and service. p. 174

Melville Shoe:

> 'A Thom McAn shoe used to be like a Model T Ford: you could have it any color as long as it was black, though we always did sell brown, to be honest about it.' p. 198

Caterpillar:

> [Caterpillar] does not manufacture any cranes, boring machines, trenchers, or on-highway trucks. So, as the nature of construction work begins to change, Caterpillar can anticipate a squeeze on its profit margins as well as additional pressures to diversify. p. 263

The transformation of the environment from a stable, homogeneous condition to a more dynamic and complex one makes the administrative task of the firm much heavier. Inadequate adaptiveness may in the long run cause managers to be faced with 'crises' and problems which require immediate attention. Executives may therefore be forced to rush their decisions, particularly when they have neglected to delegate power down the line. There is thus little time to analyze situations in detail and a short-run oriented, stop-gap approach is employed.

Eastern Airlines:

> [At Eastern, there were] several shortsighted decisions about equipment ... [the company] staked too much on the project Electras ... [were] late in ordering and getting delivery on ... full jets [and] ordered too few jets. p. 217

Amtrack:

> During its entire first year, Amtrack merely tried to repair breakdowns as they occurred ... [After spending money on 'cosmetic' alterations only] Amtrack was caught in a plague of breakdowns that is still out of control. p. 278

Executives of F_2 firms tend to lose sight of the big picture. There is little evidence of conscious long term strategies, perhaps because operating, rather than strategic problems and goals were the focus in the past. There was rarely any need for reorientation of the firm because the setting was so stable. Now that changes are required there seem to exist inadequate executive, technocratic, and intelligence resources to deal with any major adjustments.

All Things Must Pass

For the most part, managers of F_2 firms rationalize their predicament to avoid rocking the boat. They apparently believe their difficulties to to be temporary and feel that the old formula will prove itself again in the near future. The fact that top executives are often out of touch with their environment and don't seem to listen to their better informed subordinates makes it difficult to break down the rigid perspectives of the men at the helm. Restrictive traditions are thus maintained, very little product-market or structural innovation takes place, and risk taking in the form of commitment of resources to new projects which attempt basic reorientations is virtually absent.

Eastern Arilines:

> [Rickenbacker] had the cautious soul of a greengrocer when it came to spending money ... [his] frugality became an industry legend. p. 173

Caterpillar:

The company prides itself on an almost primordial conservatism, which extends to all aspects of its business ... it carries little debt and relatively few receivables ... the company will almost never be the first to introduce a new product if it can possibly avoid doing so. p. 162

Conclusion

The firm has been lulled to sleep by a previously stable environment and a formerly successful strategy. In the tranquil past, little intelligence activity, decentralization, innovation, or technocratization was required. A powerful top management which seems out of touch with the environment, disdains bottom-up communication, and has strong commitments to the old way of doing things, is unaware of the need for change. Conflict between upper and lower levels and across departments results respectively from differences in perception, and a need to escape blame for failure. Strategies seem uninformed, unadaptive, and geared to implementing stop-gap measures to stave off crises. Innovation, risk taking (in a positive sense) and proactivity appear out of the question as traditions and conservatism predominate.

There appears to be some similarity between the S_2 Dominant Firm and the F_2 Stagnant Bureaucracy. Both types are reluctant to change past strategies in any very major way. They are somewhat wedded to product-market scopes and administrative modus operandi of the past, usually because these had at one time proved successful. In addition, both firms are run by top executives who are powerful and make many of the important decisions. Here however, is where the similarity ends.

S_2 firms define their strategies quite broadly - in terms of the product-market orientation as well as the administrative practices. They thus have more 'play' available in making changes. These companies also have a talented tier of line executives who attempt to incrementally adapt strategies to meet new conditions and opportunities. F_2 firms on the other hand are not at all preoccupied with updating their strategies since key strategists do not admit to themselves that there is any need to change. While S_2 firms pursue incremental change, F_2 companies appear to avoid all manner of change.

It seems also that S_2 companies are better structured to deal with change - there exist some types of intelligence activity, industry expertise is high, and authority for carrying out routine functions has been delegated down the line so that top managers have the time to focus on strategic matters. Interestingly, the environment is not all that hostile and has changed only gradually so that the firm still has things under control. We have noted before that in contrast, F_2 firms face a radically transformed environment, one that has gone from relative tranquility to substantial dynamism and hostility. Not ever having had the occasion to reorient strategies in the past, firms are not geared either structurally, managerially, or in terms of their intelligence network, to altering their strategies and administrative approaches.

Relationships Suggested by Archetype F_2

1. Power centralization and inadequate intelligence activity are a dangerous combination. The result is often that the people who can do the most really know the least. This causes maladaptive strategies, executive overload, and usually, a good deal of intra-organizational conflict.

2. Power centralization makes the strategy of the firm extremely dependent on the personalities of the men at the top. To the extent that these men are ill informed and conservative, their company's strategies will be likewise.

3. The longer a firm has succeeded in a stable environment, the greater the level of conservatism.

4. The longer a firm has succeeded in a stable environment, the more jarring must be the alarm system to shake the firm into action.

See 1 & 2 of F_3.

F_3 THE HEADLESS GIANT

Sample Case Summaries

The sprawling Société Générale de Belgique is involved in a great many industries all over the world. Its banking, mining, steel, electrical, and chemical interests are all run quite independently of one another. The firm remains very traditional in its outlook and there is little evidence of any top level coordinative or integrative force which attempts to direct in a purposive way the fortunes of the Société (February 1969).

Allis Chalmers Manufacturing Co. can also be considered a conglomerate. A producer of milling, mining, farm and roadbuilding machinery (amongst many other things) the firm has been drifting without an explicit strategy for many years. The management is wont to leave well enough alone and the management style is extremely conservative (November 1967).

The massive oil company, Jersey Standard, is very proud of its extremely decentralized mode of operations. A fully integrated oil company with worldwide facilities, Jersey's size and complexity make it a formidable firm to guide. There is little interference from head office in divisional affairs and the pace of change is very slow (1970).

Pan American World Airways and Berenscot are not quite as large or diversified as the other firms in the archetype. However their basic problem does seem to be leadership. Pan Am's top executive is too involved with Government matters to tackle some of the company's pressing problems and his lieutenants are inexperienced with the airline industry (January 1972). In the case of Berenschot, the founder's death has left the consulting firm with a large leadership gap and it muddles through without any clear strategy (1971).

Essential Features

The most prominent characteristics of the headless giant are: a good deal of size and diversity (in terms of environmental heterogeneity and, usually organizational differentiation as well) and a conservative temperament since few risks are taken, traditions abound, and product-market innovation is all too rare. Perhaps most important, no one has

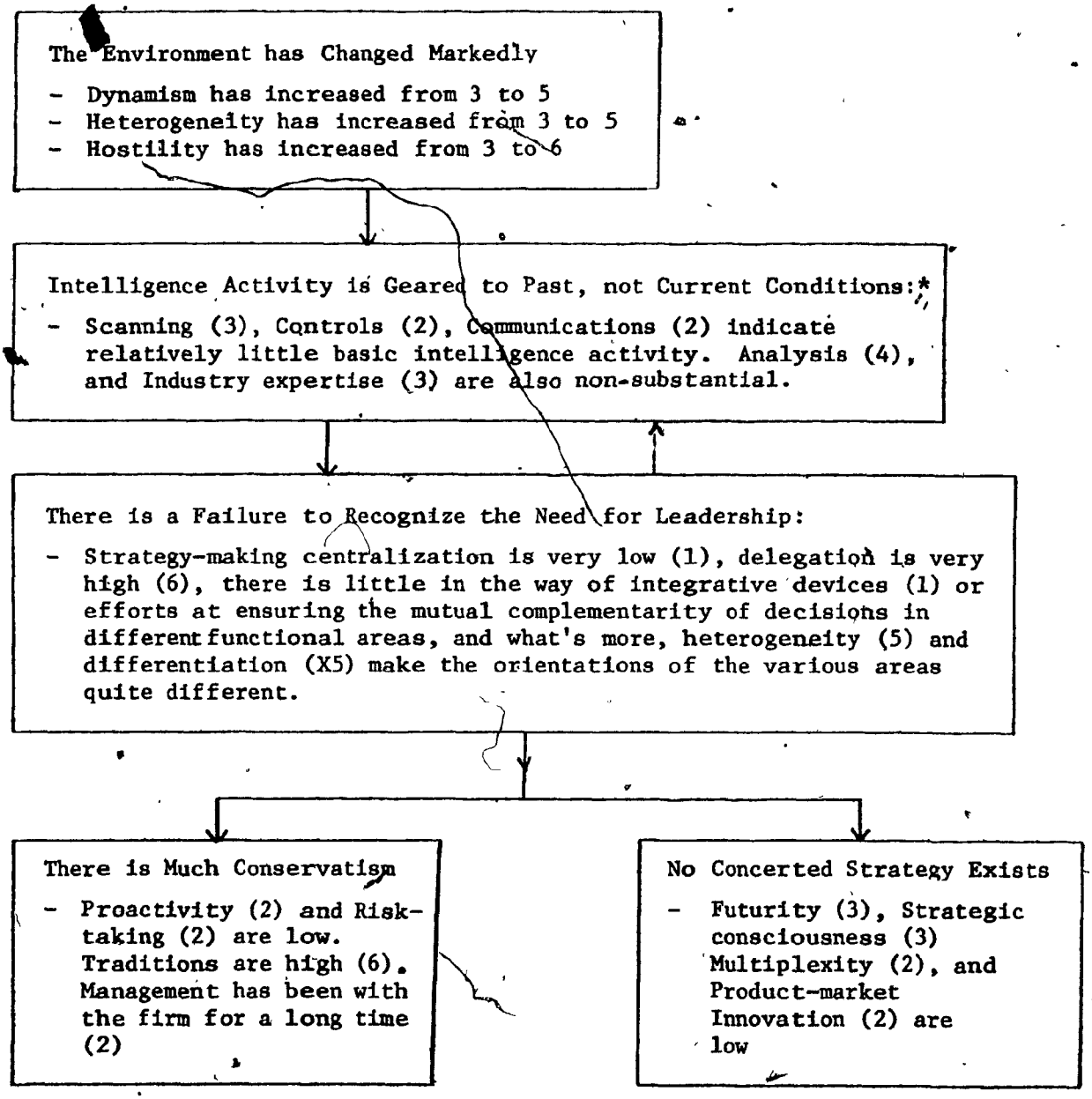
emerged as a leader or stratrgist and the actions of the sub-units of the firm are quite disjointed and independent. Executives seem to muddle through without any clear sense of direction.

Hypothesized Causal Links

Figure 5-6 presents a series of relationships which are hypothesized to exist amongst the key variables in the archetype. These links can be summarized briefly as follows. The environment has changed markedly from one which was quite stable, homogeneous, and munificent, to one which is more dynamic, heterogeneous, and hostile. Unfortunately, the firm which under the previously simple conditions did not have such a difficult administrative task, is now forced to cope with environmental turbulence. Management has not recognized this. Perhaps in part because the firm seems not to be fully aware of the problems and opportunities inherent in its new environment, the need for unified leadership is ignored. (The reverse causality might also be true).

The diffuseness of leadership hampers effective strategy formulation. Strategy making activity is carried out in piecemeal fashion at the lower levels of the organization. It does not entail a concerted effort at formulating long run goals or product-market orientations but rather consists of a series of quasi-independent attempts at handling increasingly pressing problems. Decisions in the various areas of the organization are by no means coordinated. Two key elements appear to emerge from the leaderless orientation of the firm. The first is the absence of a well developed strategy and the second is the high level of conservatism which characterizes the strategic posture. The lack of a concerted strategy manifests itself in low levels of decision multiplexity, strategic consciousness, and product-market innovation, and short decision time horizons. Substantial conservatism is evidenced by the low levels of proactivity, the notable aversion to risk, the extent of traditions in the firm, and the presence of managers who have been with the organization for a long time. It is not surprising that the more demanding conditions in the environment coupled with an apparently aimless and conservative stance seem to result in an unsuccessful corporate effort.

FIGURE 5-6 THE HEADLESS GIANT



* These scanning deficiencies may, for some firms, not be all that severe. It is mainly the lack of controls and the cumbersome communication system which can be most hazardous in the more heterogeneous firms.

Discussion

The Changing Environment

As with other failure archetypes, the environment presents the company with a real challenge, one which the firm is not equal to. Increases in the rate of product-market innovation by competitors, the emergence of new production technologies, the diversity amongst sectors of the environment, and increasing hostility from government, competitors, suppliers, and so forth, each serve to complicate the adaptive task of the firm.

> Jersey Standard:
>
> ... conditions in the oil business are changing rapidly, and frequently not for the better. At home, the political climate has turned disturbingly hostile ... [abroad, foreign governments are imposing severe operative restrictions].
>
> Berenschot:
>
> ... within Holland, competition in the management consulting market has become much more intense ... p. 3. The political situation in the Netherlands is currently very uncertain ... the nature of the markets has changed ... Dutch companies need more advice in areas such as marketing and corporate strategy and Berenschot has not the people to deal with these areas. p. 13
>
> Pan Am:
>
> ... costs are soaring and revenue growth [is] slowing down ... [while] long-term debt has risen by almost fifty percent. p. 79
>
> Société Générale:
>
> La Générale is now in a debilitated state [due to] congolization of the assets of [its] major African property ... its steel mills [are] harassed by worldwide overcapacity ... and the Common Market has exposed one after another of la Générale's manufacturing affiliates to the brunt of unaccustomed competition ... p. 100

In addition to such changes in dynamism and hostility, the levels of heterogeneity have also increased. Over the years, the firms have entered new markets and the environment has become quite diverse.

Allis Chalmers:

> ... the diversity of the company's product lines ... actually seems to be a disadvantage in some of its best lines ... [where] it competes with specialists [who have] larger volume and lower costs. p. 157

Société Générale:

> ... Describing La Générale, one Brussels banker says, only a shade hyperbolically, 'It owns a piece of just about everything'. p. 98

Two essential problems emanate from the transformation in the environment. The first is that the firm seems not to have realized the need to adapt its administrative practices to the new conditions. The previously stable setting has apparently caused managerial complacency. The second problem is that the administrative task has changed in discontinuous fashion and has become much more complex so that even a firm which is alert would be amply challenged.

Outdated Controls

The intelligence variables do not seem to figure all that prominently in explaining the firm's demise. There is little explicit evidence to point out inadequacies in the scanning process. Perhaps however the relatively primitive controls and communication systems allow the firm to become more fragmented and disintegrated in its orientations. This is particularly true for the more diversified and heterogeneous firms where there is often a pressing need to control and ensure the harmony of the operations of subsidiaries or divisions.

Allis Chalmers:

> Allis Chalmers became a conglomerate before the sophisticated techniques for managing such diverse and far flung enterprises evolved, and for years it failed to come to grips with that fact. p. 157

Société Générale:

> With the company's continuing presence in more and more industries, it became difficult ... to keep track of them all. p. 102. La Générale's management group ... has nobody looking over its shoulder. The eleven men [in charge of the various divisions] serve both as management and as the board of directors. p. 138

There is some reluctance on the part of managers to address important operating matters. Many executives assume a rather lofty role, perhaps because of their unfamiliarity with the fundamental products and markets of the company, or maybe because the administrative task pressures have grown so much that there is little time to devote to most problems.

Pan Am:

> Halaby's preoccupation with a merger or some form of assistance from Washington has been frequently criticized as a diversion of his attention from Pan Am's difficult internal problems. p. 146. ... Five of Pan Am's top six executives have relatively limited airline experience - or none at all. p. 142

It is hypothesized that the poor intelligence effort may have been both caused by, and was itself the cause of, diffuse corporate leadership. Inadequate intelligence may have disguised many of the problems which needed attention and thus made the need for more decisive leadership less apparent. On the other hand, problems in internal communications and control might have been due to the absence of a leader who would take charge of these functions.

Fragmented Leadership

There exists no strong leader to guide the firm and to formulate long range strategies. Authority to make strategy often tends to be vested in a number of lower level executives who act almost independently of one another in running their divisions or departments. Top executives tend to play more of a figurehead role and often abstain from actively leading the company. Strategic and routine decisions are the domain of operating managers.

Jersey Standard:

> Haider was plainly an extreme adherent of decentralization. He once told an interviewer 'If I ask a question, I'd rather the contact director said, 'I don't know but I'll find out'. If he knows, he's following the situation too closely.'

Berenschot:

> The five division managers operated quite independently of the Board ... [This] method of operation is necessary since the Board does not dictate a clear policy. Another division director had similar thoughts. 'I have always followed the policy to act in internal activities as if there were not any policies from the top.' p. II-5

It seems that the excessive autonomy of lower levels created by the vacuum in leadership leads to a poorly coordinated, improperly integrated, strategy making effort.

Pan Am:

> There is a tendency for walls to be erected [between functional areas] ... a lot of things fall between the cracks. p. 142

Société Générale:

> Each director [of the management board] focussed his attention on his own [and only his own] industry, and rarely saw reason to divert assets under his command into an entirely different [though more profitable] business [which might eventually be run by someone else]. p. 102

The tendency towards disjointed, uncoordinated strategy making was especially pronounced in firms which had a high degree of organizational differentiation. Here sub-units had very different goal and task orientations and had a proclivity to go off in different directions, often causing intra-organizational conflict in the process.

Two important strategy making characteristics appear to have resulted from these organizational orientations: the absence of a clear and concerted strategy, and the adoption of a rather conservative decision making stance. We shall discuss each of these characteristics in turn.

The Absence of a Concerted Strategy

F_3 firms seem for the most part to be drifting quite aimlessly. There is no evidence of explicit product-market strategies which are accepted by the majority of executives. Decision makers appear to have short-time horizons. They don't seem to worry much about the long-term impact of

their decisions. Also, they consider basically only factors of the moment or those attributes related to their immediate area of specialization in making decisions. This results in the low multiplexity scores.

> Pan Am:
>
> Pan Am's lower echelon were badly infected with a feeling that the company was difting with no clear plan of action. p. 146

> Allis Chalmers:
>
> Stevenson's [the chief exec's] view of management still remains largely passive. An associate once heard him compare Allis-Chalmers to a log floating down a stream, which is the economy, and its executives to ants trying to cling to that log. p. 157

Conservatism and Sluggishness

One of the most prominent attributes of firms in the F_3 archetype is the degree of conservatism of the management. There is precious little risk taking or innovation and decisions are most likely to be reactive rather than proactive. Management have been with the firm, as a rule, for lengthy periods of time and a host of traditions, policies and regulations seem to have grown up to restrict the latitude for original thinking.

> According to the leader of Berenschot:
>
> I have not ... attempted to win new markets for the firm or to lead the development of new products ... p. II-5. ... The next Chairman should have a broader role than I have had. p. II-6.

> Société Générale:
>
> [Société Générale was] made rigid by tradition and hobbled by a peculiar structure rooted in the 19th century. p. 100. [The firm, according to the Belgian government] has failed to move with the times ... the group rarely abandoned its original interests. p. 102

> Jersey Standard:
>
> [Jersey Standard's] size and complexity make it formidable to guide at all; altering its course rapidly is all but impossible [says the CEO] 'You can't make drastic changes'.

Conclusion

With an increasingly challenging environment, inadequate controls, diffuse leadership, and an unweildy tradition-bound corporate orientation, it appears that strategy formulation is quite ineffective.

No one seems to have the necessary power base or a sufficiently bold temperament to guide the firm decisively. As a result, the corporation seems to drift without any clear or informed sense of direction, letting external factors (competitor moves, the economy) largely determine its course.

The 'Headless Giant' is in some respects similar to the 'Giant Under Fire'. In both archetypes firms tend to be large, diversified, and decentralized. Also, the rate of change in the product-market scope tends to be quite gradual as companies adhere, more or less, to their past strategies. The main differences between the two types are in the areas of coordination, consciousness of strategy, and expertise relating to the environment. S_3 firms have a reasonably explicit and well articulated strategy which serves as a sort of rallying point for different divisions. F_3 appears to muddle through and has no defined strategic orientation which can be useful in coordinating the activities of divisions. What is more, S_3 firms have tried to become aware of the important trends in the external environment and the executive group is doing much to adapt to these trends. In contrast, F_3 companies do not appear to devote much effort to understand or to stay relevant to their altering surroundings. There are fewer concerted attempts at leadership.

Relationships Suggested by Archetype F_3

1. Rapid changes in environmental dynamism, heterogeneity, and hostility, particularly if they occur together, pose a very serious and threatening administrative challenge. Where previously tranquil settings have lulled the firm into complacency, the dangers are especially severe.

2. Little intelligence activity is conducted by firms which have recently been in simple and munificent environments, no matter how much things have changed.

3. Diffuse or indecisive leadership may be both the cause and result of inadequate organizational intelligence. It may be the 'cause' when the chief executive neglects to set up adequate scanning, controls, and communication systems because he has inadequate power or expertise to do so. It may be the 'result' of inadequate organizational intelligence to the extent that there is no realization of the pressing problems and the need for their resolution through more effective leadership.

4. The absence of an effective strategy making body (or CEO) severely hampers the adaptive process of the organization. Diffuse leadership is likely to result in ill-defined and ill-conceived product-market strategies, an inadequate sense of mission or direction for the firm, and a conservative, reactive, problem-focussed decision making process.

F_4 SWIMMING UPSTREAM - THE AFTERMATH

Sample Case Summaries

The Consolidated Edison Co. of New York is the nation's largest electric and gas utility. A conservative and often inept previous management has left the firm with an extremely inefficient and costly-to-maintain plant. It is very difficult to provide good service to customers and their dissatisfaction with the company has continued to grow. Management recognizes that something must be done, yet their performance in this respect has been poor. Limited resources and some managerial incompetence have prevented many real improvements (March 1966 (1), September 1974 (2)).

For years the Franklin National Bank had been run by a venturesome entrepreneur who knew precious little about banking. By the time of his departure, the financial condition of Franklin was such that the new management was motivated to undertake a concerted salvage operation. Unfortunately however things did not go smoothly as the management's inexperience, aggressiveness, and plain carelessness, coupled with the already dismal state of the Bank's assets, caused the firm to go into receivership (October 1974).

A similar, but less disastrous scenario unfolded as a new management took control of Wheeling Steel. The firm had been badly neglected and had become run down. The case describes the difficulties encountered in attempting to bring about a turnaround (July 1967). Finally, the Sealed Fresh Company had for years been undercapitalized. It dealt in the dwindling fresh orange juice market which was under severe fire from frozen juice companies. The difficult predicament of the firm and the very thin layer of managerial talent was making it tough to return to profitability (1962).

Essential Features

The firms in this archetype have to labour under a very serious disadvantage. Previous product-market strategies have proved to be extremely weak and have badly eroded the resources of the firm. The environment has become more dynamic and hostile. Strategy making power is quite

centralized in the hands of the top executives (5) and these individuals, often frantically, attempt to solve the problems of the company. The strategies are not always backed by a very sound analytical effort; and managers seem to be quite ignorant of some of the critical environmental forces. Trial and error problem solving characterizes the strategy making mode, but this is sometimes interrupted by the hasty decision to pursue a new 'opportunity'.

Hypothesized Causal Links

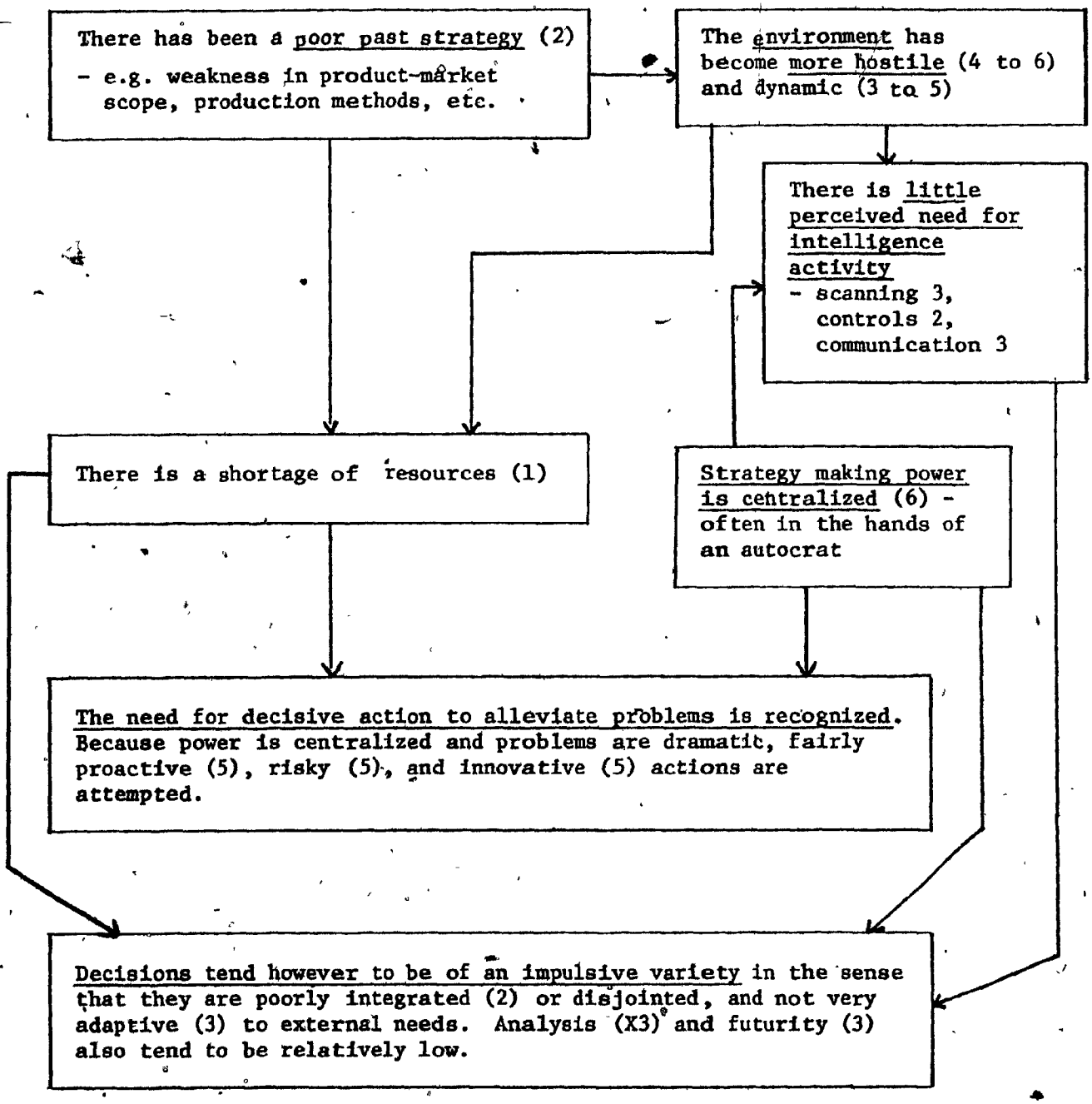
Figure 5-7 shows a diagram of the hypothesized causal forces which characterize the archetype. We review the relationships in this section. The firms have been saddled with the ill-effects of a previous product-market, production, or finance strategy which was extremely poor. Inept past management has resulted in there being severe shortages in some of the resources critical to the firm's operations. There is often a dearth of funds, dwindling or dying markets, production facilities which are in a very bad state of repair, and so forth. To compound the hardships facing the company, the environment has become more difficult to cope with. Increases in the levels of competition and greater uncertainties in economic conditions place the firm in an environment with which it is unacquainted. Previous stability occasioned little need for investigative and deliberative problem solving activity and many firms continue to pay inadequate attention to this function in spite of its greater urgency.

As it happens, strategy making authority is concentrated in the hands of an often autocratic leader. There seems to be insufficient consultation and discussion in decision making. On many occasions, the top man calls the shots without making enough inquiries and investigations beforehand.

The strategy making attributes seem to follow quite naturally from these environmental and organizational parameters. The two most prominent strategy making traits are the bold action orientation of the firm and the haphazard nature of the decisions made. We shall discuss each of these features in turn.

Top managers do recognize the need for action. There are blatantly obvious difficulties plaguing the organization and there is absolutely no doubt in the minds of most managers that there is an urgent need to do

FIGURE 5-7 SWIMMING UPSTREAM



to do something. Problems have reached crisis proportions as a result of the ineffective past strategies and practices, the increasingly demanding environment, and the depleted store of resources. Because power is centralized, it is easily mobilized and can be harnessed for action. The leader who recognizes that something must be done has the power to do it. The urgency of the situation and the temperament of the managers causes actions to be bold, risky and decisive.

Unfortunately, actions are also often ill considered and impulsive. The lack of consultation and the inappropriate investigative activity induce decisions to be rather maladaptive. Many key realities are ignored, actions tend to be disjointed, the analysis of the situation can be sloppy, and the emphasis is very much on short-term solutions.

Discussion

A Troubled History

Firms in the F_4 archetype are swimming upstream because they are forced to do so as a result of earlier strategic blunders. Mistakes made in the past have placed these companies in quite a compromised position.

> Wheeling Steel:
>
> Wheeling has many serious objective problems ... that had accumulated over years of unimaginative management, p. 106 ... [It] has gained a reputation for substandard, non-competitive delivery and quality of product, and by so doing it has lost business. p. 109

> Sealed Fresh:
>
> The former president, who had a reputation for being a very competent salesman, had demonstrated little financial and organizational ability ... The sizeable operating losses which the former management incurred resulted in part from heavy overhead and the lack of financial controls. [The result was extreme indebtedness and the accompanying financial strictures]. pp. 355-6 ... [poor service and inadequate distribution strategies] had ruined the store market. The consumers and the grocery trade has lost confidence in the product. p. 368

Franklin National Bank:

> Roth started it all by making a lot of risky loans. When the loans went bad, Roth turned to bonds. When the bonds fell in value, they could not be sold because of the loan losses. And so the bank ended up trapped with a wad of low-yielding assets that had to be financed with progressively higher cost-money. p. 227. [These conditions led to Fraklin National Bank's last desperate gamble on foreign exchange and the firm's eventual bankruptcy].

Depleted Resources

These sorts of strategic failures have hurt the F_4 companies very badly. They have led to depleted resources, dwindling markets, inefficient facilities and the like.

Wheeling Steel:

> Consultants concluded that 'Wheeling was far behind the steel industry in terms of modern facilities, operating efficiency, quality of products, costs and personnel utilization and practices.' p. 105

Sealed Fresh:

> 'Yet again and again we have consciously chosen courses of action which have had long-term detrimental effects to achieve short-term advantages. We have done so because at the time our resources were so thin that we could not have taken the short-term disadvantages and survived as a corporation.' p. 354

Con Ed (1):

> Despite the company's massive construction program, about half of its capacity is in inefficient plant, some of it half a century old, that swallows up cash simply for maintenance. p. 125

Con Ed (2):

> About 90% of the company's electrical load is distributed underground ... and this enormously increases the cost of maintenance and repair. p. 174

Environmental Hostility

Partly because of the previous mistakes of the firm, and partly due to independent forces, the environment has become less receptive. Inadequate production, finance and product-market strategies have caused hardships including pressures from creditors, lawsuits, disloyalty from customers, and the like. In addition, there are some independent external influences which have made the environment more challenging.

> Sealed Fresh:
>
> The chilled orange juice industry ... has passed the stage in its growth curve when the demand was skyrocketing, and it has now appeared to level off. p. 360

> Con Ed (2):
>
> Accelerating inflation has brought mounting interest rates and construction costs and difficulty in selling bonds. At the same time, regulatory agencies have been slow in providing rate relief. p. 171

Low Level of Industry Expertise and High Centralization

Power tends to be tightly concentrated in the hands of one or two key individuals of the firm. These men seem to make all the most important decisions. This proves to be dangerous because it reduces the amount of information and knowledge brought to bear on the resolution of key issues (which have become more complex and pressing with the evolving trends in the external environment). The firm is not used to doing problem solving and intelligence work. Top decision makers tend to decide things in isolation - without consulting other managers at lower levels who might possess relevant knowledge and expertise. We present evidence of power centralization and then provide examples of related intelligence blunders.

> Franklin National Bank:
>
> The bank was headed ... by Arthur Roth, a hard-driving autocrat whose favorite homily is 'every organization is but the shadow of one man'. Roth ran Franklin as a one man show, surrounding himself with malleable subordinates who had no particular aptitude for banking. p. 120

Wheeling Steel:

> [At Wheeling, Norton Simon was majority shareholder, and Bob Morris, the man he appointed president, held virtually all the power. Re: Morris:] He is a direct, forceful, confident executive, with a brisk - even impatient - manner. [Others say:] 'The guy ... was ready to tell us what to do. He didn't take any time before he started dictating.' p. 107

Because of such centralization and the failure of top decision makers to consult more frequently with persons who might have important information, top executives tend to make uninformed decisions.

Franklin National Bank:

> [To resolve its problems] the bank could have raised its rates on its maturing assets to competitive levels; alternatively, it could have turned away the business. Eventually, Franklin did some of each, but not soon enough to raise earnings. p. 224 ... Franklin's managers didn't know how to run a big-league bank. p. 118. The plain fact is that Franklin could not manage the spread between the yield on loans and bonds and the cost of investible funds, personnel and occupancy. p. 120

Sealed Fresh:

> [After a much belated consulting study, the President of Sealed Fresh] admitted that he was surprised at the small population base for consumption of chilled orange juice [his major product]. Also, the high turnover among people who tried chilled orange juice and then went out of the market disturbed him. p. 362

Wheeling Steel:

> By industry standards [Wheeling] was still short of men with steel experience. Only five of the top fourteen executives had any background in the business. p. 133

The repercussions of these organizational characteristics on the mode of strategy formulation appear to be quite intriguing. There are basically two major features which describe the strategies and strategy-making behavior of F_4 firms. These are the fairly bold and risky action orientation assumed by strategists, and the seemingly haphazard and impulsive nature of the decisions made.

Men of Action

F_4 companies do not appear to hesitate to act to resolve their considerable difficulties. There is a pressing incentive posed by the manifold and urgent problems which face the firm as a result of past misguided strategies. Also, there is sufficient power vested in the few men who do have the incentive to act. They seem free of most damping encumberances. The result is action, sometimes opportunistic, often remedial, usually both at once.

> Sealed Fresh:
>
> [In spite of much indebtedness, Sealed Fresh acquired more companies]. Management was constantly looking around for other companies with related product lines with which to merge. 'Our financial position', said Mr. Drake, 'is such that we cannot at the present time buy any good successful company. We have to search for 'sick' companies'. pp. 360-1
>
> Franklin National Bank:
>
> Beginning in the fourth quarter of 1973, Franklin began gambling heavily in the bond market ... Well aware of the bank's precarious operating position, Shaddick redoubled his efforts to make extraordinary gains in foreign exchange. p. 225
>
> Wheeling Steel:
>
> Morris was determined last year to top the production record established by Wheeling back in 1941. [This was attempted under severely adverse conditions]. p. 109

Managers in F_4 firms react to uncertainty by going after more uncertainty. Instead of attempting to consolidate the position of the corporation, they become expansive and ambitious, usually to the detriment of the shareholders.

Blind Impulse

Decision makers tend not to be deliberative or analytical. They seem to act according to impulse, often ignoring important realities of the situation. The emphasis is usually on short-run gains. Not infrequently, decisions made by top executives are unrelated - that is they are almost

never mutually reinforcing and sometimes interfere or are at cross purposes. We believe the reasons for such behavior to be the inadequate intelligence efforts of the firm and the autocratic disposition of its leaders. The absence of relevant perspectives and the neglect by top level people to obtain a number of points of view before making a decision allow actions to be quite off base.

> Franklin National Bank:
>
> ... no U.S. bank speculated [in foreign exchange] as heavily as did Franklin. Most banks can make money in less risky ways. p. 118

Sealed Fresh bought a very unprofitable subsidiary which drained the firm of cash; Wheeling installed new facilities which did much to increase costs and scrappage and alienate many clients; and so it goes. Apparently, impulsive, ill-considered moves continue to weaken the firms.

Conclusion

Past strategies have proven manifestly unsuccessful and have begun to deplete the resources of the firm. A formerly placid environment has done little to hone the problem solving practices employed. Power centralization has not helped organizational intelligence and both of these attributes seem to have led to uninformed and impulsive decision making. The severity of organizational problems coupled with a narrowly dispersed power distribution have induced top managers to make bold and decisive moves to solve problems.

Relationships Suggested by Archetype F_4

1. Detrimental past strategies rob the firm of its vitality and make it very difficult for new management to be successful. There are a great many things wrong.

2. Under these conditions, resources are scarce and the need for action becomes apparent and pressing. Power centralization allows bold moves to take place.

3. Yet, such moves are often inappropriate and poorly considered because the intelligence system is undeveloped, and because autocratic managers fail to consult informed members of the organization.

CHAPTER SIX

INTERARCHETYPE TRANSITIONS OVER TIME

INTRODUCTION

FINDINGS FROM OUR DATA

- The No-Transition Firms
- The Success-to-Success Firm
- The Failure-to-Failure Firms
- The Turnarounds: Failure-to-Success
- Paths of Decline: Success-to-Failure

SOME GENERAL HYPOTHESES

- S_{1A} and S_{1B}: The Adaptive Firms
- S_2: The Dominant Firm
- S_3: The Giant Under Fire
- S_4: The Entrepreneurial Conglomerate
- S_5: The Innovators
- F_1: The Impulsive Firm
- F_2: The Stagnant Bureaucracy
- F_3: The Headless Giant
- F_4: Swimming Upstream - The Aftermath

DRAWING CONCLUSIONS ABOUT TRANSITION PATHS

- Archetype Stability
- Archetype Lineage
- Developmental Tendencies

CONCLUSION

INTRODUCTION

While our focus in this dissertation is on the common states which characterize the environmental, organizational, and strategy making style attributes at a given point in time, it is also important to look at interarchetype transitions which firms follow over time. Strictly speaking, this is beyond our scope since few data were gathered which were relevant to this topic. Our 81 cases did however encompass 12 firms which were analyzed at two different points in time. We shall briefly discuss these, drawing some very tentative hypotheses on the nature of interarchetype transitions. The second and third parts of the chapter generate hypotheses which go beyond those suggested by the data.

FINDINGS FROM OUR DATA

The No-Transition Firms

Four companies that were analyzed at different points of time remained classified in the same archetype. Two of these were F_4 firms which, due to severe resource shortages, a very hostile environment, and an inability to obtain managerial talents could not turn themselves around. One company, Franklin National Bank, went into receivership. The other, Consolidated Edison, continued to operate with its inadequate equipment and somewhat outmoded methods of operation, thanks largely to government authorized rate boosts. Indeed the F_4 archetype appeared to be something of a terminal state. Long and devastating periods of mismanagement have left the firms with very few strengths that could be used in a turnaround.

The two successful firms which remained in the same archetype over time were Burlington Industries and Control Data. Burlington was an S_{1A} firm which had performed very well initially under a very powerful leader. Upon the death of this individual, there appeared a number of new upper echelon executives who had climbed upwards in the firm as a result of their past success in running major divisions. The firm had taken care to develop a corps of fine managers and succession was not much of a problem. Also, Burlington was well managed, in excellent financial shape and was

continuously adapting to the environment. Few changes in structure or strategy making were necessary, particularly given the relatively enduring state of the environment. The unchanging status of Control Data's situation may be attributed to the continued dominance of the firm's founder-president and the long-standing presence of IBM as the major competitor. Control Data's market structure and leadership remained the same and thus it is not surprising that most other things did as well.

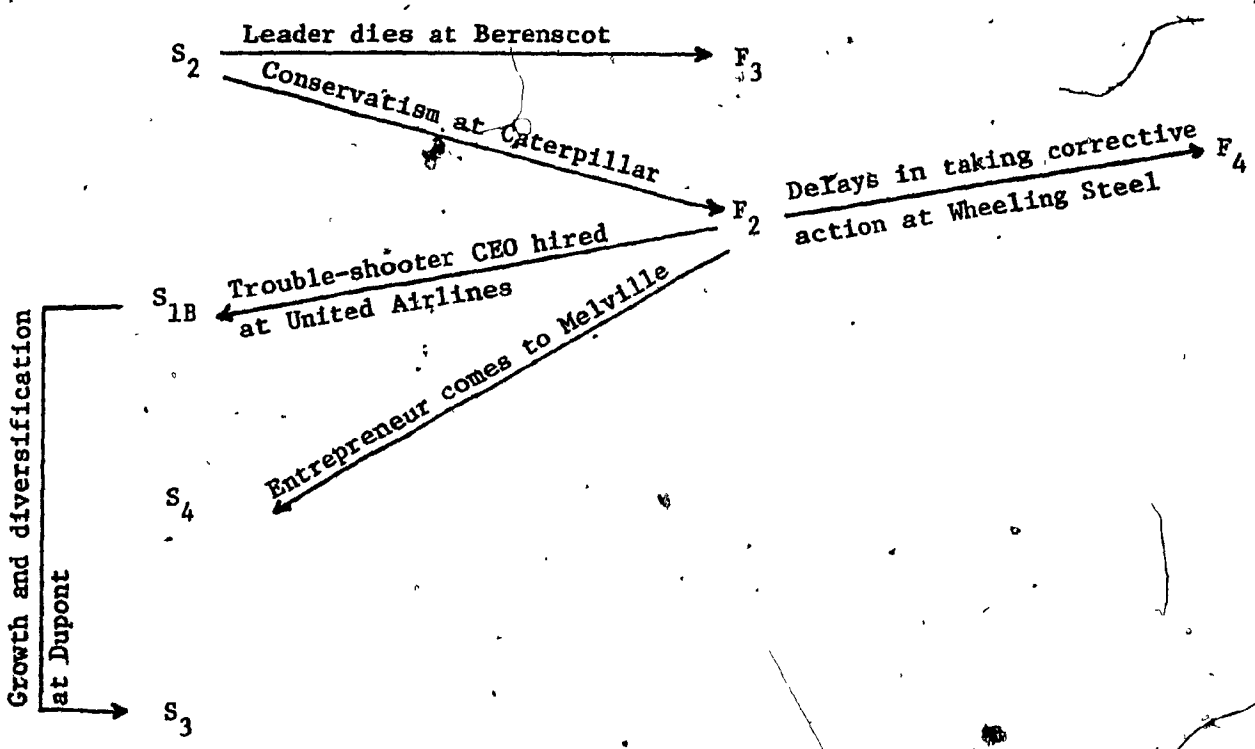
The Success-to-Success Firm

Dupont was the one successful firm in our sample which both remained successful and changed archetypes. The firm over 15 years went from an S_{1B} to an S_3 company. The main reasonsfor the change appeared to be increased environmental hostility and the growth and diversification of the firm. The accelerating relative strength of competitors appeared to result in more of an incremental approach to strategy making - there was a little more conservatism and some apparent hesitation to make bold moves. Also, increased environmental heterogeneity and divisionalization might have caused strategies to be less integrated and more piecemeal in nature. The larger size of the firm may also have contributed to such an orientation.

The Failure-to-Failure Firms

Wheeling Steel went from archetype F_2 to archetype F_4. This 'terminal state' was reached after a bout of very long-standing conservatism and administrative sloppiness. A new management took over Wheeling Steel after industrialist Norton Simon seized control of the company. Already in a badly dilapidated state, the firm benefitted little from the salvaging attempts of an executive team which was not in the least familiar with the industry. The attempted turnaround went sour largely because of the already badly damaged reputation of the firm, the poor state of the plant and equipment, and the inexperience of the new managers. Volkswagen went from a rather disorganized and confused F_1 company under Kurt Lotz to a more purposive and integrated firm (outlier) under Rudolf Leiding. Leiding was in the midst of an attempt to consolidate Volkswagen's operations and to rationalize the product market strategy after Lotz had embarked upon a surfeit of misdirected and risky model development projects. Perhaps Volkswagen remained unsuccessful because the turnaround was still in mid-stream.

FIGURE 6-1 ACTUAL INTERARCHETYPE TRANSITIONAL PATHS



The Turnarounds: Failure-to-Success

There is one particularly interesting fact about firms which have recovered. They all came from the F_2 archetype. It may be that F_2 companies experience the least severe form of failure. (It may also be that these results are merely an artifact of the sample.) Neglecting to adapt to the environment due to excess conservatism does not always cause very much damage to firms. This is provided that the situation has not existed for a very long time. International Paper became more successful when a new leader began to enter more lucrative markets and abandoned some of the dysfunctional long-standing traditions. United Airlines also benefited from a new leader who began to systematically identify and resolve problems in the firm, particularly those concerning labour relations and customer service. Melville Shoe went from a staid, unadaptive firm to one run by an aggressive, acquisitions-oriented manager who brought the firm into the rapidly changing high-fashion market. The leadership bias of the Fortune cases may be responsible for the emphasis on the entry of new management as a stimulus for a turnaround. Unfortunately, case histories reveal little in the way of clues about structural or environmental changes which might also have been responsible for the improving lot of the corporation. Indeed, it really did seem as though new people had to come in to change the strategy making and structural conditions of the firm. This in turn often caused companies to redefine their environments and pursue more lucrative market segments.

Paths of Decline: Success-to-Failure

Just as firms which have recovered all stem from the F_2 archetype, those which are in decline have progressed 'downwards' from the S_2 archetype. Berenscot and Caterpillar have begun to experience serious difficulties. The death of Berenscot's founder left the firm with a very major leadership gap. Ironically, the firm was populated with a very large number of management consultants but had very few employees who possessed managerial abilities. As a result the company began to drift without a clear strategy and divisions rarely did interact on matters of mutual concern. The Caterpillar Tractor Company had dominated its market for so long that it fell asleep. Strong competition from American and Japanese firms was ignored and the firm failed to promptly tailor its line of equipment to important changes

in the construction industry's needs. Apparently, the dominant firm is in danger of relying too much on a top executive and of becoming complacent as a result of its past success. Figure 6-1 summarizes this section.

SOME GENERAL HYPOTHESES

Because we have collected so little information on interarchetype transitions, our findings show only a small number of plausible transition paths. In this section we generate several other paths which are believed to be most common amongst archetypes. We postulate various events which can lead firms in our failure and successful archetypes to move to different archetypes. It is important to note that our discussion is based mainly on intuition, and to a very limited extent, on the findings discussed in the previous section. Hopefully future researchers will find these hypotheses sufficiently intriguing to embark upon further investigation.

S_{1A} and S_{1B}: The Adaptive Firms

The similarity between S_{1A} and S_{1B} firms seems to make several adjoining paths likely. For example, if the firm discovers that its competitors are making excellent progress with new product lines, or if environmental dynamism or hostility increases because of the rate of technological change, S_{1A} firms may be tempted to adopt several devices which cause them to be much like S_{1B} companies. The sensitive intelligence system of S_{1A} warns managers of the need to change and there might follow an attempt to increase efforts at product-market innovation, decentralization, delegation, and so on. Another possible trigger which could cause the movement to S_{1B} might be the discovery that the firm has made an important error in dealing with its environment. The failure of a new product for example might cause the firm to adopt more careful scanning and internal communication mechanisms.

Just as error might cause increased alertness, extreme past success might induce the firm to become complacent and to "institutionalize" the leader "responsible" for the firm's success. Rapid growth in sales and profits and the diminishing threat of competitors could cause strategies to become a bit rigid or even extremely rigid. In the former case S_{1A} might become S_2, in the latter, if accompanied by a substantial lack of vigilance and conservatism archetype F_2 might be reached.

Firms do not usually remain the same size. They grow and often diversify (Chandler, 1962; Channon, 1973). If these tendencies are pronounced and if the S_{1A} firm is already substantially large, archetype S_3 might be reached. There is a need to decentralize as environmental heterogeneity becomes greater and as the administrative task becomes more complex.

Another path also seems to be feasible. The success of the S_{1A} firm might enhance the leader's power base. If this individual has entrepreneurial instincts his increased confidence may cause him to boldly enter new markets by acquiring subsidiaries. This is probably most likely to happen in medium sized companies where it is possible for one executive to have a very major impact on the course of events.

Figure 6-2A illustrates the paths which we have just discussed. We hypothesize that the transitions shown below the dotted line on the figure also apply to S_{1B}.

S_2: The Dominant Firm

We noted in Chapter Four that the S_2 firm has a very dominant leader and tends to adhere rather closely to its previous strategies. The intelligence system is relatively unimpressive when compared to other successful archetypes. As was the case for S_{1A}, S_2 can be shaken up by some forceful event in the environment which catches the firm by surprise. For S_2 companies, such an event may have to be more pronounced and more blatant than for S_{1A} firms because of the differences in the intelligence system. For example, a major product line might encounter marked resistance from customers. The firm, in awakening, might recognize the need to change its strategies, track the environment more closely, get 'new blood' to make more decisions, etc. In other words, S_2 may move to S_{1A}. Another possible impetus for the very same transition might be the departure of the dominating executive. This could cause a reexamination of old strategies and some decentralization of authority. Also, it could create a severe leadership gap, and, particularly if the firm is somewhat diversified, lead to the F_3 archetype (e.g. Berenscot).

Our own data indicated another potential danger for firms in the S_2 archetype. Caterpillar, which was wedded for so long to a successful strategy, became reluctant to change. The long run failure to adapt is of course reminiscent of the conservative F_2 archetype.

Finally, S_2 firms can grow and diversify. Their considerable strength in certain markets may lose significance as these markets become saturated. There might then be a great incentive to diversify and move toward the S_3 archetype. Notice that we do not hypothesize a frequent path to the S_4 conglomerate. The firm's preeminence is not likely to provide much incentive for diversification until market maturity is threatened. By that time the firm is usually far too large to be very entrepreneurial. Figure 6-2B illustrates these relationships.

S_3: The Giant Under Fire

Firms rarely seem to shrink or become simpler as time passes. The tendency is instead toward growth and diversification. Once a firm has become very large and relatively diversified, there do not seem to be many likely paths to other (simpler, smaller) successful archetypes. There does unfortunately appear to be a 'natural' failure archetype which could be reached by at least three paths. If leadership becomes weak (or if divisions become overly autonomous), if the firm begins to neglect a top level focus on overall strategy, or if interdivisional conflict becomes too great, S_3 may be on the road to F_3. Recall that the Headless Giant's main problems are the lack of leadership and the absence of an integrated and well coordinated strategy. It 'muddles through' to use Lindblom's (1968) phrase.

S_4: The Entrepreneurial Conglomerate

Entrepreneurs who are for the most part quite acquisition-minded control S_4 firms. If these individuals discriminate carefully amongst their acquisitions and consolidate operations from time to time to avoid overextending resources, the S_4 firm one day might become a member of the S_3 archetype. Steady growth and diversification will require decentralization and this in turn may cause there to be less of a proclivity towards risk-taking and proactiveness.

There appear two major dangers which may prevent the graceful aging of the S_4 corporation. On the one hand vigilance may be relaxed in acquiring new companies and the firm might pick up some very sick or incongruous merger candidates. Overly rapid expansion might overburden managers and cause deterioration of the firm's intelligence and analytical efforts. These events describe the path to F_1.

Perhaps a somewhat more remote threat is a possible transition to F_3. If the strong S_4 leader disappears, he may not have left anyone suitable to take over. The already high level of organizational differentiation may allow a number of distinct fiefdoms to emerge, and we are back to the 'muddling through' orientation. See Figure 6-2D.

S_5: The Innovators

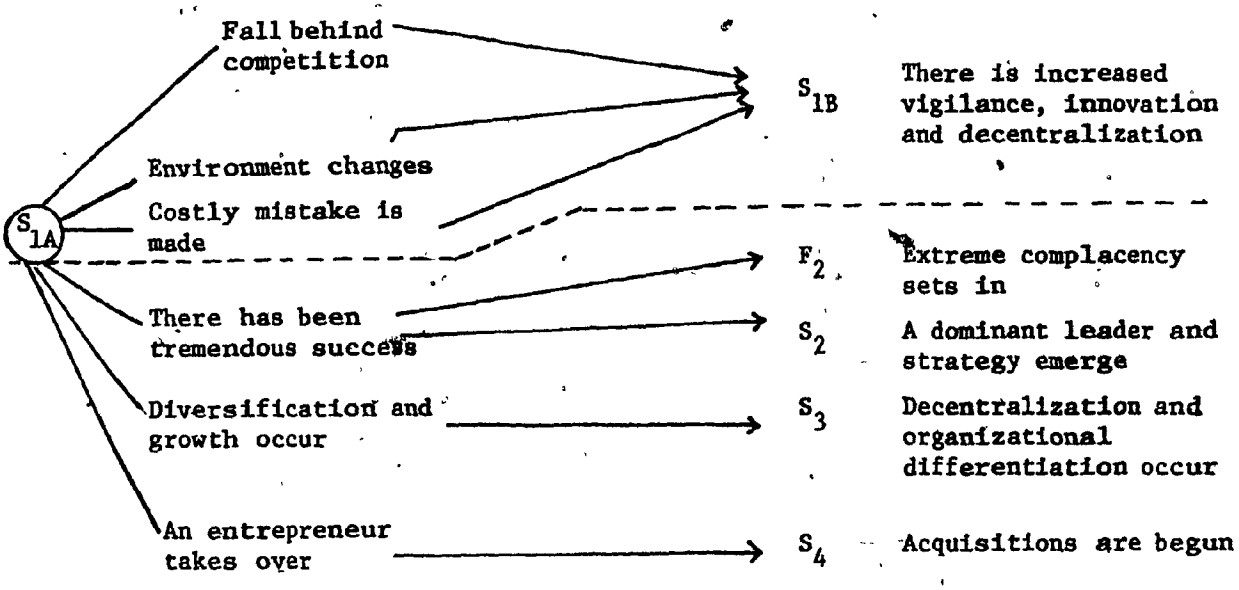
The S_5 firms pursue a very carefully defined niche strategy - they operate 'between the cracks' of the markets of their more powerful competition. They also rely a great deal on the talents of the innovator and the entrepreneur of the firm. With continued success, S_5 might become S_{1A} or S_{1B}. That is, firms might recognize the relatively fragile position they are often in and attempt to broaden their product-market scope (perhaps diversifying into other areas not dominated by the competition). They may also, in the process, try to become more aware of the different types of problems and opportunities in the environment and to reduce their dependence on so few people in the firm. The motivation to change might stem from an external threat of some sort or a change in the management.

If the external threat is severe and the powerful competitors which were previously operating on the periphery of the firm's markets decide to challenge the company head on, this could drive the firm to a failure archetype. As the firm is inexperienced at diversification, it may try frantically to enter new markets to avoid competition, and may display the sort of incompetence which seems to characterize F_1 firms.

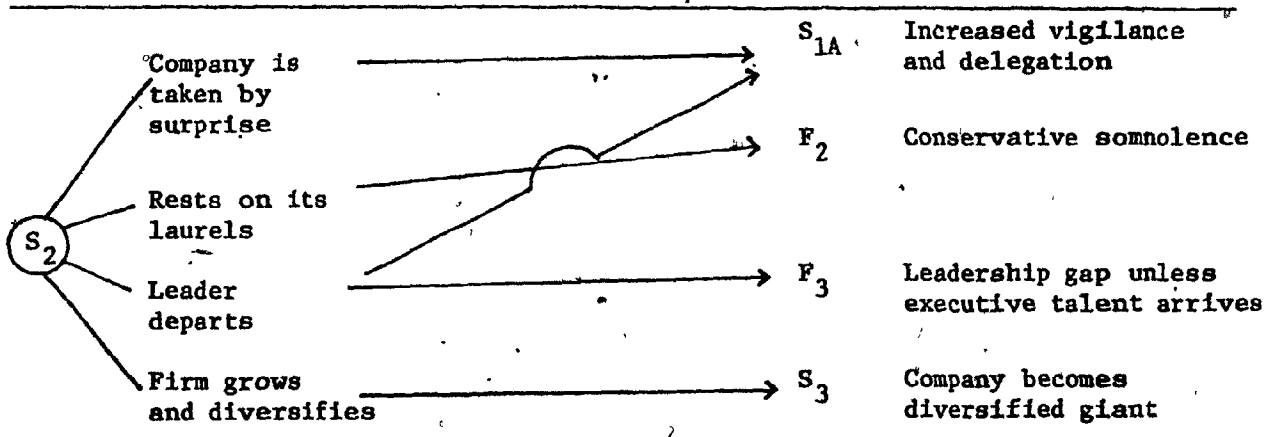
F_1: The Impulsive Firms

The F_1 firm finds itself with a monumental turnaround task. It is usually a complex and diversified organization which deals in a dynamic and hostile environment. Extreme power centralization and a deficient intelligence system also hinder the strategy making effort. If the leader (old or new) is quick to recognize the plight of the firm before resources are too badly depleted, it might be possible to reach the S_4 archetype (or S_3 if the firm is very large) by selling off poor acquisitions, working to build up an

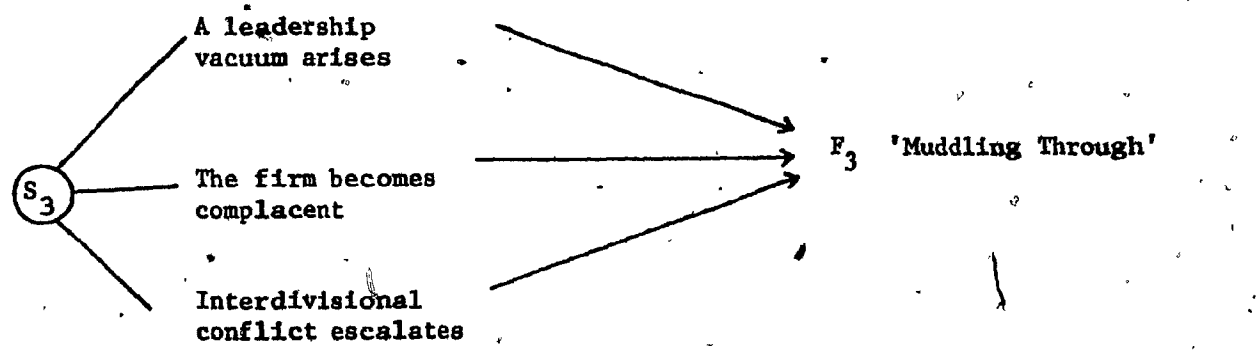
FIGURE 6-2 HYPOTHESIZED INTERARCHETYPE TRANSITIONS: SUCCESSFUL FIRMS



6-2A (S_{1B} is as S_{1A} below dotted line)

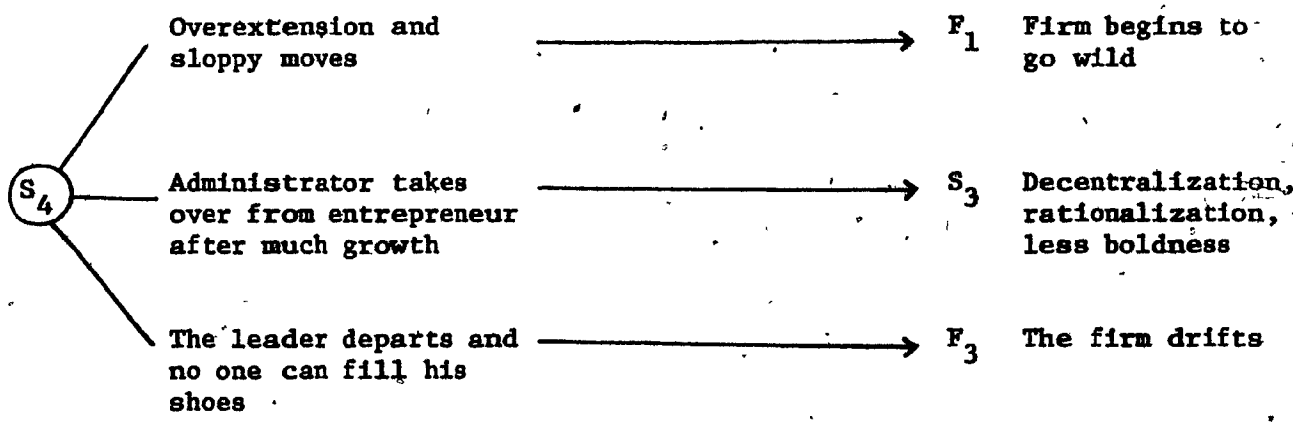


6-2B

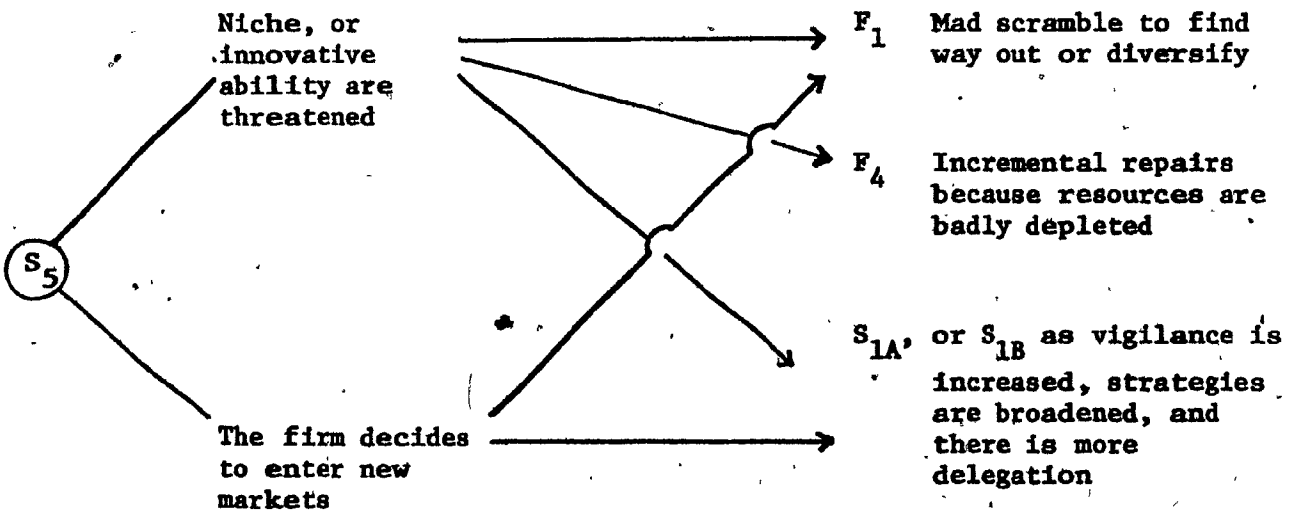


6-2C

FIGURE 6-2 continued



6-2D



6-2E

adequate layer of middle managers, improving organizational intelligence, and conserving resources by curtailing extreme risk-taking. This is a tall order and of course it might well be impossible to carry out. The temperament of the entrepreneur may also preclude this strategy.

If a firm is in an F_1 state for a long time, this is particularly dangerous. A progressive weakening of the company may make recovery possibilities remote. The untutored, inexperienced management may not be sufficiently astute to effect a turnaround and the feeble efforts in this direction which characterize the F_4 firm may prevail. See Figure 6-3A.

F_2: The Stagnant Bureaucracy

Evidence contained in our sample indicates that stagnant bureaucracies do have a good deal of recovery potential. Unlike in the case of the F_1 archetype, resources are not squandered rapidly on new products or unsound acquisitions. Firms may in fact be quite "profit conscious" in the short-run. Thus, we have seen that a new leadership which recognizes the need for change can modify the product-market and structural orientation of the firm and get onto the S_{1A} path (the S_{1B} path might also be possible but it is less likely since product innovation is hardly the company's forte). Another reason why the F_2 company might be easier to turn around than the F_1 firm is its relative homogeneity. F_1's are differentiated and diversified and the task of running them is much more complex.

A second path from F_2 to success leads to the S_4 archetype. We have seen what happened at Melville Shoe when an entrepreneur took over and redefined the corporate product-market scope to include many high fasion items besides shoes. Part of the strategy was to engage in a few acquisitions.

Needless to say, recovery is by no means imminent for all F_2 firms. The protracted failure to adapt may cause resources to become depleted. Inexperience in changing the strategy and restructuring to meet new challenges may lead to the F_4 or F_1 conditions. F_1 will be favoured over F_4 if there is an entrepreneurial attempt to boldly diversify the firm to get out of trouble. F_4 will apply when resources are extra scarce and incremental change is attempted. See Figure 6-3B.

F_3: The Headless Giant

As we mentioned in our discussion of the transition potential of the S_3 archetype, once a firm grows large and diversified, it seldom seems to travel the other way. Thus it is unlikely for F_3 to move towards any other failure archetype or to successful archetypes other than S_3. Even though our emphasis on leadership has already become quite cloying in this Chapter, it is once again hypothesized that this factor will serve as the major impetus behind the transition. The emergence of a strong leader or executive team who can coordinate the activities of divisions and formulate a superordinate strategy appears to be what is needed to spur recovery in the F_3 firms. This is not to suggest that a strong body of top executives is all that is needed. Certainly integrative structural devices such as coordinative and planning bodies could also go a long way in resolving the problem. The point however is that only top level managers are likely to initiate these remedial measures. Divisional interests may be too parochial to perform this task.

F_4: Swimming Upstream - The Aftermath

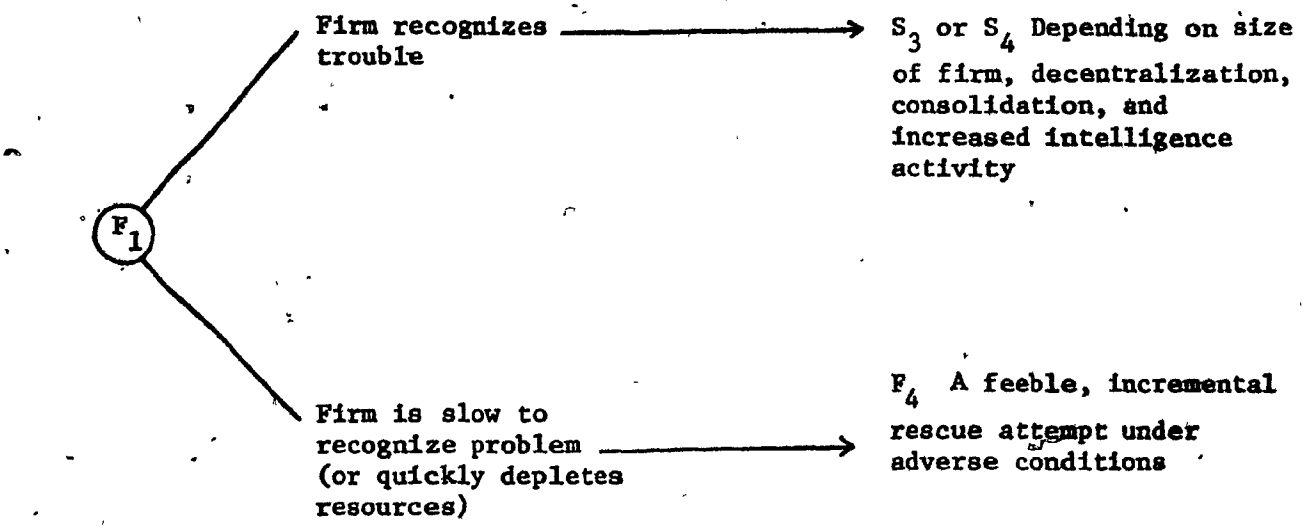
The F_4 archetype was characterized as something of a terminal state and it is difficult to envision many recovery possibilities which could rescue member firms. A take-over by a company with ample resources (or by the government) may be the only way these firms can survive.

DRAWING CONCLUSIONS ABOUT TRANSITION PATHS

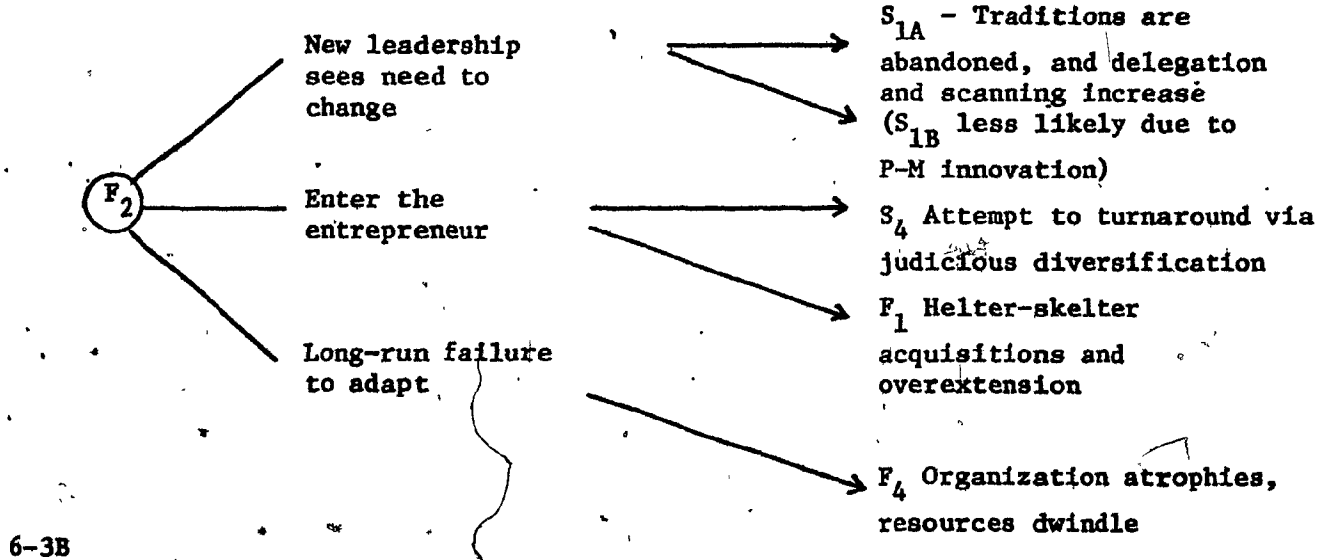
We have already stated that our discussion so far has been rather gratuitous. The lack of data on actual interarchetype transitions caused us to generate hypotheses that were based essentially upon intuition. Still it would be useful to indicate a sample method for squeezing some interesting findings out of data on transitional sequences - even if we cannot very seriously entertain the findings which were suggested in the previous section.

Table 6-1 summarizes our hypotheses on interarchetype transitions. It provides very rough summary statistics on the stability of the archetypes, the relative likelihood of companies which move towards the archetype (INPUT)

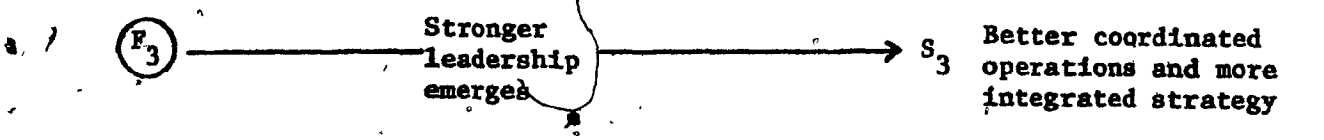
FIGURE 6-3 HYPOTHESIZED INTERARCHETYPE TRANSITIONS: FAILURE FIRMS



6-3A



6-3B



6-3C

coming from failure or success conditions, and, the relative likelihood of companies which move out of or away from the archetype (OUTPUT) moving towards failure or success conditions.

Archetype Stability

In order to gauge the stability of each archetype we compared the number of input paths to the number of output paths. That is we counted the number of paths on Figures 6-2 and 6-3 which flowed into and out of each of our archetypes. Column 1 on Table 6-1 contains the total number of inputs and Column 4 shows the total number of outputs. It is suggested that a very rough measure of stability is forthcoming since if few paths lead towards an archetype and many lead away from it, companies in said archetype may be unstable. That is they may be headed soon towards another state. Our measure here is extremely crude since the inflowing paths may of course be much more intensely travelled than the outflowing paths. Subsequent researchers with better data must then take traffic rather than merely the number of paths into account.

The Table shows S_3 to be the most stable of our archetypes and S_5 and S_2 to be the least stable. This fact was reflected in our hypotheses as we noted that S_3 had become very large, diversified and well established. Firms had built up tremendous resources and administrative capacities and it would take quite a severe blow to dislodge these companies. Further growth is unlikely to change these companies materially since they are already so large (and significant shrinkage goes against the normal flow of corporate history). S_5 companies with their niche strategies were shown to be subject to many destabilizing factors including tougher competition and the departure of a key individual in the firm. S_2 companies had a tendency either to grow or to fall asleep.

For failure firms we note that F_2 is the least stable. The firm apparently has chances to recover if stagnation has not endured for too long a period. On the other hand if the damaging level of conservatism continues the F_4 state may be reached. This appears to be the most stable of the archetypes as there seems to be no exit. Obviously stability for F_4 has a special meaning - there does seem to be a way out but it may lead to bankruptcy rather than another archetype.

TABLE 6-1 HYPOTHESIZED TRANSITIONAL PATHS - SUMMARY

	Input				Output			Stability	Input (lineage)†	Output (development)††
TO	1 (2+3)	2 (from S's)	3 (from F's)	FROM	4 (5+6)	5 (to S's)	6 (to F's)	7** (1÷4)	8† (3÷2)	9†† (6÷5)
$S_{1A/B}$*	3	2	1	$S_{1A/B}$	5	4	1	.6	.5	.25
S_2	1	1	0	S_2	4	2	2	.25	0	1
S_3	5	3	2	S_3	1	0	1	5	.66	∞
S_4	3	1	2	S_4	3	1	2	1	2	2
S_5	0	0	0	S_5	3	1	2	0	N/A	2
F_1	3	2	1	F_1	2	1	1	1.5	.5	1
F_2	2	2	0	F_2	4	2	2	.5	0	1
F_3	3	3	0	F_3	1	1	0	3	0	0
F_4	3	1	2	F_4	0	0	0	∞	2	N/A

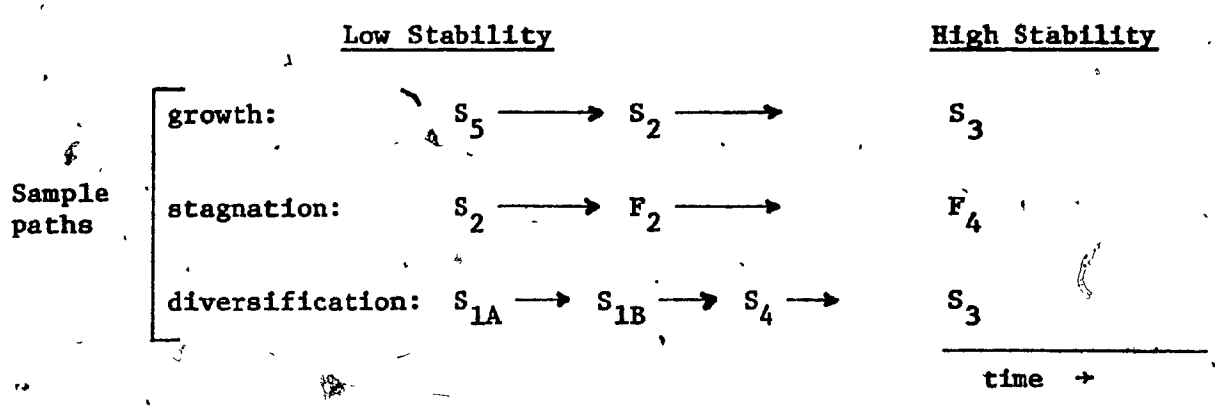
* S_{1A} and S_{1B} were hypothesized to have extremely similar transitional properties.

** A coefficient of < 1 indicates instability, one of > 1 indicates stability (with 0 as maximum instability and ∞ as maximum stability).

† A coefficient of < 1 indicates that the archetype is most likely to be reached from a successful archetype; one of > 1 indicates that the archetype is most likely to be reached from a failure archetype.

†† A coefficient of < 1 indicates that the archetype is most likely to lead to a successful archetype; one of > 1 indicates that it will likely lead to a failure archetype.

Some researchers might be interested to chain together transitional steps to come up with theories of organizational growth and development which go beyond the rather simplistic 'product-life cycle' concept. We can postulate that the most stable archetypes are 'terminal points' and the most volatile archetypes are 'starting points' in a time sequence. This is an unrealistic assumption since obviously there can be periods of stability alternating with those of flux. Nonetheless it is possible to string together a number of development paths using stability indices as one of the criteria for the temporal orderings. For example:



Archetype Lineage

What are the "backgrounds" of the firms which one finds in any archetype? Where have these companies been at a previous time in their history? There are, of course, many ways to categorize the previous states of firms which are in a given archetype. For the sake of simplicity, and because our data are so limited, we merely look at the proportion of the 'input paths' which stem from successful archetypes (Column 3 divided by Column 2 on Table 6-1). Coefficients in Column 8 of less than 1 indicate that more of the firms in the archetype were previously in successful archetypes. Coefficients of greater than 1 indicate that member firms had been mainly in failure archetypes.

Apparently, for successful archetypes, the Dominant Firm, S_2 has been successful in the past. This is by no means surprising given its subtitle - Yesterday's Superstar. - Dominance obviously comes from past success and reaping the long-run benefits of prior strategies. In marked contrast, we

note that many of the S_4 firms may have unsuccessful backgrounds. These might have been turnaround situations which were triggered by the infusion of new leadership and/or the diversification out of stagnating markets.

For failure companies we note that the overconfidence which is so characteristic of F_1 entrepreneurs has its roots often, in a glorious past. So do the tradition-bound F_2 companies and the muddling-through F_3 firms. Slack resources and past success have induced complacency and disintegration respectively. F_4, as we have noted so often, usually represents a lower level of decline for firms which were already quite sick.

Developmental Tendencies

It is interesting to look at the 'developmental' tendencies which firms within an archetype have. For example, do companies progress to other successful archetypes, or do they lean towards failure? In Table 6-1, Column 9 we display the ratio of the number of paths to failure archetypes to the number of paths to successful archetypes (Column 6 divided by Column 5). Archetype S_{1A} for example normally leads to another type of successful condition. Firms are reasonably vigilant and well adjusted so they are able to avoid many of the inadequacies and mistakes which cause failures. The S_4 and S_5 conditions appear to be more hazardous. Powerful competition, overextension of resources, or the reliance on too few managers might eventually cause problems. (The S_3 archetype contains too few observations to warrant comment.) As for the failure archetypes, there appear to be better recovery possibilities for the rather large and diversified F_3 companies than for the somewhat more beleaguered and overextended F_1 firms.

CONCLUSION

It has been our intent only to very tentatively suggest a few hypotheses regarding interarchetype transitional sequences. The principal objective of the Chapter was to suggest a potentially rich area for further investigation. No doubt the investigation of paths to success and failure will yield far more powerful normative implications than the focus on stable states (Hedberg, Nystrom and Starbuck, 1976).

CHAPTER SEVEN

CONCLUSIONS

INTRODUCTION

THE ARCHETYPE CONCEPT AND GESTALTS

SUCCESSFUL ARCHETYPES

FAILURE ARCHETYPES

GENERAL RESEARCH IMPLICATIONS

- The Case Study Data Base
- The Use of Factor Analysis
- Escaping the Hazards of the Bivariate Research Approach
- Directions for Further Research

IMPLICATIONS FOR MANAGERS

- Beware of Panaceas
- Recognize your Firm's Situation
- Combating Failure
- The Perils of Success
- Some Cautious Generalizations

INTRODUCTION

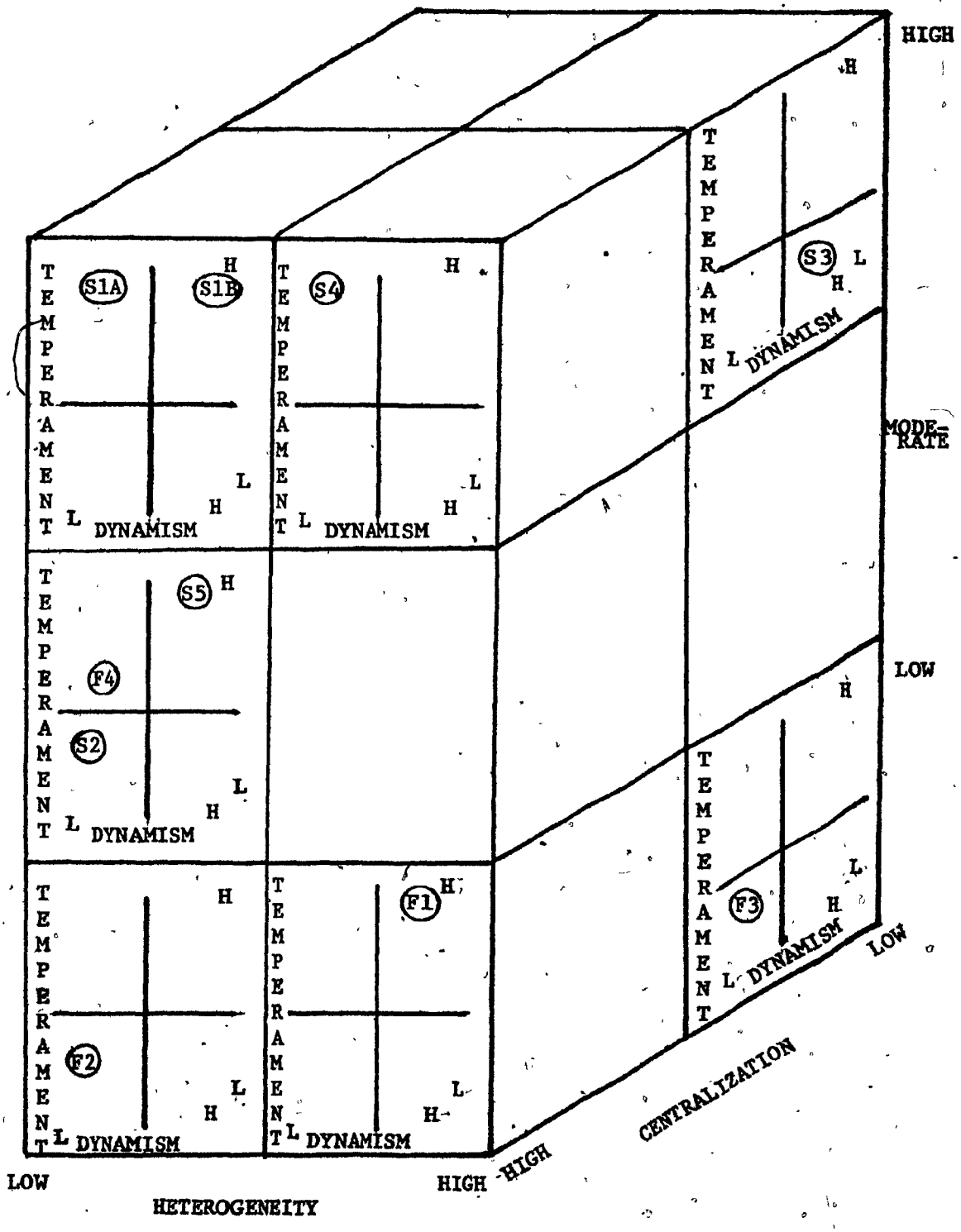
It is extremely difficult to summarize our findings. Chapter 3 contains some of the generalizations which we could make on the basis of gross, bivariate analyses of the data. The theme of this dissertation however is that strategy making must be viewed within a complex context and that this context varies a great deal across our data base. The ten archetypes which we have identified do not collectively form any simple continuum and each is quite different from the others. What is more, variable scores and relationships also vary as a function of the archetypes in question. Conclusions of the form: trait A is necessary for success, trait B causes failure, C is significantly related to D are anathema to the thesis. As a result, each of our archetypes is to be viewed as a complex hypothesis concerning a given model which has a fair chance of occuring once we have assumed certain initial conditions. Each of the score patterns which described the archetypes was seen to occur with a probability that was significantly greater than chance. There were relatively few archetypes so that they collectively entailed a parsimonious description of 'strategy making in context'. Sub-hypotheses uniquely relevant to individual archetypes were generated and presented at the end of each archetype description. Figure 7-1 presents the archetypes graphically and describes a tentative taxonomy of administrative situations.

THE ARCHETYPE CONCEPT AND GESTALTS

Our more encompassing view of the field of organizations has not resulted in an overwhelming host of ideographic, choatic, or anecdotal perceptions. Rather, it seems that even complex reality has much structure to it and that the number of archetypes we have derived is quite small given our sample size. They are also quite stable and statistically significant. The factor analytic and hypothesis testing methods allow us to conclude that there are interesting and densely occupied regions called archetypes which describe a number of 'paths' to corporate success and failure. The fact that firms along each path are so very similar to one another in terms of the relationships amongst and scores along the original

FIGURE 7-1

ARCHETYPES OF SUCCESS & FAILURE



variables, lends credence to the hypothesis that there are a number of states of quasi-equilibrium. That is, there exist several Gestalts or integrated patterns amongst environmental, organizational and strategy making variables which are very common (occur with above average frequency) and also quite different from one another. Perhaps this signifies a temporary state of balance amongst attributes which endures until a destabilizing force takes effect. After destabilization, a new temporary state is quickly reached. The new state may differ in a good number of ways from the old one. If this were not the case, we would expect there to be many more archetypes since, as firms change gradually they present a larger number of only slightly different 'pictures' at different points in time. It can also be hypothesized that some of our outliers, that is, firms which did not fit one of our archetypes, were in states of transition between archetypes.

SUCCESSFUL ARCHETYPES

Most successful firms have a large number of coping devices to deal with the set of hurdles which must be cleared. Their intelligence is quite high, a good deal of delegation takes place, analysis, multiplexity, and often innovativeness is substantial, and so forth. The tougher the environment, the more pronounced is this trend. There are interesting exceptions however. The dominant firm becomes less keen to interpret and scan its environment, power is extremely centralized for so vast an enterprise (at least this is true for strategy-making power), and innovations are essentially incremental. Yet, the firms remain very successful because of the excellent reputation, distribution channels, and technical and financial resources which provide a powerful competitive advantage. Another interesting exception to the rule is the innovative S_5 firm. In a turbulent environment, and without very much of an intelligence effort, the company succeeds in introducing bold new innovations mainly because of the outstanding talents of one or two individuals in the organization.

Success tends often to lead to lethargy or carelessness and sometimes, so does centralization of strategy making authority. The dominant firm, the entrepreneurial firm, and the lucky innovators illustrate such tendencies.

Again however there are exceptions to the 'rule'. The adaptive firms under both moderate and extreme dynamism may have enjoyed success for long periods of time. Nonetheless, these companies remain extremely vigilant towards their environments. Also, even though centralization of strategy making power can be quite high, there is a great deal of delegation of authority to lower levels for all but the most crucial decisions. The 'giants under fire' also remain vigilant and decentralized even when they have experienced past successes.

The only real generalization which we can make about our successful archetypes is that they tend to perform more intelligence activity than do unsuccessful firms. Also, there has usually been much less rapid change in the levels of environmental dynamism, heterogeneity, and hostility than for unsuccessful firms. There is no doubt that different firms succeed for different reasons. Some, because they have built up an excellent reputation and are much stronger than their competitors, some because they possess a marvellously talented innovator, some because there is a well developed and competent level of middle managers, and many because there is a great deal of effort devoted to exploring, interpreting, and experimenting upon the environment. What is important to note is that the utility of any of these attributes is a function of the historical and extant circumstances of the firm. It is impossible to make blanket statements about the necessary attributes for organizational success. The context of the administrative setting has to be studied. Fortunately, contexts are not infinitely variable and do seem to be subject to a manageable taxonomy. It is critical however that the 'state' of the firm be identified before remedial suggestions are made.

FAILURE ARCHETYPES

Corporate failures result from a multitude of 'deficiencies'. Over-centralization or over-diffusion of power, the lack of sufficient scanning of the environment, poor internal controls, obstructed internal communication and shoddy analysis of decisions, a temperament which appears excessively aggressive or too conservative, and so on. It seems that individually, any of these traits may not be all that damaging. They do become very dangerous however when a host of co-conditions facilitate the development of a 'critical mass' which leads to failure.

All failure archetypes display something of a unified set of symptoms which combine to form an overall pathology. There are a series of mutually facilitating weaknesses which together cause firms to fail. To prevent corporate failure it is not sufficient to engage in patchwork so that 'a stitch in time saves nine'. Instead, there appears to exist a combination of deficiences which are critical to the particular firm given the nature of its environment, resources, and the managerial talents available. For example, if intelligence activity is low, it may not help to merely increase efforts in this realm. It is important first to determine whether inadequacies in this area are germane to the problem, why they have occured, and whether it is useful to create a better intelligence facility or to deal with a more basic part of the problem first. One of the useful aspects of the archetype models is that they suggest a likely sequence of links which have caused the problems. It becomes possible to diagnose the root of the difficulty and to find the most fundamental, as well as the most alterable parts of the problem which must be addressed.

Several very different modes of failure were discovered in our sample. The ways of being sick were just as varied as the ways of being healthy.

GENERAL RESEARCH IMPLICATIONS

The Case Study Data Base

One of the more unorthodox aspects of the research is the case study data base which was used. Cases did indeed lend themselves to reliable scoring by raters and some of the more recently written studies were shown to have a high level of validity and accuracy as well. Perhaps most

importantly, cases provided rich detail on the strategy making process and on the time priority of change in the states of many of our variables. Our archetype descriptions are taken directly from the case write-ups of firms which were members of the archetypes. Instead of relying on summary score figures, the findings are based on the more elaborate information contained in the case studies themselves. For generating complex models of organizational success and failure there is nothing better than precise statements which supply concrete evidence and time sequences and provide insights into causal links. It seems that the use of cases as a data base has been quite rare in the past. If this resource is to be used with caution, taking particular care to verify data reliability and validity, there is no reason why it should not be used more frequently in future research on organizations.

The Use of Factor Analysis

The Q-type factor analysis came in quite handy as a tentative categorization technique. Firms were grouped according to their intercorrelations. Once groups of similar firms could be identified, their relative importance or density (number of firms in each group ÷ size of group as defined by the score ranges along 31 variables) could be established and compared to the average density of the Cartesian product-space (total number of firms ÷ size of product space as defined by the total score ranges along 31 variables) to establish the statistical significance of the archetypes. In this way it is possible to categorize firms in terms of a very great number of relationships.

Escaping the Hazards of the Bivariate Research Approach

The use of a detailed case data base and the factor analytic categorization technique has enabled us to come up with models that are far more encompassing than bivariate relationships. Our models or archetypes display a variety of relationships amongst the same environmental, organizational, and strategy-making variables. These relationships were not discovered using correlational techniques but rather were suggested by the consistent appearance of several traits simultaneously in the firms within a given archetype. The nature and direction of the associations could often be discerned by the time priority of change in organizational, environmental, and strategy making traits

reported in the case, and by the explanations of the case writers.

A working paper (Miller & Friesen, 1976) describes the danger of focussing on bivariate relationships. It was shown that the direction and intensity of the association between two variables depended upon the characteristics of the broader context within which the association occured. For example, in entrepreneurial organizations, power centralization enabled bold leaders to enter new environments thereby increasing heterogeneity. Thus, heterogeneity was associated with high levels of power centralization. In contrast, for the archetype 'giant under fire', environmental heterogeneity resulted in greater complexity in the administrative task and executives recognized that there was a need to decentralize power in order to cope more quickly and intelligently with externalities. Here heterogeneity is associated with lower levels of power centralization. This example is one of the great many which point out the limitations of bivariate analyses. It is important to note that intra-archetype bivariate associations are significant even when there is a contrary statistically significant sample-wide relationship. Inconsistencies do not point out sporadic error, but highlight alternative common, consistent and intuitively valid associations which are sensible in the light of their contexts.

There is certainly the need for a more holistic orientation in studying organizations. The alternative is for the blind wise men to continue to examine "different parts of the elephant", arguing heatedly about the differing conceptions of the nature of the beast. The atomistic approach to theorizing about organizations and their behaviour has resulted in many oversimplications, a myriad of consequent intellectual feuds, and an inability to erect a strong foundation upon which to build up knowledge in the field. The search for archetypes which are sufficiently rich in detail to comprise a sizeable chunk of reality should yield greater insights into the reasons for successful and dysfunctional organizational behavior and structures under different conditions.

Directions for Further Research

Many key questions are raised, but remain unanswered, by the research:

What are the most common inter-archetype transitional paths? If a firm is a member of S_3, in what direction is it likely to change? What is the most probable failure archetype which it might slip into? Which variables change first and signal the movement from one archetype to another? There might be a fascinating set of models concerning inter-archetype transition which could be generated and investigated in the future.

What are some of the important causal links and associations which have been missed because of the focus on fairly brief cases? Would lengthy case studies reveal more variety amongst firms than has been identified in the dissertation? Which parts of our models are sketchy or misleading as a result of the bias of our data base? It would be extremely useful for subsequent researchers to use different sorts of cases and different types of firms. Our sample leans toward brief cases and large firms and it would be helpful if a complementary data base could be built up so that the generalizability of findings might be tested.

Which are some of the key dimensions not treated here? There are those who may feel that the selection of the 31 variables included many unimaginative ones and that many dimensions which could be of crucial importance to the archetype models were ignored. Many of the critical variables could not be measured using our case data base as there was insufficient information available. Other important dimensions may have simply been overlooked. Subsequent researchers might wish to generate different dimensions and measure them using information gathered from questionnaires. Some of the important variables which we neglected were bureaucratization, specialization, modes of conflict resolution, the dynamic aspects of decision making such as obstacles to progress, speed-ups in taking action, cycling back to a previous decision making step, etc. It might also be useful to look at more concrete and quantifiable variables such as company size (in terms of sales, number of employees, etc.), actual sequences of events in making decisions (delays, number of solution alternatives generated, number of people involved in the decision process, etc.). The nature of the intelligence--scanning and control programs in terms of the concrete activities which take place might also provide insights into the causes of organizational success and failure. Detailed, live, longitudinal, studies could supply the sort of information needed to gauge the more concrete variables.

What do models suggest in terms of normative conclusions? Given that a company is in a successful archetype, how can it remain there? What sorts of actions are necessary to forestall slipping into a failure situation? What sorts of measures are necessary (and feasible) for particular failure archetypes that will enable them to improve steadily? Our next section discusses some of the implications which our research has for managers of organizations. It has not been the focus of this research to come up with concrete recommendations for executives on the basis of our models. It is still too early to develop a list of suggestions tailored to each archetype's characteristics. Our small sample size, limited array of variables, and somewhat sparse data base makes this premature, particularly since the inter-archetype transitions and other dynamic aspects of the models have not yet been investigated. The strengths and weaknesses of each archetype were discussed when we presented each model and we encourage the reader to treat any normative implications which stem from these as hypotheses which require further validation.

IMPLICATIONS FOR MANAGERS

Beware of Panaceas

One often reads of consultants who install M.I.S. devices, engage in human relations training, encourage diversification schemes, suggest techniques for more decentralization, and perform market research studies. In fact, these programs and techniques may be just what is required to make a firm more successful. However, this is by no means certain. It depends really upon the particular situation which prevails within the company. Research which concludes that any specific attribute is necessary or desirable for success is suspect, particularly where there are no qualifications regarding when to pursue or reject that attribute. We have already noted that contexts and causal patterns vary tremendously from one firm to another. What is right for one situation may actually aggravate another. Take the implementation of a better M.I.S. for example. The M.I.S. could supply managers with information which they need in order to make more timely and accurate decisions. This seems good if there is a dearth of information and if the new information is worth the cost of gathering it. Things are not always this simple however. Many firms tend to be overcentralized, with one or a couple of top executives trying to make most of the decisions themselves. An M.I.S. which efficiently supplies such individuals with a great deal of information will bolster the trend towards overcentralization. Information facilitates control and will tempt the top managers to hoard more power and perhaps to make more decisions unilaterally. To the extent that the M.I.S. does not contain all of the subtle cues that impinge upon lower level executives, decisions made by the top men may be inferior. Also, middle level executives can become increasingly hostile as their responsibilities remain constant while their authority dwindles.

There are of course many other instances where popular administrative techniques are blatantly inappropriate. The inadequacy of a universal, or even a simple contingency approach to management is apparent in our archetypes. There are a number of ways to succeed and to fail. What is a chronic inadequacy for one firm (the absence of a sound intelligence system for F_1) can be irrelevant to another (S_5).

Recognize Your Firm's Situation

A key managerial task is diagnosis of the company's strengths and weak-

nesses. It is useful to ask why the firm succeeds the way it does. Where are the profits coming from? What things does the firm do particularly well, and how are these facilitated by the external environment, the corporate structure, and the method of strategy making? We have identified about ten recipes for success and failure and no doubt there are more. In order to determine the required direction for change, a company must establish the impact of the proposed alterations upon existing strengths and weaknesses. To the extent that no technique or programme is by itself good or bad, it is essential to understand how it conflicts with or enhances the current state of affairs. This state can be described in terms of the variables which were used to characterize the archetypes. Hopefully, however, managers will have more perspective in choosing variables which we have not considered but which are quite germane to their situation. Unfortunately, the state of the art is such that common sense and experience with the company's business are the best guides in establishing putative models. The models, in describing how variables relate, provide clues regarding the interaction of the strengths and weaknesses of the firm and its structural and strategic posture.

Combating Failure

Most of the failure archetypes paint a very grim picture indeed. There are usually a constellation of problems, each serious enough to cause trouble. Usually, however, there seem to be only a few "roots" to the symptoms that are displayed. These roots are the uppermost variables on our archetype flowcharts and have a number of repercussions. It is crucial for managers who wish to turn around a failing organization, to address the roots of the difficulties rather than try to do a patch-up job on the more manifest symptoms of the problem. The archetype method of investigation has disclosed several trait configurations which are successful. It might be useful, as a tentative aid in creating a plan of action, to find the successful pattern which is easiest to reach given the existing state of the company. There are some successful archetypes which may be close in nature to the failure archetype or the unique pattern in which the firm finds itself. The successful archetype can serve as a target to the extent that its attainment gets at the root of the problems of the firm, and the changes required are feasible given the resources and constraints facing the company.

The Perils of Success

Success seems to breed failure. Many of the unsuccessful archetypes became that way after having enjoyed resounding success. Overconfidence, carelessness, and the desire to stick with yesterday's formula for success in the face of conflicting evidence, seemed to emanate directly from the mentality which grew out of earlier successes. In some organizations the top manager responsible for the excellent past performance of a firm becomes a very powerful leader. His power base is enhanced by his reputation and he begins to run the company singlehandedly. He is often reluctant to change his tried and true methods in the face of a new environment and the company begins to decline. An opposite, but equally dangerous reaction to past success is overconfidence. The company begins to embark upon some wild and risky ventures without adequate consideration of vital constraints. It is important for the managers of successful companies to remain reasonably vigilant and open to change where this is required. Any sentiments of infallibility are likely to lead to trouble. Too often success contains the seeds of decline.

Some Cautious Generalizations

What we have argued so far is that given the different conditions in and around firms, it is tough to make generalizations about what is good or bad. There are however some attributes which seem to do more harm than good in most situations. For example, a good intelligence system allows the company to track its environment, monitor internal performance, and ensure that the proper parties are given information which allows them to make better decisions. Similarly, a reasonable amount of planning and analysis appears to benefit the quality and complementarity of decisions as does the multiplexity of the points of view brought to bear in arriving at a judgement. Some firms continue to do well in spite of moderately low scores on these variables. But they usually possess some very strong counterbalancing forces such as the ability to carry out product-market innovations successfully.

To some degree at least, proactiveness and product-market innovation are associated with successful operations. The ability to come up with attractive new products puts the company in good stead in a turbulent environment. Of

course, in more stable settings, there is not as much need for these 'temperament' attributes. Also, some unsuccessful companies are highly proactive, yet fail miserably.

It was quite surprising to find that often, a good deal of centralization of strategy making power was not very detrimental. Having some tight and closely knit body which is devoted to strategy formulation commonly resulted in a coordinated and well directed effort. The real dangers of overcentralization only manifested themselves when there was also a failure to delegate routine operating matters to lower levels, and where top managers were closed to the suggestions of boundary spanning units.

We should conclude by noting that even 'favourable' traits can be overdone and the marginal utility of intelligence systems, decentralization, diversification, analysis, and innovation should be weighed against the costs (and these include possible negative repercussions towards other strengths possessed by the firm).

APPENDIX I

LISTING OF COMPANIES

1. Matsushita S_{1B} F. Dec. '72
2. R.C.A. F_1 F. Sept. '72
3. Proctor & Gamble S_{1B} F. July '74
4. Marshall Ford S_{1A} F. Dec. '72
5. Toyota S_{1A} F. Dec. '69
6. Xerox S_2 F. Sept. '74
7. Polaroid S_5 F. Jan. '74
8. IBM S_2 F. Nov. '73 and F. March '72
9. Combustion Engineering OUT F. Dec. '71
10. I.T.T. S_3 F. Sept. '72
11. Upjohn S_{1B} F. June '72
12. Nuclepore S_2 F. Dec. '73
13. Intel S_{1B} F. Nov. '73
14. Melville Shoe (1) F_2 F. Dec. '69
15. Melville Shoe (2) S_4 F. Dec. '69
16. DuPont 1950, S_{1B} F. Oct. '50
17. Boise Cascade S_4 F. Oct. '69
18. C & S Bank S_{1A} F. Nov. '69
19. Union Bank S_{1A} F_1 March '74
20. Control Data (1) S_5 F. April '66
21. Dr. Pepper S_{1A} F. Dec. '73
22. Heinz S_3 F. Oct. '71
23. Kiewit S_4 F. April '66
24. United Airlines (2) S_{1B} Recovery F. March '72

LEGEND:

S_{1B}, F_1 etc. denote the firm's archetype membership. F., McN., and HCC respectively indicate that the case in question comes from Fortune, the McNichols (1970) text, or the Harvard Case Clearing House Series. The final entry on each firm shows the date of the case.

25. United Airlines (1) F_2 F. March '72
26. J.B. Fuqua S_4 F. Feb. '72
27. Merrill Lynch S_2 F. May '72
28. Amtrack F_2 F. May '74
29. Babcock & Wilcox F_1 F. Nov. '69
30. Consolidated Edison (2) F_4 F. Sept. '74
31 Consolidated Edison (1) F_4 F. March '66
32. USM F_1 F. Oct. '72
33. Volkswagenwerk (1) F_1 F. March '72
34. Volkswagenwerk (2) OUT March '72
35. Krupp F_1 F. Aug. '67
36. Leathercraft F_2 McN '55
37. Pan American Airlines F_3 F. Jan. '72
38. International Paper (1) F_2 F. March '69
39. Caterpillar (2) F_2 F. May '72
40. Caterpillar (1) S_{1A} F. May '72
41. Federated Dept. Stores F_3 F. June '69
42. Automatic Sprinkler F_1 F. May '69
43. International Paper (2) OUT F. March '69
44. Société Générale de Belgique F_3 F. Feb. '69
45. Raleigh Industries F_2 McN '64
46. Rolls Royce F_4 F. March '69
47. General Motors S_3 F. Jan. '72
48. Dansk Design S_5 HCC Nov. '71
49. Berenschot(1) S_2 HCC '73
50. Berenschot(2) F_3 HCC '73

51. Vappi F_1 HCC '71
52. Levi-Strauss-Europe F_1 F. April '74
53. Litton F_1 F. April '68
54. Control Data (2) S_5 F. Feb. '68
55. Franklin National Bank (1) F_1 F. Oct. '74
56. Franklin National Bank (2) F_4 F. Oct. '74
57. Hughes Aircraft S_{1B} F. April '68
58. Allis Chalmers F_3 F. Nov. '67
59. Penn Central F_3 F. Aug. '70
60. Cincinnati Milacron S_{1A} F. Dec. '70
61. J.W. Thompson S_{1A} F. Oct. '70
62. Wheeling Steel (1) F_2 F. July '67
63. Wheeling Steel (2) F_4 F. July '67
64. Jersey Standard F_3 F. July '70
65. Gulf & Western S_4 F. March '68
66. J.C. Penny S_{1A} F. July '64
67. DuPont (2) S_3 F. Nov. '67
68. CBS F_2 F. Sept. '70
69. General Electric F_1 F. Oct. '70
70. Magnavox S_{1A} F. Feb. '64
71. Textron S_4 F. April '64
72. Astra-Lite OUT McN '56
73. Electric Steel F_4 McN '56
74. Sealed Fresh F_4 McN '62
75. Burlington Ind. (1) S_{1A} F. June '64

76. Burlington Ind. (2) S_{1A} F. June '64

77. Ø

78. U.S. Rubber OUT F. Dec. '64

79. Avon S_2 F. Dec. '64

80. Armstrong Cork S_{1B} F. March '64

81. Eastern Airlines F_2 F. July '64

82. Monsanto S_{1B} F. Sept. '64

APPENDIX II-A

VARIMAX ROTATED FACTOR MATRIX — SUCCESSFUL SUBSAMPLE N of 29 (from total sample of 52)

Underlined loadings indicate the factor-archetype into which the firm was classified.

FIRM#	S_{1A} FACTOR 1	S_2 FACTOR 2	S_{1B} FACTOR 3	S_5 FACTOR 4	S_4 FACTOR 5	S_3 FACTOR 6	OUTLIER FACTOR 7
4	0.91112	0.03426	0.22374	0.02454	0.10037	0.17619	-0.00737
5	0.64477	0.39542	0.39642	-0.00764	0.16806	0.17245	0.08790
18	0.72239	0.35398	0.28326	0.19753	0.34097	0.01002	0.19038
19	0.69842	0.28258	0.30312	0.15915	0.34384	0.00134	0.27711
21	0.81776	0.18471	0.11358	0.19930	-0.05472	0.11330	0.05571
1	0.38102	0.46333	0.58818	-0.13064	0.21176	0.34764	0.05872
3	0.44746	0.19789	0.69099	-0.05986	0.28718	0.33926	-0.01171
11	0.11855	0.40458	0.63815	0.28153	0.09959	0.11500	-0.02538
12	0.02392	0.56092	0.23325	-0.09672	0.13660	-0.09066	0.15092
13	0.22951	0.16001	0.80199	0.26698	0.01180	-0.01832	0.18297
16	0.15750	0.56403	0.56465	0.06507	0.44480	0.12295	0.04570
24	0.22490	-0.01327	0.77726	-0.08441	0.10318	0.08325	0.41252
6	0.15274	0.74307	0.24350	0.29222	0.17519	0.22343	0.19878
8	0.31920	0.74020	0.23195	0.21281	-0.09410	0.18440	0.00538
40	0.51637	0.50623	-0.05188	-0.06131	-0.01822	0.01731	0.12079
49	0.47225	0.55692	0.10368	0.37057	-0.10188	-0.04452	-0.19132
10	0.00597	0.07467	-0.00200	-0.05954	0.30856	0.69810	0.00609
22	0.18349	-0.18778	0.49901	0.22855	0.12892	0.62368	0.11885
47	0.25825	0.36312	0.16136	-0.00276	-0.05620	0.76940	0.21214
15	0.47017	0.16832	0.45274	0.25551	0.45314*	0.31791	0.18602
17	0.52501	0.28578	0.32334	0.08321	0.53686	0.14987	0.24910
23	0.35002	0.45931	0.33391	0.23922	0.46427	0.20184	-0.01022
26	0.07398	-0.06691	0.10375	0.25091	0.79305	0.22470	0.08736
7	0.18634	0.54391	0.26101	0.47863*	0.05869	0.02682	0.00638
20	0.02321	0.14759	0.36064	0.80453	0.09132	0.00441	0.03301
48	0.15208	0.14252	-0.18013	0.75630	0.25705	-0.00861	0.06347
9	0.34827	0.36432	0.26862	0.34844	0.24172	0.27620	0.37718 OUT
27	0.23168	0.60342	-0.18949	0.19941	-0.00442	0.15059	0.11062
43	0.16875	0.23153	0.29706	0.07572	0.13221	0.18682	0.83038

*Indicates discrepancy between highest factor loading for firm and ultimate classification. Scores were close on two factors and a re-reading of the case revealed that classification of the firm according to the lower loading seemed most appropriate.

APPENDIX II-B

UNSUCCESSFUL SUBSAMPLE N of 23 (from total sample of 52)

Underlined loadings indicate the factor-archetype into which the firm was classified.

VARIMAX ROTATED FACTOR MATRIX

FIRM #	F_1 FACTOR 1	F_2 FACTOR 2	F_3 FACTOR 3	F_4 FACTOR 4	OUTLIER FACTOR 5
2	0.87162	0.06717	0.09901	0.00673	-0.09605
29	0.77142	0.17503	-0.00788	0.27096	-0.11403
32	0.55566	0.18875	0.24381	0.45799	-0.25208
33	0.82297	0.03993	0.09362	0.10918	0.24907
35	0.65214	0.21640	0.18123	0.39028	-0.10242
42	0.80428	-0.03994	0.18348	0.29101	0.09899
51	0.76220	0.09636	-0.06445	0.11773	0.22613
52	0.79150	0.11858	0.38197	0.07941	0.25072
14	-0.07454	0.72134	0.12897	0.27618	-0.02494
25	0.31243	0.86000	0.02989	-0.08384	0.04584
28	0.37124	0.71588	0.18411	0.16382	-0.23656
36	0.34716	0.77517	0.31437	-0.10593	0.01503
38	-0.00818	0.64897	0.15090	0.08380	0.11886
39	-0.03611	0.62534	0.01217	0.08243	0.45353
45	-0.07900	0.67661	0.19174	0.14307	0.49249
37	0.57752	0.04759	0.44311	0.22126	-0.13207
41	0.06934	0.16438	0.69144	0.07223	0.42890
44	0.30054	0.17955	0.82204	-0.03375	-0.21274
50	0.08839	0.26527	0.71130	0.08301	-0.00610
30	0.27829	0.35371	0.08127	0.61098	0.04190
31	0.48062	0.34130	0.05265	0.63651	0.17402
46	0.28585	-0.14387	-0.09735	0.63482	0.27203
34	0.14176	0.10617	-0.03495	0.10698	0.62578

REPORT REGIONS

APPENDIX III ARCHETYPE SCORE RANGES ALONG THE 31 VARIABLES

S1A

VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
UPPER RANGES	4	5	5	5	6	7	7	7	7	7	2	4	7	7	7	5	7	7	7	7	7	7	7	6	7	7	7	7	7	7	7
LOWER RANGES	1	1	1	1	3	4	5	3	4	5	1	1	4	4	4	1	1	3	1	5	4	3	1	4	4	5	4	5	1	1	5

S2

VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
UPPER RANGES	5	5	5	5	4	5	7	6	7	7	2	5	7	7	6	5	7	7	7	7	7	7	7	7	7	7	7	6	7	7	
LOWER RANGES	1	1	1	1	1	1	4	3	4	4	1	1	4	4	4	1	1	1	4	4	2	2	1	1	3	5	1	5	3	1	5

S1B

VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
UPPER RANGES	7	7	5	5	7	7	7	7	6	7	2	4	7	7	7	5	7	7	7	7	7	7	7	7	7	7	7	7	5	7	7
LOWER RANGES	4	5	1	1	1	4	5	5	3	4	1	1	4	4	4	1	4	1	5	5	5	4	4	4	5	4	3	4	1	1	5

S3

VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
UPPER RANGES	7	7	7	7	7	7	7	7	5	7	2	5	7	6	7	7	7	7	7	7	7	7	7	7	6	7	5	7	6	7	7
LOWER RANGES	3	4	3	5	3	5	5	2	5	1	1	4	3	4	4	3	1	3	4	4	4	3	4	4	3	3	4	3	1	5	

S4

VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
UPPER RANGES	6	7	6	7	6	6	7	7	7	7	2	4	7	6	7	7	7	7	7	7	7	7	6	7	7	7	7	7	5	7	7
LOWER RANGES	2	3	2	5	2	3	4	4	5	3	1	1	4	3	4	4	1	1	3	4	3	4	3	4	4	3	5	5	1	1	5

APPENDIX III ARCHETYPE SCORE RANGES ALONG THE 31 VARIABLES

Ss

VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
UPPER RANGES	6	7	5	5	6	7	5	7	7	7	2	7	5	7	5	5	7	7	7	5	5	5	5	7	7	7	7	7	7	7	7
LOWER RANGES	3	4	1	1	1	1	3	4	6	4	1	1	2	1	2	1	1	1	5	2	2	2	2	4	5	5	5	5	1	1	4

F1

VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
UPPER RANGES	5	7	5	7	4	7	4	7	7	7	2	7	4	4	4	7	7	7	7	4	3	4	4	5	7	4	7	7	7	7	4
LOWER RANGES	1	4	1	3	1	4	1	1	4	1	1	4	1	1	1	3	1	1	1	1	1	1	1	2	4	1	5	1	1	1	1

F2

VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
UPPER RANGES	4	7	4	5	5	7	4	4	7	7	2	7	4	4	4	5	7	7	4	3	7	4	4	4	3	5	4	7	7	7	4
LOWER RANGES	1	1	1	1	1	3	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1	1

F3

VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
UPPER RANGES	4	7	7	7	4	7	4	7	5	7	2	7	4	4	4	7	7	7	5	3	4	4	4	4	4	4	4	5	7	7	4
LOWER RANGES	1	1	1	4	1	4	1	4	1	1	1	4	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	4	1	1

F4

VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
UPPER RANGES	5	5	5	6	7	7	5	7	7	4	2	7	4	7	5	5	7	7	7	5	5	5	4	5	7	6	7	6	7	7	4
LOWER RANGES	1	1	1	2	1	4	2	1	4	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	4	3	1	1	1

APPENDIX IV

TESTS OF SIGNIFICANCE OF REGION DENSITIES

The area of the Cartesian product space which describes the region into which firms with a certain factor loading can fall is very complex. It is described in 31 dimensions and there is obviously no output from any factor analysis program which tells us precisely what the boundaries of this area are in terms of raw company scores. Ideally, we should test our hypotheses about the factors in terms of the occupation density (# of firms in region ÷ area of region) of this factor region relative to the density of the entire Cartesian product space. Unfortunately, this could not be done because of one's ignorance of the precise geometry of the factor region. A somewhat sub-optimal hypothesis testing format had to be used.

Using company factor loadings to determine relatively homogeneous groups of firms, the score ranges on each variable for each company in a group served to define the archetype region to be used in our hypothesis test. As we mentioned in the text, ranges were expanded (and even occasionally contracted) to conform to our intuition about the nature of the archetype. Obviously then, the regions we are left with to help determine archetype "densities" are different from the ideal regions which correspond to our factors. The importance of such a discrepancy can only be gauged by examining how often the classification by factor loadings disagrees with the classification by membership in our archetypal regions. As it turned out we were fortunate in that the discrepancy involved only a relatively small number of firms. For four out of the 29 cases in the hypothesis testing sample, the firms fit into one archetype region, yet loaded highly on a factor which did not correspond to that region. We call these discrepancies 'misclassifications' and do not count these firms as being members of any archetype <u>for purposes of hypothesis testing</u>.

Discrepancies are due to two influences. First, the archetypal regions are more gross than factor regions and can therefore accommodate a number of different score profiles and factors. Secondly, as we noted, occasionally the ranges which describe the region have been expanded or contracted. In two out of the four misclassification cases, the firm fails to fit the archetypal region which corresponds to its Q-factor by only one point on one of the 31 scales. It is impossible to come any closer than that and still remain outside the region.

We did decide to err on the side of conservatism and so demanded that two criteria be met in order for a firm to be counted as a member of an archetype for purposes of testing statistical significance of archetypes:

1. The firm had to load substantially on the factor relating to the archetype (usually > .5 loading required).
2. The firm had to fit within the score ranges which defined the region of the archetype.

In this manner we are sure of deleting the firms which occupy a part of our regions which are not related closely to one of the Q-factors. The table on the next page displays the outcome of our hypothesis test. A 95% confidence interval was constructed around the sample proportion, i.e. the number of firms out of the 29 which fell into a given archetype. The lower bound of this interval was compared to the proportion of the area of the given archetype over the area of the Cartesian Product Space. If the lower bound of the interval was greater than the latter proportion, we can reject the hypothesis that there is no significant difference in the two proportions (i.e. we are confident that the archetype regions are more densely populated than the average of the Cartesian Product Space).

(1) ARCHETYPE	(2) SAMPLE PROPORTION	(3) LOWER BOUND OF 5% INTERVAL	(4) ARCHETYPE REGION SIZE	(5) COLUMN (4) DIVIDED BY NO. OF SITES IN CARTESIAN PRODUCT SPACE*
S_{1A}	5/29	5.8449E-2†	2.4089E+19	1.843E-8
S_{1B}	3/29	2.1858E-2	3.7756E+18	2.889E-9
S_2	1/29	8.7357E-4	2.8104E+20	2.150E-7
S_3	1/29	8.7357E-4	5.6184E+18	4.299E-9
S_4	1/29	8.7357E-4	2.1849E+19	1.672E-8
S_5	1/29	8.7357E-4	3.0217E+19	2.312E-8
F_1	3/29	2.1858E-2	2.7855E+20	2.131E-7
F_2	3/29	2.1858E-2	3.4818E+20	2.664E-7
F_3	3/29	2.1858E-2	1.2127E+20	9.279E-6
F_4	2/29	8.4610E-3	6.1983E+21	4.742E-6
OUTLIERS	2/29			
MISCLASSIFIED	4/29			

† -2 indicates number of zeros in front of the decimal.

* No. of sites = 1.307E+27 = 2×7^{30} (or thirty 7 point scales, one 2 point scale).

As we can see, the proportions in Column 3 are always at least 1000 times greater than those in Column 5, and so we can easily reject the null hypothesis for each archetype.

FACTOR

FILE SUCCFSSF (CREATION DATE = 01/09/76)

APPENDIX V-A

VARIMAX ROTATED FACTOR MATRIX — SUCCESSFUL SUBSAMPLE N of 44 (from total sample of 81)

Underlined loadings indicate the factor-archetype into which firm was classified.

	FIRM #	S_{1A} FACTOR 1	S_{1B} FACTOR 2	S_4 FACTOR 3	S_5 FACTOR 4	S_3 FACTOR 5	OUTLIERS FACTOR 6	S_2+ FACTOR 7	FACTOR 8	
VAR001	5	0.60926	0.51124	0.19112	0.08352	0.13032	0.20919	0.16894	0.02309	
VAR002	13	0.65194	0.45743	0.35039	0.24768	-0.00017	0.14736	0.16757	0.10110	
VAR003	19	0.65432	0.41631	0.32176	0.23574	0.00003	0.21119	0.06946	0.20802	
VAR004	21	0.79185	0.14404	0.04381	0.22397	0.07927	0.07285	0.10280	-0.03876	
VAR005	60	0.51231	0.52233	0.33572	0.06580	0.14748	0.22640	-0.02294	-0.04065	
VAR006	70	0.51884	-0.13249	0.17918	0.26521	0.21289	0.15589	0.60131	-0.03257	
VAR007	75	0.55726	0.07748	0.47848	0.46131	-0.07870	0.22522	0.06293	0.18257	
VAR008	78	0.16173	0.00962	0.23002	0.21126	0.03900	0.37480	0.09451	-0.08534	
VAR009	4	0.83840	0.15997	0.25952	0.00112	0.06850	0.18958	0.09708	-0.21481	
VAR010	61	0.71257	-0.00144	-0.07809	0.13612	0.48290	0.22294	0.09811	0.10699	
VAR011	43	0.12961	0.28327	0.15695	0.07468	0.14195	0.65841	0.20981	0.37061	
VAR012	66	0.55213	0.45456	0.12327	0.04795	0.04342	0.45267	0.15654	0.37830	
VAR013	9	0.32588	0.33156	0.29850	0.40060	0.28094	0.20016	0.22262	0.24034	OUT
VAR014	27	0.13973	0.13810	0.12740	0.09061	0.08037	0.04784	0.79318	0.04175	
VAR015	40	0.58423	0.25992	-0.06311	-0.02473	0.05475	-0.10877	0.38407	0.34995	
VAR016	44	0.43257+	0.29920	0.02002	0.39578	-0.06075	-0.03038	0.55896	-0.35543	
VAR017	8	0.32630	0.50475+	-0.03708	0.32302	0.22720	-0.00037	0.48802+	-0.00970	
VAR018	6	0.11242	0.60112+	0.13691	0.39116	0.28375	0.07640	0.43103+	0.25484	
VAR019	79	0.71941+	0.14608	0.00412	-0.04534	0.10435	-0.03638	0.54526+	0.17216	
VAR020	3	0.47789	0.58346	0.31050	0.01669	0.31277	0.31132	-0.13030	-0.11412	
VAR021	1	0.39640	0.73206	0.19639	0.00356	0.39404	0.14606	0.02652	-0.02881	
VAR022	11	0.12059	0.58960	0.13595	0.31868	0.14541	0.30659	0.11170	-0.14989	
VAR023	16	0.16491	0.80551	0.34140	0.16488	0.18276	0.08844	0.05585	0.14996	
VAR024	76	0.65388	0.11065	0.14239	0.26037	0.43704	0.27477	0.03069	-0.21597	
VAR025	80	0.68457	0.47950	0.17528	0.11478	0.20184	0.29708	0.08556	-0.11047	
VAR026	24	0.22722	0.51037R	0.05835	-0.00453	0.11046	0.67478R	-0.21926	-0.02781	
VAR027	82	0.34646	0.42395R	0.12541	0.11022	0.27875	0.63373R	0.12572	0.09292	
VAR028	13	0.22991	0.65764	-0.02902	0.30537	0.09833	0.53226	-0.12239	-0.12433	
VAR029	57	0.27569	0.53235	-0.03328	0.44611	0.39013	0.25594	0.23192	-0.12075	
VAR030	10	-0.03034	0.07177	0.39642	-0.10999	0.65275	-0.04717	0.05259	-0.01397	
VAR031	47	0.31382	0.20698	0.03979	-0.00185	0.78372	0.19383	0.26722	0.17838	
VAR032	22	0.20176	0.07630	0.20214	0.15399	0.55753	0.40498	-0.19869	-0.16389	
VAR033	67	0.14818	0.38138	0.15339	0.30424	0.65210	0.11867	0.08989	-0.01901	
VAR034	17	0.51865	0.44668	0.54221	0.06855	0.11489	0.20688	0.07171	0.27871	
VAR035	65	0.23957	0.25823	0.70494	0.20946	0.25089	0.15652	0.19846	0.06452	
VAR036	71	0.20628	0.13274	0.77511	-0.05985	0.32417	0.05320	0.21264	-0.25373	
VAR037	26	-0.00673	0.09484	0.84240	0.17928	0.06430	0.15211	-0.09554	0.07336	
VAR038	15	0.50097	0.28038	0.47653	0.27125	0.28228	0.30872	-0.06423	0.13578	
VAR039	23	0.25013	0.53460	0.54838	0.20414	0.09408	0.13119	0.28055	-0.06796	
VAR040	20	0.02538	0.18816	0.15440	0.84553	0.04057	0.16432	-0.02706	0.02852	
VAR041	54	0.32485	0.24816	-0.05134	0.72011	0.03302	0.41131	0.13971	-0.19505	
VAR042	48	0.11609	-0.16580	0.37555	0.66277	-0.05241	-0.03704	0.24588	0.17297	
VAR043	7	0.14373	0.49407	0.05977	0.71190	0.16515	-0.07483	0.27970	-0.07442	

+ To be classified in the S_2 archetype, firms required a high loading on both Factor 7 and either Factor 1 or 2.

R Indicates a hybrid of S_{1B}

Indicates a hybrid of S_{1A} – Turnaround Situations – which required high loadings on Factors 6 and 2.

FILE UNSUCCES (CREATION DATE = 01/09/76)

APPENDIX V-B

VARIMAX ROTATED FACTOR MATRIX UNSUCCESSFUL SUBSAMPLE N of 37 (from total sample of 81)

Underlined loadings indicate the factor-archetype into which firm was classified.

	Firm #	F2 FACTOR 1	F4 FACTOR 2	F3 FACTOR 3	F1 FACTOR 4	OUT FACTOR 5	OUT FACTOR 6	FACTOR 7	FACTOR 8
VAR001	69	0.11634	0.26203	0.42323	0.52619	0.08940	0.00764	0.17169	-0.27234
VAR002	32	0.18969	0.54510	0.27706	0.50386 *	0.07327	-0.21163	0.14872	0.00874
VAR003	33	0.03688	0.18200	0.14113	0.80803	0.22296	0.25414	-0.11258	-0.08747
VAR004	2	-0.04029	0.13521	0.12315	0.80864	0.30475	-0.06496	0.15018	0.01483
VAR005	52	0.10083	0.21938	0.38063	0.75183	0.23954	0.20516	-0.19873	0.09890
VAR006	29	0.09195	0.38245	0.07231	0.77927	0.01605	-0.04354	0.35183	-0.07218
VAR007	42	-0.08236	0.46209	0.24490	0.65870	0.20613	0.14852	0.11349	-0.09216
VAR008	28	0.59140	0.25705	0.20577	0.18035	0.53658	-0.18046	0.28082	0.12363
VAR009	81	0.84066	0.15148	0.10183	0.06897	0.21381	0.08501	0.02178	-0.00501
VAR010	39	0.54184 *	0.03775	0.04054	-0.03724	-0.05500	0.61206	0.39557	0.17474
VAR011	59	0.17202	0.40749	0.49136	0.32054	0.51763	-0.15703	0.23443	-0.03145
VAR012	36	0.62171	-0.09920	0.31174	0.31815	0.28411	0.07540	0.22843	0.22647
VAR013	25	0.70729	-0.08588	0.11069	0.24386	0.32141	0.20505	0.45613	-0.01048
VAR014	62	0.62294	0.16186	0.16200	-0.31798	0.05067	0.12084	0.02013	-0.10181
VAR015	38	0.83012	-0.02258	0.14708	0.12645	-0.13678	0.07470	-0.16974	0.00064
VAR016	72	0.38888	0.15902	0.20612	0.37187	0.59599	0.01114	0.00710	-0.03736
VAR017	14	0.76777	0.19532	0.10689	-0.01723	-0.02549	-0.09719	-0.00343	0.20150
VAR018	44	0.06495	-0.01383	0.87989	0.24088	0.12368	-0.16092	0.26115	0.10880
VAR019	37	-0.03903	0.28690	0.46813	0.32687	0.49121	0.01321	0.07790	-0.07286
VAR020	41	0.14425	0.09048	0.60259	-0.09459	0.01866	0.25873	-0.15672	0.39600
VAR021	50	0.27209	-0.00562	0.76091	0.02770	0.15456	0.04631	-0.15111	0.04219
VAR022	64	0.36155	0.17574	0.65886	0.26418	-0.16590	0.31902	0.13223	-0.09575
VAR023	53 *	0.46168	-0.22277	0.69042	0.14654	-0.06545	-0.17873	0.00824	-0.26901
VAR024	51	-0.01811	0.28810	-0.10716	0.57046	0.62408	0.25704	-0.11276	0.10585
VAR025	63	0.07187	0.54500	-0.21176	0.43217	0.56979	-0.04651	0.01530	-0.13609
VAR026	74	-0.02416	0.80846	-0.03396	0.42660	0.20113	0.09081	0.09540	0.19786
VAR027	61	0.39673	0.60071	0.07656	0.31698	0.30219	0.22977	-0.11963	-0.05419
VAR028	46	-0.08441	0.68473	0.02378	0.21490	-0.12181	0.30360	-0.11803	-0.01516
VAR029	30	0.31841	0.63608	0.17182	0.04206	0.24916	0.16394	0.21523	-0.09597
VAR030	73	0.18414	0.82212	-0.02321	0.23585	0.10613	-0.12465	-0.14148	0.02317
VAR031	56	0.03798	0.59243	-0.00577	0.49115	0.33343	0.09030	0.15883	0.12927
VAR032	55	0.29817	0.23171	-0.07101	0.76679	0.12392	-0.06092	-0.03282	0.21091
VAR033	43	0.57847	0.08708	0.10587	0.03128	-0.09257	0.38503	0.10743	0.67963
VAR034	68	0.49837	0.13757	0.34841	0.27809	0.44806	0.18772	-0.17276	-0.09308
VAR035	34	0.08059	0.09655	0.01077	0.08244	0.05828	0.63653	-0.03944	0.06488
VAR036	53	-0.07091	0.11122	0.43429	0.75670	-0.04062	0.14259	-0.15808	-0.03419
VAR037	35	0.23783	0.43371	0.16256	0.61735	0.15004	-0.16892	0.02630	0.08705

- - - - - Indicates discrepancy in classification versus Appendix II-B due to the increase in sample size from 52 to 81.

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