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**ENTREPRENEURIAL LEADERSHIP:
A DELPHI STUDY OF NEW VENTURE SUCCESS FACTORS**

by

Alan J. Grant

**A dissertation submitted in partial fulfillment
of the requirements for the degree of**

Doctor of Education

University of San Diego

1992

Dissertation Committee

**Susan M. Zgliczynski, Ph.D., Director
William P. Foster, Ed.D.
Daryl G. Mitton, Ph.D**

ABSTRACT

ENTREPRENEURIAL LEADERSHIP:

A DELPHI STUDY OF NEW VENTURE SUCCESS FACTORS

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Director: Susan M. Zgliczynski, Ph.D.

Over a million new U. S. enterprises are formed each year. Virtually all the country's net new jobs come from these and other new ventures. Yet 60% of new ventures still fail within two years. The purpose of this study was to isolate the most dominant leadership success characteristics of a typical early stage, high-growth potential venture. Thus discovered, these factors could properly focus the enterprise's tactics on improving its probability of fulfilling its original success related objectives as well as enhancing new job creation and in turn, economic wealth.

A Delphi Technique research methodology was employed. The advice and counsel of 25 senior U. S. venture capitalists was obtained by their participation on the Delphi expert panel. The subject base was industry focused through survey sponsorship by the American Electronics Association. Three Delphi rounds were used to obtain a consensus on the most important Entrepreneurial Leadership success factors.

The 18 most dominant factors fell into three major clusters. To better understand the findings of this study, *success enhancement* was metaphorically associated with a *troika*, a Russian

vehicle pulled by three horses of equal strength. Each horse represents a cluster of the success factors. The troika is being driven towards success by the *visions and dreams* of the founding entrepreneurs.

The first cluster, THE LEAD ENTREPRENEUR, was highlighted by the panel's opinion that the venture leader must have a realistic, rather than egotistic, self concept and be intellectually honest in all dealings. Setting the venture's pace and possessing courage were additional factors.

The next cluster, THE VENTURE TEAM, focused on the venture's internal environment. Factors included creating and maintaining an ethical business environment as well as stressing the importance of the lead entrepreneur and the venture team collaboratively blending their capabilities.

The third cluster, THE EXTERNAL INFLUENCES, dealt with the venture team's relationship with its outside environment. The most important factor was the team's sensitivity to satisfying the needs of the venture's constituents with equal priorities to those of their own.

A new definition of Entrepreneurial Leadership was proposed. Further investigations of other entrepreneurial leadership factors were suggested.

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DEDICATION

To my wife and best friend, Margaret Stewart Grant, whose love, encouragement, understanding and patience have never waived over the last forty-six years.

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ENTREPRENEURIAL LEADERSHIP: A DELPHI STUDY OF NEW VENTURE SUCCESS FACTORS

CHAPTER I

INTRODUCTION

This study involved a critical investigation of the nature of new business venture leadership. The principal research objective was to identify the most dominant venture team activities which had led to an enterprise's success. The identification of these characteristics (*entrepreneurial leadership success factors*) was developed through the advice and counsel of a panel of senior venture capital industry leaders. They agreed that the venture leadership's implementation of these factors, should increase the probability of successful achievement of the organization's goals.

Hisrich (1986) presented an historical overview of the term *entrepreneur*. He pointed out that it was coined by the French in the Middle Ages and meant *between-taker* or *go-between*. At that time, an entrepreneur was identified as a person in charge of a large scale production project. Later, in the seventeenth century, the term was economically attached to persons bearing the risk of profit or loss on contracts with the government.

Other milestones, which have led to contemporary concepts of entrepreneurship, and their principal contributors are outlined by Hisrich (p. 96). Some of these highlights are:

- Richard Cantillon's observation that a person taking risks is different from the one supplying capital (1725).
- Jean Baptiste Say's concept that the profits of the entrepreneur are separate from the profits of capital (1803).
- Joseph Schumpeter's tenet that an entrepreneur is an innovator who develops untried technology (1934).
- Peter Drucker's seminal definition that an entrepreneur is someone who maximizes opportunity (1964).

Although the French first formulated the entrepreneurship concept, every country in the world now endorses the exceedingly large impact on the nation's economy arising from successful new business ventures. Thus, it appeared that the isolation of these entrepreneurial leadership success factors should have a dramatic economic impact once they are accepted and implemented by new venture leaders and their teams.

Over one million new U. S. businesses are started each year. Approximately 600,000 of these new enterprises will fail within two years and 900,000 within three years, according to the nation's major business credit watching organization, Dun & Bradstreet Corporation (1988). They chronicled 42 failure causes ranging from natural disasters to personal incompetence.

Thus, each new venture founder faces a high risk of early failure. It should be possible to identify, to these founders, factors which could enhance their probability of success by studying not only the causes of failures but also the causes of failure avoidance.

Once identified, the principal factors which comprise failure avoidance could be used as guidelines in minimizing new venture failure rates. These actions would not only result in huge economic gains but also would stabilize and increase employment.

The entrepreneurial leadership success factors presented in this study have been developed through a qualitative research process, the Delphi Technique. This method was developed to handle the type of subjective social science research which could not adequately be performed by the classical research methodologies used for handling physical science research. Quantitative research is normally performed under a set of rules called the *scientific paradigm*.

The Delphi Technique falls under another set of rules, the *naturalistic paradigm*. Its use overcomes the quantitative restrictions required by the scientific paradigm. The naturalistic paradigm employs an iterative *emergent* process. It better accommodates and expands the boundaries of the type of qualitative research required by this study (Lincoln & Guba, 1985).

The fact that qualitative research seeks truth and quantitative research validates inferences mitigates against the sole use of a quantitative methodology to develop and explain entrepreneurial leadership, which is basically a social science phenomenon.

Statement of the Issue

Although most enterprises develop and produce a variety of different products and services, there seems to be some common leadership factors which differentiate the most successful enterprises from those which are marginally successful or have failed. Factors such as prior experience, group values and functional skill specialties seemed to play a strong role (Cooper, Dunkelberg, et al., 1988).

It also appeared that the achievement of success, in some cases, did not come about through the sole action of just one entrepreneurial leader, but through the integrated actions of the management team. Even though it is very common to perceive the success of an institution as attributable to the outstanding leadership of one individual, it often appeared that there was one or more other participants whose contributions to the enterprise were equal or greater (Timmons, 1990a).

The quality of the management team and other entrepreneurial success factors which appear in the literature, have been reviewed in order to isolate the most dominant factors influencing entrepreneurial leadership success. Some of these other factors included the start-up teams' previous experiences, both on an individual and group basis, and their ability to effectively handle both the inside and outside environmental constraints on the enterprise (Timmons, 1990b).

The focus of this research was to isolate the most dominant entrepreneurial leadership success factors by obtaining a consensus

of the opinions of experts who have financed and monitored dozens of high growth potential new ventures.

Purpose of the Study

Successful entrepreneurship has tremendous personal and economic benefits. Because of this, there has been a sharp increase in the research associated with the new venture creation process. New theories and frameworks are being studied which could be used to increase the probability of entrepreneurial success.

The dominant success factors identified through this study should not only suggest the direction for future research but could be extrapolated to serve as a guide for all those who finance and back new ventures throughout the rest of the world. The opinions of recognized experts in the fields of new venture finance and business administration have played a principal role in determining the most dominant success factors.

An emergent inquiry provided a better basis for research on phenomena whose qualitative nature escapes the scientific paradigm's dependence on rational and structured models such as those of inferential statistics (Lincoln & Guba, 1985). A similar call threaded through the research and literature in entrepreneurship, that is, the need to identify new paradigms (Stevenson & Jarillo, 1990a). Researchers in these fields seek the discovery of paradigms which can ground theory to reality. It is believed that this study, to develop the dominant entrepreneurial leadership success factors, may generate one of the sets of rules they seek.

Thus, the research methodology selected for this study was qualitative, the Delphi Technique. It employed an emergent iterative questionnaire process. A panel of experts in the area of this research were repeatedly queried on the importance of the various factors which they believe influence success.

Three rounds of restructured questionnaires were sent to each expert in order to arrive at a consensus of the panel's opinions on the major success factors. The expert panel for this Delphi study was composed of 25 general partners (senior experienced business managers) from firms throughout the nation's venture capital industry.

This industry is part of the business financing community. It concentrates on the financing and guidance of new enterprises. On the average, each venture capitalist continuously monitors the growth of six to ten enterprises (Rhunka, 1992). As such, the consensus of the complete panel reflected a sample of new ventures much larger than the number of experts in the panel.

This study had the following purposes:

1. To contribute to a better understanding of the entrepreneurial leadership process.
2. To aid new venture financing entities to improve on the selection of more successful ventures for their portfolios.
3. To help new venture founders be aware of the factors needed for their enterprises to succeed.

4. To suggest areas for continued research of the entrepreneurial leadership economic success factors and their possible extrapolation to other fields of human leadership.

Research Questions

The research questions were carefully formulated not only to best satisfy the objectives of this study, but to encompass current literature opinions. In order to avoid obtaining data on entrepreneurial leadership success from a subject base which normally contains some high potentially biased subjects, that is, successful entrepreneurs, 87 experienced senior Venture Capitalists were solicited to serve as members of an anonymous Expert Panel. Twenty nine venture capitalists responded to the first round survey; 27 of these to the second round, and 25 of them stayed the course through the third round.

The research questions used as guidelines to implement the process of satisfying this study's research purposes were:

1. Is the most effective entrepreneurial leadership manifested through the dominance of the entrepreneurial leader, a dominant team, or both? As a corollary, "Is leader effectiveness related more to an attitude of invincibility or to one of realism?"
2. To what extent does the previous successes or failures of the leadership group impact the success of a new venture?

3. How important to success is the venture's adherence to ethical behavioral practices?
4. What should be the optimum sense of timing and priorities of the entrepreneur and the others in the venture team? Is it better to have the team focus on meeting short-term goals, thus modifying their original long-term visions? Is it better for them to be proactive or reactive in meeting their commitments?
5. What role towards enhancing new venture success should outside mentors play, if any?
6. Should the entrepreneurial team's main focus be on internally maximizing the organization's success or should the needs of the other constituencies, which the organization serve, temper this focus?
7. What other research questions, which may arise during the study from the literature review and the panel's responses to the open-ended questions, should be answered?
8. Can the entrepreneurial leadership success factors, identified in this study, be sorted into logical clusters to form the basis for developing an entrepreneurial leadership paradigm?

These research questions were carefully formulated not only to best satisfy the objectives of this study, but to address current assumptions in the literature. Obtaining data on entrepreneurial leadership success from a subject base which normally contains some potentially biased subjects, that is entrepreneurs globalizing the causes of their own success, was avoided. Instead, 25 senior

venture capitalists who had invested in, mentored and monitored dozens of these enterprises, agreed to serve on an anonymous *expert panel*.

The panelist's opinions were iteratively sampled using the Delphi's emergent research processes. In addition, the panel was asked to focus their opinions on companies which had achieved stage II (survival), were just entering stage III-G (growth), and envisioned stage IV (take off). The stages are those defined by Churchill and Lewis, (1983, pp. 30-39). Stage III-G (growth) was interpreted, in this research, as applying to a relatively new electronics venture which had shown some growth, but would soon deplete its first round of venture capital financing. As such, the enterprise was looking to the venture capital industry to provide a larger amount of capital which the venture needed to finance its forecasted growth.

The subject base was industry-focused through survey sponsorship by the American Electronics Association. Three Delphi rounds were used to obtain a panel consensus on the most important leadership factors which the members believed would enhance success. Over 75 factors were isolated through the literature review. A great number of them were conflicting. For example, Does too much prior experience inhibit the new venture team from creating their own culture and procedures or does extensive prior individual and team experiences make a major contribution to new venture success?

Eleven dominant pairs of these conflicting factor positions were selected to implement this study's research questions and were included in the first survey instrument. This approach gave the

expert panel an initial set of *bipolar* opinion factors which, through a consensus process, they would eventually rank in importance when the three Delphi Technique rounds were completed.

In summary, entrepreneurial leadership success factors suggested by the research questions and the literature were included in the first round instrument of this Delphi study. The panelists' responses to open-ended questions from each round were added to each subsequent instrument in order to assure that these additional factors, which the individual experts thought should supplement those of the first round, were included in the study.

The experts also commented on the relevance of each question in each round. Questions considered consistently irrelevant were dropped from subsequent rounds and the study.

Significance of the Study

Over a million new U. S. enterprises were formed each year during the last decade. Virtually all of the country's net new jobs came from these and other newly formed ventures. During the first eight years of that decade, the top 10% of all these new companies created 96% of the 17 million new jobs while the Fortune 500 companies eliminated a net 3.1 million people from their payrolls. Yet 60% of new ventures fail within two years (Timmons, 1990b).

Thus, each new venture founder faces the threat of early failure. It should be possible to identify to these founders, as well as to new leaders of social or political causes, that their success could be enhanced by adding additional team members who possess

complementary attitudes and skills. This failure avoidance action should represent a huge economic gain for this country as well as others in stabilizing and increasing employment.

The entrepreneurial leadership success factors should serve to supplement the quantitative restrictions of the scientific paradigm and expand the boundaries between itself and other qualitative dominant success factors. The study's goal was inspired by a challenge to discover hidden dominant success factors by looking critically at "What is not?" (Smith, 1982).

Definition of Terms

Delphi Technique: A method for structuring a group communication process so that it is effective in allowing the individuals, as a whole, to deal with a complex problem (Linstone & Turoff, 1975).

This technique has also been described as an anonymous debate. It is a frequently employed forecasting and research procedure used to obtain an iterative consensus of opinion from a panel of experts.

Between question rounds, the panel members are informed of the group's previous distribution of opinions (Linstone, 1978). Usually it takes three rounds to obtain stabilization of the questions. Analysis of responses to later rounds indicates consensus and leads to trending and/or forecasting conclusions.

Entrepreneurship: An overall definition for this process is the continuous opportunity-driven action, by an enterprise, using an unique combination of resources and information in an attempt to create value or advantage (Mitton, 1990).

Expert Panel: The participants of the Delphi study were selected because of their recognized expertise in observing and monitoring new venture leadership teams. In this research, these experts were selected from those senior general partners of venture capital firms who have funded and directed many new electronic ventures.

General Partner: An individual working for a Limited Partnership or an officer of an Investment Corporation, whose activities, with respect to new ventures, entail deciding on which enterprise to invest and when and how much to invest. The general partner(s) monitor(s) the progress of the investment, periodically reporting to all the partners and at the same time developing and implementing strategies to provide a favorable return on investment to the partnership.

Leadership: According to James MacGregor Burns (1978), "The reciprocal process of mobilizing, by persons with certain motives and values, various economic, political and other resources, in a context of competition and conflict, in order to realize goals independently or mutually held by both leaders and followers" (p. 425). In refining this definition, Burns added, "The ultimate test of practical leadership is the realization of intended, real change that meets people's enduring needs" (p.461).

Mentor: An individual, who by education, skill and experience, serves as a trusted counselor to an enterprise. The role is similar to that of a coach or tutor.

Paradigm: Essentially, an example or set of rules. A framework or way of seeing which provides the boundaries for investigation into the area of concern for defining research questions and their acceptable answers (Foster, 1986a). A systematic statement of the basic assumptions, concepts and propositions employed by a school of analysis (Merton, 1968).

Success Factor: The attribute or characteristic exhibited by an individual entrepreneur or a venture team which, in the consensus opinion of the Delphi expert panel, enhanced the achievement of the enterprise's long-term goals.

Transactional Leadership: This term encompasses the day-by-day work of managers. Transactional leadership normally involves those activities which cover the administrative efforts of the enterprise, and the setting and enforcement of rules.

Transformational Leadership: This is the creative and visionary part of the leadership process (Burns, 1978). It represented the major theme of Burns' classic work, Leadership. Later, this concept was more concisely stated as "Doing the right thing" (Bennis and Nanus, 1985). At the same time, those authors condensed transactional leadership to "Doing things right."

Since a universally accepted definition of leadership did not appear in the literature, the definition elements previously stated must be tempered by taking into account some contradictory

definition elements. The main leadership theses included the following factors:

1. A strong influence relationship was reflected. It was multi-directional and non-coercive (Rost, 1991).
2. Its participants were both leaders and followers (Timmons, 1990a).
3. Multiple intended changes were included in the definition. Rost (1991), as part of his definition, contended that these changes need not be realized, but Burns (1978) argued that these changes must meet the participant's enduring needs.
4. Mutual purposes were forged into common purposes to reflect a shared organizational vision (Rost, 1991).
5. According to Foster (1986b), the educative part of the leadership process was vital to any definition of leadership. Followers were developed by leaders to become leaders. They learned from taking and observing risk environments.
6. Ethical behavior was indigenous to any definition of transformational leadership (Foster, 1986b). Human qualities reflected by democratic and morally lifting processes buoyed up this form of leadership. Mutual trust was an important element (Kousnes & Posner, 1985). The virtue ethic described by MacIntyre (1984) and the Civic Republicanism tenets of Sullivan (1982) fleshed out the dimensions of this ethical factor.

Venture Capital Industry: A unique segment of business financing composed of both Limited Partnerships and Corporations. Monies, under their trust, are judiciously awarded to new and other

ventures which appear to have the potential for higher than average returns on their investments.

Venture Capitalists: Individuals who by their experiences are capable of successfully investing and monitoring investments in new and ongoing enterprises in order to assure a high return to their investors. They are often general partners of limited investment partnerships and/or officers of investment corporations. A number of wealthy venture capitalists act as private investors of their own funds. They are referred to in the industry as *angels*.

Limitations and Assumptions

There are four areas of concern which might impact the validity and reliability of this study: the *true* experience of the panelists, the electronics industry being representative of all industries, the shortcomings of the Delphi Technique and possible researcher bias in shaping the conclusions.

The first area of concern involved the difference between the perceived experiences of the experts chosen for the panel and that which they really have. All of them have been members of a venture capital enterprise involved in monitoring perhaps a dozen new ventures in the last few years. Although it is assumed that each selected expert has common new venture monitoring experiences, variance in the responsibilities assigned may vary from one venture capital partnership to another.

The second area involved how generalizable the experts' experiences are with respect to the electronics industry. One of the

focusing rules of this study was that the selected panel experts would be from firms who were members of the American Electronics Association and/or who had large portfolios in that industry. But most of these firms have partners who concentrate on other industries besides electronics. The experts chosen for this study may reflect experiences gained from monitoring all industries in their portfolios.

Therefore, focusing on the success factors of the entrepreneurial leadership of electronics companies may not be extrapolative to other industries. For example, in the biotechnology industry a founder, who is often a medical specialist, may be the titular head of the enterprise but might not be the real entrepreneurial leader. As such, the founder may be delegated very little decision making authority.

The third area involved the use of the Delphi Technique. It does provides an advantage over other qualitative methodologies, namely the anonymity of the panelists which helps to overcomes a number of potential psychological barriers arising from face-to-face committee discussions. Each expert's views are stated without bias or coercion. As a limitation, the validity of the results may be influenced by the possible marginal capabilities and competencies of some of the experts.

Extreme care has been taken, in the processing of the Delphi data, to minimize any possible researcher bias in the analysis of these data. For the last twenty years, the researcher has been active in new venture start-ups, business turnarounds, and in the management and financing of these entities.

During that period he served on the adjunct faculty of Colleges of Business Administration instructing courses in Small Business, New Venture Creation and Venture Financing.

In order to maintain objectivity through the research process, three very experienced venture capitalists agreed to serve on a *pilot* expert panel. The design of each Delphi survey instrument and the analysis of the data from each Delphi iteration were carefully and continuously reviewed by each member of the pilot panel as well as by the members of the dissertation committee.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this study was to isolate those dominant factors of the leadership of entrepreneurial ventures which have most contributed to their success. Because of the empirical nature of this task, an emergent methodology, similar to that described by Lincoln and Guba (1985), appeared in order. The responses to this study's research questions required exploration into two disciplines which have developed independently, but which were based on similar academic disciplines, the fields of entrepreneurship and leadership.

Entrepreneurship literature has been principally authored by members of the faculties of the management departments of schools of business administration. As such, they focussed on economic institutions. Leadership literature was generated from many fields.

Early researchers in both disciplines concentrated their efforts on the traits and characteristics of the individual entrepreneur and/or leader in order to find a basis for replicating success. On the other hand, these phenomena must be observed from the viewpoint of group dynamics (Timmons, 1990b). He identified the need for further research on the nature of not only the inspired entrepreneur but also that of the founding team.

Pragmatically, emphasis on individual trait and characteristics were ineffective in fully describing the Entrepreneurship and Leadership phenomenon since it has been generally agreed that each of these terms represent group processes (Burns, 1978; Timmons, 1990b). The reason for the original shortcomings in defining these phenomena was believed to have been researchers' adherence to the use of the scientific paradigm, a set of rules requiring quantification of all research data. They missed the importance of the qualitative elements of these processes (Harman, 1988; Bygrave, 1990).

Objectives and Research Sources

The major objectives of the literature review were twofold:

1. To isolate the most frequently researched entrepreneurial leadership factors so that they can be included in the first survey instrument of the Delphi process and thus be verified.
2. To become cognizant of collateral studies whose findings may be contributory to the completeness of the dominant entrepreneurial leadership success factors arising from the study.

This research focused on the nature of the leadership success factors of new venture teams. Research sources which contributed to the development of the entrepreneurial success factors were found in the literature of many disciplines.

The literature searches involved two major steps. The first was that of reviewing the principal research journals, dissertations and other scholarly works in the fields of Entrepreneurship, Leadership, and Organizational Theory as well as the descriptive statistic sources which record and analyze business successes and failures.

The major journals reviewed for this study are identified in Appendix A. They included refereed publications from the Babson College Research conferences, the Wharton School of the University of Pennsylvania, Baylor University and the Harvard Business School. All of these publications served as rich data sources.

The second facet in the literature review process was that of tracing the success factors, when so isolated, through the individual author's references and bibliographies in order to reinforce the importance of the particular factor.

Building on Previous Research and Methodology

Contemporary research in both the fields of entrepreneurship and leadership called for new paradigms to better describe and understand both these phenomena. Harman (1988) challenged all to look beyond static concepts, such as the restrictions in the use of the scientific paradigm, when one explores the leadership elements involved in organization change. In a similar vein, Stevenson and Harmeling (1990b) of the Harvard Business School, suggested that the research efforts in the field of entrepreneurship adhere to a

chaotic theory, which should include qualitative factors, in order to better understand the entrepreneurial process.

Contemporary studies of entrepreneurship have borrowed the qualitative research methods used by anthropologists, principally ethnology (Smircich, 1983). Smircich suggested the use of the discipline of recreating a culture from analysis of artifacts. A similar research process could be applied to any culture, entrepreneurship being one of them. Other contemporary qualitative methods explored were phenomenology, case studies, biographies and histories. These techniques replaced or augmented research based on the old scientific paradigm disciplines. The advocates of this paradigm believed that quantification was the only basis for true research.

When one accepts the thesis that qualitative research seeks truth and quantitative research validates inferences, then the sole use of a quantitative methodology to develop and explain entrepreneurial leadership, a basically social science phenomenon, is mitigated.

Entrepreneurship Literature Review

Entrepreneurship research in the United States has a major concentration in the eastern part of the United States, at Babson College (with support of the faculty of the Harvard Business School) and at the University of Pennsylvania's Wharton School.

Most authors agree on the milestones contained in Hisrich's (1986) presentation of an historical perspective of the term

entrepreneur. He indicates that the term was coined by the French in the Middle Ages and meant *between-taker* or *go-between*. At that time, an entrepreneur was identified as a person in charge of a large scale production project. Later, in the seventeenth century, the term was economically attached to persons bearing the risk of profit or loss on contracts with the government.

Other milestones leading to the modern day concepts of entrepreneurship were highlighted (Hisrich, 1985, p. 96):

1. Richard Cantillon's observation that a person taking risks was different from the one supplying capital (1725).
2. Jean Baptiste Say's concept that the profits of the entrepreneur were separate from the profits of capital (1803).
3. Joseph Schumpeter's tenet that an entrepreneur was an innovator who develops untried technology (1934).
4. Peter Drucker's classic observation that an entrepreneur was someone who maximizes opportunity (1964).

Entrepreneurship is a term which incorporates the findings of studies in many fields, principally that of economics and business administration. A number of authors derived definitions of entrepreneurship through trait definitions of the entrepreneur. For example, Mitton (1989) summarized that entrepreneurship is the practice of unique individuals who see the *big picture*, and have the spirit and capacity to drive through short-term events in order to fulfill their dreams.

He identified the following patterns of conduct:

1. They see the *big picture* perspective.
2. They spot unique opportunities.
3. They make a total commitment to their cause.
4. They see a need for total control.
5. They have a utilitarian view of what's right.
6. They welcome uncertainty.
7. They use contacts and connections.
8. They embrace competence.
9. They possess certain know-how.

On the other hand, Timmons (1990a) presented a more holistic definition of Entrepreneurship:

The ability to create and build something from nothing. It is initiating, doing, achieving, and building an enterprise or organization, rather than just watching, analyzing or describing one.

It is the knack for sensing an opportunity where others see chaos, contradiction and confusion. It is the ability to build a founding team to complement your own skills and talents. It is the know-how to find, marshal and control resources (often owned by others) and to make sure you don't run out of money when you need it the most.

Finally, it is a willingness to take calculated risks, both personal and financial and then do everything possible to get the odds in your favor (p.1).

Stevenson and Jarillo (1990a) proposed a more concise definition, "An entrepreneurial organization is that which pursues opportunity regardless of resources currently controlled" (p.23). It should be kept in mind that for this study, the term *entrepreneur* was used as a modifier, that is, to focus on a particular type of leadership, entrepreneurial leadership.

Leadership Literature Review

One of the principal disciplines related to the isolation of the dominant entrepreneurial leadership factors was that of leadership. Burns' seminal work, Leadership (1978), established a bench mark for the study of this process. The concepts contained therein were used as the major reference on leadership in this study. Burns segmented the meaning of the term *Leadership* by considering two separate but overlapping subordinate definitions: transactional leadership and transformational leadership. The transactional leadership definition dealt with the administrative requirements of a leader. Transformational leadership encompassed the visionary content of the phenomenon.

Transactional leadership was identified as including those activities carried out in a day-to-day managerial environment. Bennis and Nanus (1985) clarified this perspective by adding, "Managers are people who do things right and leaders are people who do the right thing" (p.21). They added that the difference between transformational and transactional leadership can be summarized as

activities of vision and judgment, that is, *Effectiveness* versus activities of mastering routines, that is, *Efficiency* .

Burns (1978) gave further precision to the term *transformational Leadership*. He characterized it as, "The reciprocal process of mobilizing, by persons with certain motives and values, various economic, political and other resources, in a context of competition and conflict, in order to realize goals independently or mutually held by both leaders and followers" (p. 425). Burn's summary definition of transformational leadership was, "The ultimate test of practical leadership is the realization of intended, real change that meets people's enduring needs" (p.461).

Foster (1986a) took a more critical look at leadership by pointing out that, "Many models of leadership make the mistake of seeing it as a property inherent to individuals rather than as an act performed within a social context." He indicated that since leadership involved the probing of language structures and the unmasking of distortions, it must be critically educative. In this sense, leadership can not only abide with the conditions in which we live, it must decide how to change them. He summed up his thoughts by stating, "Leadership is the process of transforming and empowering" (p.188).

Zaleznick (1990) reinforced Foster's position by observing that leaders tend to be twice-born personalities. They tended to work in organizations but never really belonged to them. Their sense of who they are required them to search out opportunities for change in order to profoundly alter human, economic and political relationships.

Recent studies on leadership place Burn's definitions in a somewhat historic light. Rost's (1991) comprehensive study of this subject argued that leadership was "good management" and definitions such as Burn's focused on a century old industrial revolution culture which did not include societal changes which will be in effect for the twenty first century. He treated leadership, not as a conclusive process, but as a visionary phenomenon.

Rost stated that the definition of leadership, for the next century, must be based on post-industrial revolution factors. The definition should include the futuristic thoughts of such visionaries as Harman, (1979) and Ferguson (1980). Until the new paradigm achieves more focus, he believed that the following definition holds, "Leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes" (1991, p. 102).

Organizational Theory Literature Review

A great deal of research which impacts on the development of the dominant factors contributing to entrepreneurial leadership success comes from studies in the fields of Organizational Theory and Organization Change. Modern contingency theorists, like Lawrence and Lorsch (1967), suggested that organizational structure and managerial style are affected by the outside environment of the enterprise and as such any organizational definition is contingent on these outside influences. This concept has all but replaced the

classic scientific management works of Frederick W. Taylor (1911). He was an early proponent of work measurements and job standards.

The behavioral scientists, Mayo and Roethlisberger (1939) initiated a changeover from industry's emphasis on maximizing production output by the consideration of the worker as an automaton. They showed that attention to the human qualities of the worker and his environment are a major factor in not only increasing productivity, but also in achieving long-term enterprise stability.

Likert's (1961) observations regarding organization *linking-pin* phenomenon provided some insight on the dual role a leader must play in a hierarchical setting. He indicated that in any hierarchy a manager's duties are to lead his subordinates. But, on the other hand, this manager, in his accountability role, was a subordinate, along with his peer managers, to their superior in the hierarchy. In this sense, the manager belonged to two groups. Likert indicated that this manager's most proper role is that of a *linking pin* between the group he supervised and the superior group in which he was a subordinate member. This concept reinforced the leader/follower educative factor associated with leadership

Weick's (1976) work on *loosely-coupled* systems served as a basis for better understanding the relationship of the new venture founding team to its environments. He indicated that the need for absolute hierarchical control, normally the nature of an entrepreneurial founder, led to the build up of a large corporate staffs. This, in turn, stymied effective performance. Maximum delegation of authority to each level of responsibility with permissive control reporting enhanced the effectiveness of each

subordinate manager and better benefited the corporation as a whole. The latter organization control form was what Weick described as *loosely coupled*. Weick's work reinforced the empowerment and trust concepts associated with leadership.

Some other concepts which provided great focus value were those which used metaphors and critical theory. A particular emphasis was placed on some of organization theory's principal metaphors, that is, the organization as a machine, as an organism, as a brain, as a culture, and so forth (Morgan, 1986). The use of metaphors helps one better understand phenomena such as leadership, entrepreneurship and organizational change.

Morgan (1986) described metaphorical association as "providing a way of thinking, rather than using mechanistic application of a small set of clearly defined analytical frameworks to investigate organizations" (p.16). As an example, the term, *entrepreneurial leadership* might be best understood with reference to Morgan's brain metaphor. Extensive documentation was available describing how one may view one's environment differently through the dominance of the left or right hemisphere of one's brain (Mintzberg, 1976). The brain metaphor appeared to open a new avenue of research.

Mintzberg (1976) made a strong case for relating the performance of visionary managers and that of effective planners to the respective brain hemisphere which controls each type of these activities. He indicated that individuals whose activities tend to be right-hemisphere oriented best serve as visionaries. They are extremely adept at establishing and maintaining effective

relationships. On the other hand, individuals with left hemisphere dominance strive for orderliness. They create and adhere to logical process.

Ferguson (1980) had suggested that our current education dilemmas might be traced to education pedagogy based on a left brain hemisphere-only learning process. She suggested that learning may be enhanced by "whole brain knowing" and indicated that, "the greatest learning disability of all may be pattern blindness - the inability to see relationships or detect meaning" (pp. 295-300). These observations might be used as a metaphor for holistically describing the *brain* of a new venture team and the team's possible shortcomings in achieving success.

The Mintzberg (1976) and Ferguson (1980) studies, were important to the isolation of the dominant entrepreneurial leadership success factors. When the new venture was holistically viewed using the brain metaphor, it suggested that a scientist-type entrepreneur (left hemisphere dominant) may not be capable or interested in carrying out all the transactional (right hemisphere dominant) leadership requirements of a new enterprise and thus may fail.

It might also follow that the *brain* of an enterprise may not be complete if the organization does not have a leadership balance from others of the team whose interests are driven by left or right hemisphere dominance. The handling of the nitty-gritty requirements covering the internal activities of the venture may not be the purview of the individual who holds the leadership title. All of the above suggested that the combination of individuals capable of

handling both vision and practice would seem to enhance the probability for entrepreneurial success

Referring to the organization as a brain and the application of other such metaphor enhanced this research. Morgan (1986) observed that,

. . . . the use of metaphor implies *a way of thinking* and a *way of seeing* that pervades how we understand our world generally. For example, research in a wide variety of fields has demonstrated that metaphor exerts a formative influence on science, on our language, and how we think, as well as how we think on a day-to-day basis (pp. 12-13).

Attention to metaphor was a basic consideration in the isolation of the new venture entrepreneurial leadership success factors. This focus led to the metaphorical association of a *troika*, a Russian vehicle pulled by three horses of equal strength, with the study's resulting three clusters of success factors. The troika driver represented the visions and dreams of the entrepreneur.

The literature search also entailed efforts to discover other factors from organizational theory studies, those which would contribute to the development of the questions contained in the initial survey instrument. For this phase of the literature review, the concepts of critical theory as espoused by Foster (1986b) were kept in mind as the search for dominant entrepreneurial leadership factors developed. In particular, the requirement that for leadership to succeed, it must have an educative and ethical basis. Foster (1986b) posited the following, in a section which included

propositions reflecting the need to transform leadership theory into sensuous human activity (pp.18-28):

1. Leadership involves the demystification (penetration) of structure.
2. Leadership involves being politically critical and critically educative.
3. Leadership is conditioned on language.

His critical perspective of leadership was summed up with, "Leadership acts, then, serve as a construct to encapsulate a variety of actions on the part of different and many individuals, but all oriented toward the idea of praxis-obtaining more just conditions for all of us who wish to persevere in fulfilling democratic relationships" (p. 24).

Review of Success Statistics and Causes of Failure

In order to contribute to the development of the question content of the survey instrument, failure statistics and their causes were investigated. This area of research looked towards isolating failure and success modes from the myriad of generalized descriptive statistics published both by the government and private institutions.

One of the most comprehensive failure reports published in the United States is the annual "Business Failure Record" issued by the business credit watching organization, the Dun & Bradstreet Corporation. They maintain a daily record on over nine million businesses.

Their published data on approximately 60,000 businesses which failed during 1988, included observations on the causes of these failures.

The Dun & Bradstreet Corporation categorized their failure data into 42 causes ranging from natural disasters to personal incompetence. Care was taken in using their database, since it didn't include enterprises which voluntarily closed down or which were absorbed by other companies.

An analysis of this database was contributory to the isolation of the dominant entrepreneurial leadership success factors in that these causal factors represent what not to do. The researcher was able to sort the 42 causes of failure into the three success clusters described in Chapter V, the conclusion section of this dissertation. In particular, venture team actions, external environmental influences and the actions of the lead entrepreneur.

Aside from less than one percent of the failures caused by Natural Disasters, 73.4% of the business failures in 1988 were classified as due to Economic Causes and Finance Causes. Economic Causes included external environmental factors which unfavorably impacted the company, such as industry weakness or high interest rates. The Finance Causes included factors arising from actions within the internal environment of the enterprise such as heavy operational expenses or burdensome debt.

The remaining failure classifications concerned the action or lack of action of the business leader. These causal factors included negligence, fraud, lack of experience and poor strategies. It could be argued that the business leader causes were understated because

both economic and financial causes of failures may have been avoided by a competent business manager.

The research literature in the field of entrepreneurship was rich in studies of success and failure modes for ventures as they progress through their stages of growth. For example, Cooper, Dunkleberg, et al. (1988) performed a longitudinal study of the attributes of failure or survival of 2,994 entrepreneurs and their firms.

Vesper's (1990) comprehensive work on new venture success indicated that mentoring of the entrepreneur appeared to be a major contribution to survival of the new venture firm.

The Dominant Literature Based Entrepreneurial Leadership Success Factors

Eighteen major success factors were isolated during the literature review. Although they were all extensively supported by quantitative data, each factor appeared to have opposing viewpoints of how the factor should be interpreted to assure entrepreneurial leadership success.

For example, one dominant factor leading to entrepreneurial success was strongly felt by some researchers to be the entrepreneurial "hero" while equally cogent researchers delineated another factor, the "team", as the hero (Reich, 1987). This phenomenon was reflected among the other 16 factors. As a result nine major bipolar entrepreneurial leadership success factors were constructed as shown in Table 1.

Table 1   Major Literature-Based Entrepreneurial Leadership
Success Factors and Their Bipolar Content

FACTOR	POLE #1	POLE #2
1. Leadership Style	Personal Direction	Consensus Building
2. Prior Experience	Minimal	Extensive
3. Self Concept	Invincibility	Realism
4. Ethical Behavior	Machiavellian	Adherence to a Strong Code of Conduct
5. Gender	Female	Male
6. Vision	Adherence to Short-term Goals	Adherence to Long-term Goals
7. Sense of Priority	Reactive	Proactive
8. Empathy	Organizational Needs Come First	Constituent Needs Come First
9. Mentoring	Team Relies on Their Own Capabilities	Team Seeks the Competencies of Others

Relationships Among the Major Success Factors

Taking into account the bipolar nature of the eighteen most dominant success factors, it was felt that the best presentation of

these entrepreneurial leadership success factors to the expert panel would be to follow the format displayed in Table 1.

The identification of the literature sources and a more detailed description of the nine pairs of success factors follows.

Leadership Style

A strong case was made supporting trait and attribute theories which emphasized and identified the winning characteristics of the founding entrepreneur (Gatewood & Shaver, 1991). This and other studies emphasized that the individual entrepreneur was the major contributor to venture failure or success (Mitton, 1989). Yet the literature seemed also to be dominated by investigations of the entrepreneurial team's impact on success (Gartner, 1989). Thus, the end points of this success factor question range from emphasis on the "hero" type entrepreneur to an effective team or possibly both.

Gatewood and Shaver (1991), using expectancy theory and a characteristic defined as persistence, supported the theories which identified the characteristics of a strong, individualist entrepreneur as the most dominant success factor. In the same vein, Zaleznick (1990) argued that it was a mystique to place a higher premium on the team over the individual.

Robinson, Simpson, et al. (1991) added to the importance of the individual entrepreneur by identifying 75 descriptive statements which could be used as a determinant of "EAO", which he defines as *Entrepreneurial Attitude Orientation*. He clustered these factors under the headings: Behavior, Attitude and Belief.

Another study supported success of ventures led by *Industry Super Stars* (Timmons, 1987). Sapienza (1991) indicated that a strong individual could accelerate success as "Decision by consensus slows down the decision making process" (in press).

Other support factors indicated that a strong leader, as a team builder, was adept at conflict resolution (Timmons, 1990b). Also, the leader was better able to create structure (Gartner, 1990). Major attributes of success are looked on by Dubini (1989) as due to the entrepreneurs' skills and competencies. "Leadership", Dubini contends, "is the capacity to motivate collaborators and learn from past mistakes" (p. 132).

The need for a strong cohesive entrepreneurial team has been predominant in recent literature. One reason could be the growing need to compete in worldwide markets. In addition, the recognition of entrepreneurship as a process rather than the results of one leader's efforts highlighted the team influence. These factors provided a compelling argument in favor of a strong cohesive team's being a major factor in a venture capitalist's funding decision.

The editors of INC magazine studied 27 companies each of whose founders fit trait theory models, and came to the conclusion that, as companies matured, a great majority of hero-type entrepreneurs got thrown off base by the responsibilities of being a Chief Executive Officer. Those who delegated survived. Others got buried (Brokaw, 1991).

On the other hand, the cohesiveness of the management team and its quality were viewed as the strongest success factors (Eisenhardt & Schoonhoven, 1990). Team play was a strong factor

when elected leaders were accepted as legitimate and in turn they didn't force their decisions (Timmons, 1990a).

Time and again, it was indicated that the quality of the entrepreneurial team was more important than that of the entrepreneur (Gartner, 1990). With tongue in cheek, Reich (1987) indicated that, "Most people would rather think that Lee Iacocca saved Chrysler than know the truth" (p. 82).

A democratic style was supported by Timmons (1990b) in that the lead entrepreneur acts as part of the team by exerting influence without formal authority. Also it was suggested that a venture founding team had a better chance for success than a single dominant entrepreneur founder (Gartner, 1989). He also indicated that an exceptionally qualified founding management team with a good product has a lower investment risk than a good management team with an exceptional product.

Gartner added that a founding team whose partners complement each other from the behavioral standpoint of both rational and logical disciplines (for example, rationality - the engineering and finance functions, and relationally, the marketing and human resource functions) stood a better chance to succeed.

Overall, Reich (1987) observed that all employees should become partners in the future. Each member of the enterprise participates in its evolution. He recalls that Horatio Alger wrote in the paradigm of the Industrial Revolution, "Free enterprise is now global and teams rather than individuals will be the *heroes* of the post-industrial paradigm of the twenty-first century" (p. 77).

Another indication of the importance of a multiple leader success phenomenon was enforced by the fact that the factor given the highest weighting in a venture capital funding decision was the effectiveness of the managerial team (White, 1977).

Prior Experience

The Prior Experience factor included various types of background exposures. Some new team members may bring exceptional strength to the management team through their past functional experience, for example, an experienced Chief Financial Officer. On the other hand, the new venture entrepreneur could have successfully or unsuccessfully brought into the venture either a base of what should have been done for success or what should not have been done to avoid failure.

The poles of this success factor were "minimal experience" and "extensive experience." One contention was that a minimally experienced team led to early creation of the new venture's culture (Starr & Bygrave, 1991). They added that prior venture experience may have positive or negative effects on a new venture. Biases and blindspots may arise. Prior success type entrepreneurs may focus on overall performance and not as much on the early ventures need for marketing and product design skills.

Another factor, which Starr and Bygrave designated as a "success syndrome" is associated with the entrepreneurs' conditioned beliefs that his/her one prior success has made him/her invincible.

On the other hand, the literature strongly supported extensive experience as a major factor in new venture success. Timmons (1987) indicated that a strong success contributor was a proven, integrated management team. Key members having worked together before also appeared to be a dominant factor (Sapienza, 1991). Lack of leadership skills and/or experience was one major cause of failure (Timmons, 1990b, p. 530). He added that success was enhanced when key members of the team had had previous new technology experience (1987, pp. 109).

From a different viewpoint, Roure and Keeley (1990) contended that the percentage of essential functions which were filled by the founders at time of founding was directly related to new venture success as well as the extent to which founders had previously worked in the same organizations.

Self Concept

The Self Concept bipolar success factor included the egotist "success syndrome" phenomenon, previously discussed, at one pole and the pragmatist at the other. Both leadership and entrepreneurship when viewed as a process favored the latter pole.

Rock (1987) indicated that although a strong lead entrepreneur is often successful, he may not have known whom to listen to, when to listen and what questions to ask. In another study of 134 companies, indications were that entrepreneurs who were successful believed it came about because of their omnipotence (Chandler & Jansen, 1991).

One example, cited in the literature, was the common belief that Lee Iacocca single-handedly saved the Chrysler Corporation from bankruptcy (Reich, 1987). It's quite likely that Mr. Iacocca believed this too! On the other hand, empathy between members of the venture team and the lead entrepreneur, which creates a helping/coaching and educative environment, was portrayed as a strong success factor (Timmons, 1990b). This was one of the themes which surfaced from interviews of 21 successful entrepreneurs who had been inducted into Babson College's Academy of Successful Entrepreneurs.

Gartner (1989) contended that entrepreneurship is better viewed as a process rather than the domain of a single hero-type entrepreneur. Burris (1978) definition of leadership as a process of mutually accepted goals between leaders and followers favored the realist.

Ethical Behavior

In dealing with the entrepreneur, an investor looks for a continuing over-achieving performance reported faithfully in an aura of trust and ethical behavior. Dees and Starr (1991), in an extremely comprehensive study of the ethics and ethical behavior dilemmas an entrepreneur faces, provided a basis for long-term investigations of these topics. They concluded that adherence to ethical business practices enhances long-term venture success.

The opposite ends of the ethical bipolar factor can range the gamut between Machiavellian (1513) behavior and a modified form of

Rule Ethics behavior. Rachels' (1986) *morality without hubris* appeared to best fit the latter end of the ethical behavior scale. The other side of the ethical behavior coin were well documented by Machiavelli (1513) when he contended that the ends justify the means by which they are achieved. In other words the leader should do whatever is necessary to achieve desired objectives.

Mitton (1990) reinforced this position in a real life business case entitled, Dan Morgan. The principal subject, a sales executive, was able to cunningly achieve his sales goals, enhance his company's profits and discredit his competition. The use of this case provided an excellent learning tool as the process of presentation and subsequent discussion tended to rapidly polarize the members of the class to either end of the ethical behavior spectrum.

In an attempt to blend the precepts of utilitarianism with those of Kant's ideas of justice and individual rights, Rachels (1986) proposed the concept of *morality without hubris*. *Hubris* was defined as exaggerated pride or self confidence. Rachels (1986) contended that morality is first and foremost a matter of consulting reason, that is, better reasonings lead to better moral judgements.

Rachels (1986) also emphasized the need to promote the interests of everyone alike except when individuals show, by their present or past behavior, that they deserve to be treated otherwise. Lastly, he believed that a just society is one in which people can improve themselves through their own actions, not just by luck of birth.

Hills and Narayana (1989) contended that to be successful, all the dealings of an enterprise should reflect integrity and honesty.

In a similar vein, Timmons (1990b) summarized, that for success:

1. The ethical environment of an enterprise should contain a mutual respect for each others opinions; openness to sarcasm or put downs and willingness to listen and change their minds. He added that conflict resolution should be handled in an open manner with expression by all team members; logic and reason prevailing and that mutual trust should be a major attribute of the team members.
2. From an overall venture viewpoint, the team solves problems using a high level of integrity and respect for the needs of the various stakeholders.

Another consequence of adhering to ethical behavioral practices was a minimization of employee turnover (Roure & Keeley, 1990). Bird's research (1988) found that success is also driven by the non-coercive influence of others, both inside and outside the enterprise .

Gender Considerations

The increasing presence of women in the ranks of management and their opportunity to participate in an entrepreneurial society prompted the inclusion of gender as a possible success factor determinant.

To put this factor into perspective, a brief insight into the literature reflecting male/female behavioral characteristics which

affect their roles in an enterprise was in order. Farrel (1988), in his study of male-female dynamics, focused his research on the different behavioral responses of each gender with respect to conflict, fantasy and socialization. His findings were relevant to the problem resolution process in an entrepreneurial environment.

Kohlberg (1976) and later Gilligan (1982), emphasizing the women's viewpoint, addressed the different life stages each gender went through. The male first went through being self-centered and later acquired the empathetic understanding of others. The female was initially care-oriented and then became more introspective. Eventually in their life cycles, both genders merged their care-oriented and justice-type ideals. Gilligan (1982) indicated that females rely more on interpersonal responsibilities as a guide to their sense of morality and are capable of holding their own with respect to the males emphasis on "rights."

Thus, the female placed priority on response and care and the male on justice and rights. Gilligan (1982) contended that the female responded to others while the male looked to reciprocity in his own dealings. Overall, the female saw herself in terms of others while the male saw others in terms of himself.

As more women entered the workplace, equality of opportunity, recognition and growth appeared to be gradually taking place. Otten (1990) discussed some of the diversities which are taking place in society. Startling demographic forecasts, concerning the female in the workplace, have been made for the next century. He indicated that majority of women will be in the workplace, either supporting a single-parent or a two-income household.

This suggested that the gender factor might become more critically important as more women vied for available jobs and hard-to-get hierarchical managerial positions.

Vision and Commitment

Another bipolar conflict arose between those organizations which concentrate on maximizing and meeting short-term goals and those who keep the original growth vision of the enterprise in mind. Bird (1988) found that temporal agility, the ability to shift time horizons from shorter to longer term and vice versa was a hallmark for success.

This success factor was identified with both those ventures which tactically achieve good results over the short term and those which maintained a consistent focus on strategic or long-term objective compliance. This phenomenon might be described metaphorically by the fabled tortoise and hare race. Many new ventures emphasized task-oriented roles, hoping that someone invariably took care of the necessary maintenance and group cohesion duties (Timmons, 1990a). On the other hand, adherence to strategic goals may result in poor short-term plans and marginal cash management (1990b).

The ability to continuously assess and manage risks was another short time factor consideration (Dubin, 1989) as well as the ability of the team to respond to change (Roure & Keeley, 1990). Success was enhanced by some form of long-term planning.

A well thought out business plan, which emphasized long-term objective compliance, enhanced the probability of success (Timmons, 1987).

Adherence to the big picture often assured a high quality product or service (Hills & Narayana, 1989). Another important factor which led to success was the venture team members having little or no disagreement about the venture's mission and objectives (Sapienza, 1991).

The entrepreneurship process was often defined as the ability to create value and fulfill an economic vision (Gartner, 1990). Bird (1988) added that success was aided by maintaining long-term vision and clarity of purpose.

Sense of Priorities

The question as to how venture teams respond to problems as they arise led to the bipolar variant of team response. Should there be an immediately reactive response or should the organization queue problems as they arise and resolve them on a slower-paced timetable? Overall, proactive problem anticipation and avoidance seemed to better enhance success.

Some of the benefits in concentrating on short-term business aspects were enhancement of the profit/loss performance (Eisenhardt & Schoonhoven, 1990) and maintaining the capacity for sustained and intense efforts (Dubin, 1989). Timmons (1987) observed that, in the short-term, the team had a more uniform orientation toward opportunity rather than control of acquired

resources but he also suggested, in a different article, that cost behavior might be poorly understood (1990b).

Hills and Narayana (1989) indicated that short-term adaptability to change enhanced long-term success. Being cognizant of the stage of the market reflected another short-term emphasis (Eisenhardt & Schoonhoven, 1990).

Rock's (1987) extensive venture capital experience led him to observe that being faithfully committed to the original venture ideas enhanced success. Drucker's (1954) classic management by objectives' disciplines included long-term value achievement as a necessary condition for success. Reich (1987) indicated that followers sharing in these type of profit performance programs will take greater responsibility for the soundness and efficiency of the enterprise. Timmons capped the importance of the long-term view with, "The successful venture team seek a method and criteria for solving problems at the outset, rather than just diving in" (1990a, p. 100).

Constituent Empathy

The first time entrepreneur learned very quickly that one's desire to autocratically manage the venture must be tempered with the realization that the entrepreneur also served many other constituents. These included the venture's suppliers, customers, competitors, regulatory and other governmental institutions, the local community, creditors and lastly the Board of Directors and the company's shareholders.

The question of concentrating on satisfying the needs of the internal organization versus those of the other constituencies previously mentioned gave rise to this bipolar factor. Many inside responsibilities face the entrepreneurial team, that of attracting and retaining quality personnel and maintaining good cost controls are high on the list (Hills & Narayana, 1989). In addition, leaders must continually retrain followers for the more complex tasks in order to enhance their creativity and ability to grow (Reich, 1987).

If the entrepreneur came from a strong functional background, as in marketing or product development, he or she would have difficulties keeping cognizant of other functional considerations, since one initially concentrates on what one has done best. This may eventually lead to what Reich (1987) has observed, failure from lack or desire to delegate as the organization grows.

Continual interface with the outside constituencies of the enterprise must take place. In particular, the product or service ideas must match the changing market opportunity (Timmons, 1987). In this sense, the team was better characterized as "opportunity seekers" than as "resource protectors" (Sapienza, 1991).

Timmons (1990b) stressed that the venture team must be comprised of mediators and negotiators, rather than dictators, and must be able to get along with all the stakeholders they serve. Bird (1988) added that success was enhanced by developing behavioral flexibility in effectively dealing with different stakeholders and situations.

In addition the sensitivity to the venture's technology and market were of paramount importance. In particular, the growth

potential and innovativeness of the product or service demanded strong and empathetic interactions with the outside environments in which the enterprise deals (Gartner, 1990).

Mentoring

Earlier bipolar factors dealt with the attitude of invincibility and in some cases a feeling of omnipotence, which some entrepreneurs adopt in early stages of the venture's development. A derivative consequence of these factors was the minimization of any relations with outside mentors. The term mentor was used herein as an individual who served as a trusted counselor and through his education and skills provided coaching to the entrepreneur and the other members of the venture team.

Normally venture capitalists insisted on Board seats, but in many cases the entrepreneur and/or the venture team were reluctant to switch from the adversarial roles they and the investors had, during the *due diligence* pre-investment phase. To be effective, mentors must be accepted and their judgements valued when they join the Board of Directors.

If a lead entrepreneur's attitude of "I can do it all myself" persisted, there surely would be a falling out with the technological community, the attorneys, the accountants and other possible mentors. Misunderstanding the venture's market niche and avoidance of open dialogue with the marketplace and the technological community as well as other outside mentors often created a failure mode (Timmons, 1990b).

The new venture cannot be an island. In order to survive and achieve success it needed to keep abreast of where it stands technically. The degree of its products' technical innovation can best be monitored by creating an outside scientific advisory board (Eisenhardt & Schoonhoven, 1990). If structured properly, a Board of Directors can represent the most effective source of mentoring. Knowing when to ask for outside aid was a necessary condition for enhancing new venture success (Rock, 1987). Bird (1988) added that structuring resources and effective use of planning and control tools were principal factors for assuring success.

Additional entrepreneurial leadership research questions which emerged from this study were, Is new venture success enhanced when the leadership element of the team consists of more than one dominant individual? and Must the entrepreneurial team contain both visionary and relationally focused individuals? Mintzberg's (1976) study showed that leadership may be evidenced by a number of individuals who act differently because one or the other of the hemisphere of their minds dominated their overt actions.

Mintzberg (1976) described this phenomenon as a *gestalt versus analytical emphasis* in observations of human behavior. Thus, the mentoring factor, one of the research questions used to develop the entrepreneurial leadership success factor survey instruments, strongly supported the thesis that organizational success occurs from the efforts of more than one leader or the combination of a leader and one or more mentors.

Summary of the Literature Review

To keep the semantics of both the definitions of entrepreneurship and leadership consistent in this study, entrepreneurial leadership was looked upon as an economic example of Burn's (1978) leadership tenets, emphasizing transformational leadership. The researcher recognized that there were some disagreements in the writings in these fields regarding the definitions used. Care was taken in this study to minimize these possible semantic difficulties.

This literature review focused on the nature of the entrepreneurial founding team of the venture. The major goal was to sift out the most applicable factors which described the role which the leadership element of the successful venture played in achieving success. For example, Did a domineering leader better enhance success or was it effective teamwork? If so, How did effective relations with other constituencies enhance success?

The patterns of the answers to these and the other research questions served as the framework for constructing the initial survey instrument and ultimately led to the isolation of the final entrepreneurial leadership dominant success factors.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

This research was focused on those entrepreneurial teams whose visions were set on high profitable growth. There appeared to be a minimum of quantitative statistics which isolated the high-growth enterprises' financial success factor statistics from those of companies which might appear successful for other than a high financial return on investment.

Unfortunately, when both government and credit agencies document and analyze enterprise failure data, they commingle all forms of new ventures. For example, the Dun & Bradstreet Corporation (1988) did not include, in their database, failed ventures which have quietly closed down and disappeared. They only reported those ventures which have legally filed for bankruptcy.

A number of research studies had attempted to quantify the entrepreneurial leadership success factors (Cooper, Dunkleberg, et al., 1988). Their databases were extensive, diverse and overlapping with respect to their populations. Industry and demographic data were difficult to sort into clean niches.

It was extremely difficult to isolate the data concerning enterprises whose founders have visions of rapid and large growth

from those whose founders' goals are just to provide a steady and adequate income for their personal needs. The members of the latter group, which represented the greater majority of new start-ups, were often referred to as *lifestyle* companies or proprietorships.

The dilemma of trying to use commingled data for the study of high-growth potential companies tended to thwart the use of quantitative methods. A qualitative methodology, the Delphi Technique appeared best to fit this research study, since the available quantitative data appeared to be contaminated. The study's objectives were to seek a qualitative assessment of the most dominant set of entrepreneurial leadership success factors and not the individual factors' relative importance to each other.

The Delphi Technique is a frequently used research design for isolating the most important characteristics which influence a social sciences phenomenon. In this sense the attempt to isolate dominant entrepreneurial leadership success factors appeared to be a proper application for the Delphi Technique.

The utilization of the descriptive statistical methods, normally associated with the scientific paradigm, is a difficult task when qualitative data, such as that required for this study, was needed. For example, statistically surveying the titular leaders of entrepreneurial organizations would cause a validation problem. Most founding entrepreneurs normally possessed an inordinately high self concept and thus have difficulty being objective when they were asked questions about leadership factors which contributed to the success of their enterprise (Chandler & Jansen, 1991).

Thus, a qualitative rather than quantitative methodology appeared appropriate for this study. The application of a number of qualitative research techniques was investigated. Case methodology, ethnographic interviewing, and phenomenological investigation were considered for this study. The difficulty in using these methodologies appeared to be replicability.

Selecting The Research Format

The research methodology which seemed to best fit the objective of isolating the dominant entrepreneurial leadership success factors was the Delphi Technique. This methodology encompassed Lincoln & Guba's (1985) template for successful qualitative research, that is, an emergent process. Social science literature did indicate that the scientific paradigm was gradually being supplemented or replaced by naturalistic methodology as the following studies indicate.

The use of the scientific paradigm for social science type research had continuously been challenged (Bygrave, 1989). Lincoln & Guba's (1985) thesis was that an emergent inquiry provided a better basis for research on phenomenon whose qualitative nature escapes the scientific paradigm's dependence on rational and structured models such as those of inferential statistics.

A similar call to identify new paradigms threaded through the research and literature in Entrepreneurship (Stevenson & Jarillo, 1990). Entrepreneurship researchers in these fields sought the discovery of paradigms which could ground theory to reality. It is

believed that this study, which isolated the dominant entrepreneurial leadership success factors, may generate one of the sets of rules they seek.

The leadership of a successful high growth company may consist of those who fought their way up a hierarchy, or a group of competent research scientists possessing some leadership and management skills. In many instances successful ventures are led by a former technician or sales person. If all of the entrepreneurs who possessed diverse backgrounds were chosen as subjects for this study, contradictory conclusions with regard to the dominant entrepreneurial leadership success factors would certainly arise.

In order to overcome these validation and replicability dilemmas, it was felt that a type of expert could be selected, who was intimately familiar with the venture, but was not a full time employee of the company. A general partner of a venture capital firm ideally fit this requirement. General partners are normally experienced and successful entrepreneurs in their own right and have played a strong role in the field of new venture creation for the industry so involved.

Venture capitalists observed and helped coach the venture leaders at arm's length. In addition to the venture in question, they also provided at least a six-fold magnification of the number of enterprises really sampled in the study, since the average venture capitalist normally monitored six to ten enterprises (Ruhnka, Feldman, et al., 1992).

The use of the Delphi Technique required that both the original research questions and the venture capitalist's feedback opinions be iterated a number of times in order to develop a consensus regarding each of the dominant success factors. Normally three Delphi rounds are sufficient to arrive at a panel consensus. In summary, all the considerations which have been outlined, pointed to the use of an emergent methodology similar to those currently used in social science research (Lincoln & Guba, 1985), rather than the classical scientific one.

These observations, and the examples given at the end of this section, represented the considerations which led to the selection of the Delphi Technique as the methodology for this study. Using this process of inquiry and analysis, the nature of entrepreneurs and their teams was explored to determine the dominant entrepreneurial factors which the expert panel felt most likely to enhance new venture success.

Some examples of the Delphi Technique's application reflected the validity of the use of this methodology for this study. Faced with similar empirical research goals, other researchers have found success in using the Delphi Technique. Parallel studies, similar to this one, helped to understand the power of the Delphi Technique. A dissertation, authored by Stuart Grauer (1989) at the University of San Diego, utilized an expert educator panel to identify the leadership values associated with the development of international resources found within the school community. Awareness of these factors should make schools more responsive to changing global educational needs and values.

Another Delphi based dissertation, written by Larry Warford (1989) at the University of Oregon, utilized an expert panel of chief academic, chief executive officers of local companies, and training program administrators to assess the worthiness of customized contract training programs at community colleges. At the end of the third Delphi consensus round, he was surprised to find that, among other factors, the panel envisioned a dramatic increase in the need for such training and that the panelists believed that this type of training constituted a significant link between the college and industry.

In a dissertation study, aimed at finding the factors which would improve the mathematics curricula at a local college, Stephen Swarder (1989) of Nova University, formed his expert panel with the 105 chairs of mathematics departments throughout California. The consensus of the panel was that an optional mathematics tutorial laboratory course be instituted as well as two new first courses in algebra, the enrollment into each course being dependent upon student need for extensive development work or for just a review of their high school work.

The Delphi Technique

The Delphi Technique appeared to adequately accommodate this study's objectives. The methodology's strength came from iteratively sampling the members of an expert panel in order to achieve an overall consensus. "Project Delphi" was the name of a

research technique developed in 1953 by Dalkey and Helmer of the Rand Corporation (Helmer, 1983).

The early applications of this methodology were sponsored by the U. S. Department of Defense. Scenarios were developed which required an assessment of the timing of a potential enemy's actions and what the nature of the United States' responses should be.

The technique's processes led to a consensus, through the use of iteratively sampling opinions of each member of an *expert* panel. Once chosen, the experts were repetitively sampled, as they completed a current round and reviewed the previous round's results. The panel really never met face to face. Because of this, the Delphi process has been often referred to as an "anonymous debate." Although the Delphi Technique was developed to provide an optimal prediction of the timing of future events, it has found another important application, studying trends in social science phenomenon through its emergent process (Helmer, 1983).

Since its origins, the application of this methodology has changed. Successive rounds of surveys are now used in order to arrive at a consensus on research questions such as those which were imposed for this study. A number of iterations of a survey instrument are made through mailings to and responses from each member of the expert panel. No separate identification of the individual expert's opinions are made, thus overcoming the normal face-to-face committee type discussions wherein members may be swayed by those of them who are more vocal (Martino, 1978).

A number of validity tests have been conducted on the use of the Delphi Technique. In one case, the same research question was

presented to the members of a number of separate panels. The actual answers to the research question was then correlated to the predictions of the panels with an 80% correlation coefficient (Loye, 1978).

Three rounds are typically required in the use of the Delphi Technique to achieve panel consensus stability for each factor. Stability of the responses was defined as occurring when no more than a 15% marginal change takes place between subsequent rounds (Linstone & Turoff, 1978).

The experts selected for this study were from the venture capital industry. Each had monitoring relations with a number of new high-growth venture founding teams and had also experienced failed deals.

Expert Panel Selection

In order to focus this research, only that portion of entrepreneurial ventures which have been funded through the venture capital industry were considered. There are over 700 firms in the United States which provide funding and corporate guidance to young high growth-potential entrepreneurial ventures (Venture Economics, 1989). The venture capitalists, normally seasoned executives in their own right, are very selective in making their funding determinations.

As a matter of fact only 1% or 2%, at most, of the ventures coming to their attention are funded (Timmons, 1990b). During the 1980s, the ventures so selected by the venture capitalists, showed a

higher success rate and growth in earnings than those which compose the various blue-chip stock indices (Venture Economics, 1989).

In a sense, all of the General Partners of a Venture Capital enterprise are experts. As such, the composition of the panel for this study was selected from the 1,500 or so General Partners of U.S. venture capital firms (Morris & Isenstein, 1989). A more industry-specific selection criteria was added, electronics. Every effort was made to obtain a representative sample from this group, although the literature describing prior Delphi projects did not make this a mandatory requirement.

As a matter of fact, in any type of research, there always is a concern regarding the negative impact of biases which may creep up in a sampled population. The Delphi method is not affected by this possible shortfall. Murray (1966) indicated that the opinion of the experts on the panel should not be compared to those subjects chosen for a Gallup-type statistical survey and that it was immaterial in the Delphi case whether the experts are a representative sample or not. In fact, there should only be a large enough sample to identify patterns relating to reality (Lincoln & Guba, 1985).

To focus on a specific industry, mature venture capital organizations which are or have been members of the American Electronics Association were solicited. In addition, to round out the demographics of the sample, a number of the large electronic industry venture capital funds, which were currently not members of the American Electronics Association, were included.

As described earlier, the process of expert panelists selection was carried out in parallel with the instrument design. The basic criteria was to concentrate on attracting partners of those venture capital firms whose portfolios reflected heavy investments in new ventures from the electronics industry.

From those organizations so considered, a general partner, whose concentration has been on the electronics part of each venture capital fund's portfolio, was solicited to be on the expert panel. The criteria for the selection of an expert panelist included the following considerations:

1. Each expert should have experienced at least one complete venture capital cycle. A cycle is defined as the sequence of initial funding, nurturing of the founding team over a five to seven year period, and then a *harvest* of the original investment. This requirement assured that the panelist had had experience in all the development and maturation phases of a corporation.
2. To assure a diverse company experience background, the expert should have guided at least five high growth new ventures.
3. To reflect the experiences of what not to do, the expert should have monitored at least two failed ventures.
4. No more than one general partner should be selected from a venture firm in order to assure that each panelists contribute independently to the final consensus and thereby not violate the anonymous debate required by the Delphi Technique.

To satisfy these specific criteria, the 1991-92 AEA Directory of the American Electronics Association was reviewed in order to isolate venture capital member firms which have been in existence for at least five years and which have made numerous investments in new electronic ventures. In addition, only venture capital organizations whose portfolios reflected cumulative new venture investments of over \$50 million were selected.

In addition to the venture capital firms so isolated, Pratt's Guide to Venture Capital Sources (Morris & Isenstein, 1989) was used to identify other venture firms, who although not members of the AEA, fit the selection criterion and had very large electronic industry content in their portfolios. An additional selection criteria was used for these entities in that they had to have made cumulative new venture investments of over \$100 million.

The first mailings were made to those general partners and officers identified in the directories as either the Managing General Partner or the President and/or Chief Executive Officer.

Panel Size

Delphi research studies over the last decade have typically included fewer than 50 respondents (Helmer, 1983). Some of the studies have had sample populations as small as 12. Thus, it appeared that a sample population of about 25 experts would be normal for this Delphi application.

Using the current 1991-92 AEA Directory supplemented by Pratt's Guide to Venture Capital Sources (Morris & Isenstein, 1989),

87 of these experts, each of whom is or has been a general partner of a Venture Capital firm, were asked to participate on the Delphi panel.

Five of the first mailings were returned with indications that the particular firm was no longer at the address given in the AEA Directory or in Pratt's Guide. Of the remaining 82 solicitations, 29 venture capitalists agreed to stay in for three survey iterations, but eventually only 25 did. This 30% response appeared reasonable for this Delphi application considering the time obligations of these senior executives. Each executed a Consent Form in which they indicated that they understood the purpose of the study and the anonymity features associated with the Delphi Technique (see Appendix C).

Developing the Basic Survey Instrument

The basic survey instrument was developed concurrently with the expert panel selection process. The instrument was constructed to support the original research questions as augmented by entrepreneurial leadership factors isolated through the literature review. The major journals and research documents were those which included contemporary research in the fields of entrepreneurship, management and leadership (see Appendix A).

In order to isolate factors appearing common to the success or failure of the ventures, these documents were searched for articles and references which described new venture activities. Therefore, as depicted in Figure 1, the first step in developing the

basic survey instrument was to identify, through these literature reviews, common entrepreneurial leadership factors from previous contemporary studies. In doing so, over 100 factors were considered. Tracing the development of the literature through footnotes and references eliminated some and added others.

Seventy success factors, which had appeared most repetitively, were isolated. A pilot survey instrument was constructed using these factors in a Likert type format (see Appendix B). Because the initial survey instrument was quite extensive, the three members of the pilot expert panel felt that it would require more time to respond to than any expert would want to spend. As such, expert panel interest would not be maintained through the three planned rounds of the survey.

Round One's survey instrument was developed to simplify the Likert format and still maintain its comprehensiveness. To this end, eleven sets of bipolar factors were constructed encompassing the most dominant factors from the pilot instrument.

For example, in some of the literature, one position was that the successful entrepreneurial team should have had just a minimal prior experience in new ventures. The tenet here was that this group would be more effective in avoiding bureaucratic procedures and would thus develop their own process more efficiently (Starr & Bygrave, 1991). On the other hand, many articles extolled the advantages which in-depth prior experiences might bring to entrepreneurial success. In this manner ten other "bipolar" factors, were developed as the basic framework for the Round One instrument (see Appendix E).

Figure 1 Delphi methodology and document process flow

Below each of the factors was a non-numerical scale whose end points each contained one of the polarizing factors. The panelist were asked to indicate by a cross what position point on the scale they felt most comfortable with. Ample space was left below each of the eleven bipolar factors, so that each panelist could either comment on the particular factors and add other factors which he felt were as important.

The basic instrument also contained two open-ended question pages. On one, the panelist were asked to identify any other factor(s) which were not included in the eleven bipolar factors. The other page asked that the panelists comment on any change(s) in entrepreneurial leadership factors which would reflect the leadership environment of the twenty-first century.

Subsequent Survey Instruments and Implementations

Figure 1, displaying the Delphi Methodology and Documentation Processing Flow, helps to illustrate the complete processing steps used in this Delphi application.

The objective of the study, to isolate the most dominant factors which enhanced entrepreneurial leadership success, was met by keeping a dialogue going with each member of the Expert Panel. Thus, during the three formal Delphi rounds, the researcher received inputs from each panelist and analyzed them for importance and clarity. A summary of these inputs was then fed back to each panel member, allowing them to alter their original opinions with respect to the average opinions of the rest of the panel.

Consensus of the panel's opinions were reached through this iterating process and the research objectives thus satisfied. The research isolated the most dominant entrepreneurial leadership success factors which the panel believed, when utilized, would enhance a new venture's progress from its first development stage ultimately to the high growth returns its entrepreneurs originally envisioned.

A preparation round, Round Zero, prefaced the formal expert panel interchange of the three Delphi rounds of modified instrument submittals and responses. Three rounds were typically required in the use of the Delphi Technique to achieve panel consensus stability for each factor.

Stability of the responses was defined as occurring when no more than a 15% marginal change takes place between subsequent rounds (Linstone & Turoff, 1978).

Round Zero - Delphi Process Preparations.

A preliminary pilot survey instrument was designed which included seventy entrepreneurial leadership factors as excerpted from the literature (see Appendix B). A Likert five-point importance scale was associated with each factor. The points were identified as: 1 - No Importance; 2 - Little Importance; 3 - Important; 4 - Very Important; and 5 - Extremely Important. The researcher then met with three experienced local venture capitalists, who in addition to critiquing the factors, also commented on the possible receptivity of the survey document to the ultimate panel of experts.

In line with their inputs, the pilot survey was then reworked to effectively identify eleven pairs of factors from the original seventy. These twenty-two characteristics had appeared to be the most dominant in the literature review. Each pair represented polarized views. For example, some of the authors of the documents had taken a position that it's best for the entrepreneurial team to have had just a minimal prior experience in new ventures. The tenet here was that this group would be more effective in avoiding bureaucratic procedures and would develop their own process more efficiently. On the other hand, many articles extolled the advantages which in-depth prior experiences might bring to entrepreneurial success.

Ten other *bipolar* factors, were used as the basic framework for the Round One instrument. For clarity to the panelists, it was decided to construct each bipolar factor as shown in Figure 2 for the Experience factor.

The last preparation element in the Round Zero box of Figure 1, the Human Subject Consent Form, reflected the University of San Diego's requirement that all research performed by faculty and students did not entail any risk to human subjects. The universitywide Committee on the Protection of Human Subjects granted such final approval on January 31, 1991. The consent form was mailed with the Round One survey instrument.

Figure 2 Round One: Typical bipolar factor presentation

I WOULD BE FAVORABLY INCLINED TO PARTICIPATE IN THE NEXT ROUND OF THE VENTURE TEAM'S FINANCING.....

(2) .....because I consider their.....

....minimal prior experience as a positive factor in helping to establish the venture's teamwork and culture.

....extensive prior experience very important for enhancing the team's integration and progress.

The Delphi Technique did not pose any risk to the research subjects as it required no identification of any specific individual or particular enterprise. The principal information came from the literature review and from the experts whose opinions reflected the integration of their experience and knowledge. The Delphi rules for gathering individual expert opinions were faithfully followed.

Each expert had no knowledge of who the other panelist were nor did they know what position any other individual expert panelist has expressed on any of the topics, since each subsequent iteration round provided only the summary information of the preceding round.

A consent form was incorporated on the last page of the first round instrument (see Appendix C). The principal use of the consent form was to verify participation and obtain agreement that the panelist understood the purposes of the study and its benefits.

In addition, it also provided acknowledgement of the panelist's understanding of the procedures which were to be followed and that

the anonymity surrounding panelist's participation in the study would be maintained.

Round One - Expert Panelists' First Opinions.

The survey instrument consisted of eight pages (see Appendix E). The six pages of closed bipolar questions were each supplemented by requests to the panelists to add any clarifying statement or additional factor they might deem important to each statement.

In addition, page 7 was left completely open-ended to allow the panelists to add additional factors to the original ones contained in the closed questions. Page 8 contained a request for the panelist's opinion regarding what changes to entrepreneurial factors might take place for ventures of the twenty-first century.

The first contact with each prospective panelist was made through a carefully constructed letter which identified the mutual purpose of this research and which asked for participation (see Appendix D). The principal motivator offered to a participant was that their firms would have first access to the results of the study and that it was sponsored by a prestigious trade organization, the American Electronics Association.

It was also indicated that these data should provide some additional guidance to aid in their selection of new enterprises which they might fund. For those experts, who had taken longer than three weeks to respond, a follow-up postcard was sent asking the potential expert's "Executive Assistant", to prompt him (see Appendix F). A week later, follow-up calls were made.

The responses to the open-ended questions were extremely valuable in that they provided some assurance that any factors missed in the closed questions were identified. The responses to the current and future oriented open-ended questions was effective in enhancing the completeness of the entrepreneurial leadership's dominant success factor identity.

Round Two - First Feedback to Panel.

A carefully constructed Round Two transmittal letter was designed to pique the panelist's curiosity as to where their individual opinions fell with respect to the aggregate of their peers (see Appendix F). The instrument for this round contained two survey formats (see Appendix H).

The first, Part A, repeated a modified version of the 11 bipolar factors of Round One. Each panelist received a tailored indication of how his Round One opinion matched the panel's mean value response to each question. He was asked to reconsider his original opinions in light of the panel's mean value and histogram data showing the distribution of responses to each factor.

An excerpt from Part A of the Round Two instrument illustrating this point is contained in Figure 3. His new opinions, if any, were so indicated on each scale by a cross. In addition, open-ended question areas again provided the panelist another opportunity to jot down any after-thoughts he had regarding each of the questions.

Figure 3 Round Two: Typical panel feedback on bipolar factors

I would be favorably inclined to participate in the next round of venture financing because I consider their....

The second survey form in the Round Two instrument, Part B, asked that the panelists indicate the relative importance of each of the new sixteen factors which they had identified in the open-ended question response areas of the Round One survey instrument. These sixteen additional entrepreneurial leadership factors were those most frequently mentioned from the over 100 statements the panelists had made in their Round One responses (see Appendix N).

A Likert five-point importance scale was used to obtain relative ranking opinions on each factor. Three of the five choice boxes were identified as: Rarely Consider, Important and Extremely Important, as shown in Figure 4. The numbers appearing below the boxes in Figure 4 were not shown on the survey instrument. They were only used by the researcher to evaluate the relative factor rankings of the panel's Round Two responses.

Figure 4. Round Two (Part B) Likert ranking scale

	<u>Rarely</u> <u>Consider</u>		<u>Impor-</u> <u>tant</u>		<u>Extremely</u> <u>Important</u>
3. Displays high energy level.	☐	☐	☐	☐	☐
	1	2	3	4	5

Twenty three responses were received within the three weeks following the mailing of the Round Two instrument. A follow-up mailing was then made to the six non-respondents. These efforts plus phone calls helped to bring the number of responses to 27 out of the 29 original Round One respondees.

Panel consensus was established when the modal value of the entrepreneurial leadership factor so described did not vary more than 15% between rounds (Linstone, 1978). Consensus was reached on all the bipolar factors. An example of this consensus is shown in Figure 5. The first set of three columns represented the panel's success factors means of Round Two and Round One with a percentage change of 2.1%, well within the 15% criteria.

The second three columns reflected the standard deviations of the Round Two and Round One responses. In this case, the smaller Round Two response indicated a favorable 15.8% reduction of the standard deviation from those of Round One, again quite indicative of the panel's sharper and stronger consensus on this factor.

Figure 5. Panel Consensus (change in mean less than 15%) example

	<u>Panel Means</u>			<u>Standard Deviations</u>		
	Round	Round	Change	Round	Round	Change
	<u>Two</u>	<u>One</u>	<u>%</u>	<u>Two</u>	<u>One</u>	<u>%</u>
Leadership Style	4.7	4.8	2.1	1.6	1.9	15.8

Round Three - Final Panel Confirmation.

The 18 most important entrepreneurial leadership success factors, as seen by the panel, were incorporated into the Delphi Round Three survey instrument (see Appendix J). The instrument was designed by interweaving the panelists' responses to nine of the eleven bipolar statements with their opinions on nine of the open-ended question response factors. The blending of these factors was accomplished by rank ordering the strongest bipolar question responses and then comparing each factor's strength against the rank-ordered Likert responses.

A number of attempts were made to discover a basis for clustering these factors. Finally, when the six factors dealing with the personal traits of the lead entrepreneur were isolated from the others, it became apparent that the remaining factors could be logically grouped into those which affected the venture's internal or external environments.

- A. External Environmental Factors (The External Influences)
- B. Overall Group Cultural Factors (The Venture Team)
- C. Individual Trait Characteristics (The Lead Entrepreneur)

With regard to the processing of the 11 original bimodal factors used in the Round One instrument, two were excluded in the Round Three instrument. One factor, Gender, was considered, by the panel, to not have any influence on their decisions to continue funding an enterprise and therefore was not repeated. Two of the other bipolar factors were deemed by the panel to have covered the same phenomenon and were thus combined. These were the Leadership Style and Individual or Team as Hero factors.

Similarly, the most dominant Likert response factors were also rank ordered and then blended with the nine most important bipolar responses. The new survey instrument was then transmitted to the panel (see Appendix I). The panelists were asked to comment, concur and re-rank the importance order of the entrepreneurial leadership statements within each of the three six-statement clusters.

The demographic survey form was designed to capture data on both the nature of each venture capital firm as well as the experience background of the particular individual who served on the panel (see Appendix K). Other information requested included, the geographic interests of the firm, the values of their portfolios, their electronic industry content and the number of ventures both the firm and the expert had handled.

Data Analysis

The rankings for each of the six factors contained in the three clusters of the Round Three survey instrument were weighted and

adjusted to reflect the panel's final consensus on those dominant entrepreneurial leadership factors which should enhance the probability of new venture success. The weighting function assigned 10 points to a number one ranking, 9 points to a number two ranking, and so forth.

The responses from the panel were then compared with the original weightings in order to adjust the relative rankings. The panel response generally indicated an overall consensus with the rankings cited in the Round Three survey instrument (see Appendix J).

The final product of this research was the presentation and discussion of the three clusters and their dominant factors. These conclusions may serve as the basis for generating a new venture leadership paradigm, as called for by both Stevenson & Harmeling (1990b) and Bygrave (1990).

Weakness in the Delphi Technique

As a limitation, the validity of the results may be influenced by the possible marginal capabilities and competencies of some of the experts. The demographic segment chosen may not be representative of the whole population. Hopefully, for this study entrepreneurial leadership of electronics industry ventures may be representative of all industries. A possible researcher bias also may affect the Delphi results.

The use of the Delphi Technique provided a major advantage over other qualitative methodologies. It provided anonymity for each panelist thereby overcoming a number of potential psychological barriers. Each expert's views were stated without bias or the type of coercion normally encountered in face-to-face group meetings. Delbecq, Van de Ven, et al. (1975) indicated that three critical conditions must be satisfied to complete a successful Delphi:

1. Adequate time.
2. Participant skill in written communications.
3. High participant motivation.

For this study, the process of three mailings of three survey instrument and the respective responses from the expert panel required three months. Any attempt to shorten that cycle would have jeopardized the validity of the responses.

For the researcher, each of the panelist's responses must be carefully analyzed. The design of the next round must empirically build on the pattern of responses and the desire to guide the panel towards consensus. Although great care was taken in the semantic construction of each survey instrument, there were some interpretive difficulties. For example, a term was used in Round One, *constituencies*, which confused about a fourth of the panel. These businessmen panelists had difficulty in interpreting this political science based semantic.

Constituencies was meant to convey the concept that a corporation serves more than just itself and its employees. For example, a corporation serves its shareholders, its customers, its suppliers, its community and must comply with the rules of various

governmental agencies. Attempts to straighten out the meaning of the term were successful because the round to round response variation to that particular question only varied 7.7 percent, well within the 15 per cent consensus criterion.

The last critical condition, participant motivation, presented a challenging problem. In this study, panelist motivation was dealt with early on, since venture capitalists have little time for extra curricular activity. On telephone follow-ups with a number of the staffs of the panelists, the researcher was told that any correspondence which is obviously a survey or questionnaire is trashed before it is even opened. This could partially explain why only 30% of those solicited agreed to participate in this study.

Obtaining the endorsement of the president of the American Electronics Association to use the institution's letterhead contributed to boosting the response. In addition, promising to give a copy of the survey summary only to each panelist who completed the full three rounds, also garnered a higher participation.

The specific limitations of the technique must include some caveats. Since the Delphi Technique involves an emergent empirical process, it is hard to assess whether another round might have added more information or that an extended literature review would have added more entrepreneurial leadership factors.

Certainly the panelists could have taken more time to add the information and critiques which were requested in the open-ended question areas of each survey instrument. But, as for obtaining a perfect snapshot of future entrepreneurial leadership success factors from any kind of research, it has been wisely observed that,

"In the absence of a time machine, true experimentation about the future is a logical impossibility" (Helmer,1983, p. 121).

CHAPTER IV

FINDINGS OF THE STUDY

This findings of this study are based on the counsel of an expert panel composed of 25 senior venture capitalists representing investment firms throughout the United States. These venture capitalists participated in three rounds of a Delphi Technique study which culminated in their consensus regarding the most dominant entrepreneurial leadership success factors which, in their opinions, would enhance the probability of success for a new venture.

Of the original 87 potential expert panelists selected from the American Electronics Association: 1991-1992 Directory and Pratt's Guide to Venture Capital Sources (1989), 29 did respond to the first survey instrument (see Appendix E). Twenty-seven of these experts answered the Round Two instrument (see Appendix H), and 25, the Round Three instrument (see Appendix J).

The demographic responses from the panel and the consensus results of the three rounds of Delphi methodology and documentation processing are described in this chapter. The financial prowess of the panel is notable. The 25 participating firms, represented by the expert panelist, had invested close to five billion dollars in new venture start-ups and subsequent rounds of financing since their inception. The latter sections of the chapter present the findings for

each of the three Delphi Technique rounds. Since this research process is an emergent one (Lincoln & Guba, 1985), the analysis of the third round feedback from the expert panelists records the study's final results.

Demographic Analysis

The demographic data was obtained during the Delphi Round Three process (see Figure 1). During that time, the panelists were asked to complete a questionnaire which sought both institutional and personal data (see Appendix L). The criteria for the selection of an expert panelist included the following considerations:

1. Each expert had experienced at least one complete venture capital cycle. A cycle was defined as the sequence of initial funding, nurturing of the founding team over a 3-5 year period, and then a harvesting of the original investment.
2. To assure a diverse company experience background, the expert should have guided at least five high growth new ventures.
3. To reflect the experiences of what not to do, the expert should have monitored at least two failed ventures.
4. No more than one general partner should be selected from a venture firm in order to prevent two or more panelists coming up with their consensus submittal thereby violating the anonymous debate required by the Delphi Technique.

There are a number of ways to measure the financial success of an investment. For the purposes of this study, a return on invested capital of five times was used. This is equivalent to a 38% compounded growth over a five-year investment term. Ventures which achieved this level of return were deemed successful. Ventures which fell below a five-times return on investment were classified as unsuccessful. On this basis, the panel submitted that, of the 88 *deals* an average firm had made, 37% were successful, 36% not so and the jury was out on the remaining 27%.

A *deal* is an industry semantic term. It is defined as an investment in a portfolio company which is normally consummated by a contractual agreement. Instead of just calling the agreement an investment contract, the term *deal* is used.

Panelist Data

One original concern was whether each expert panelist selected would have extensive experience as venture capitalists. This should really not have been a concern, since the data showed that the average panelists has been in the industry for 15 years and with his current firm 11 years.

Since the criteria for panel member selection was quite stringent, it was not surprising that each panelist selected was either a general partner or officer of the partnership or corporation he represented. The average age of the panelist fell into the 46 to 55 year old category.

But, observing that the average panelists had been in the industry for fifteen years, it could have been expected that, as reflected in Table 2, 84% of them were over 45 years old.

Table 2

Expert Venture Capital Panelists' Demographics

Age Range (years)	<u>25- 35</u>	<u>36 - 45</u>	<u>46 - 55</u>	<u>Over 55</u>
Distribution (%)	8	8	44	40
Major Functional Specialty	<u>Finance</u>	<u>Engineer.</u>	<u>Marketing</u>	<u>Other</u>
Distribution (%)	50	28	10	12
Highest Degree Earned	<u>MBA</u>	<u>Doctorate</u>	<u>MS</u>	<u>BS</u>
Distribution (%)	67	17	8	8

	<u>Mean</u>	<u>Range</u>
Experience as a venture capitalist (years)	15	5 - 31
Experience with current firm (years)	11	5 - 31
% Direct experience in electronic deals	52	10 - 100

The expert panelists had, on the average, served the same firm for eleven years and had spent the majority of their time, 52%, handling electronic deals. With regard to the panelists' functional experiences, 50% had had financial backgrounds, followed by 28% in engineering, and 10% in marketing. All but one had earned college degrees with 67% holding Master of Business Administration degrees and 17% holding doctorates. Eight per cent of the remaining

panelists had earned Master of Science degrees and an equal percentage, Bachelor of Science degrees.

Institutional Data

A summary of the responses to the Demographic Questionnaire of Appendix L is shown in Table 3. Eighty-four per cent of the firms represented by the expert panelists are Limited Partnerships, while 12% represented corporations. The other 4% were panelists who, although having had extensive venture capital experience, now serve only in an advisory role to other venture capital firms.

The year in which the firms started varied from 1902 to 1985. Since one venture capital cycle takes, on the average, between five to seven years to complete, firms started after 1985 were not included in the request for panel members. The panel represented firms which, on the average, started in 1972 and thereby have been active for the last 20 years.

Another hallmark of an experienced successful venture capital firm was the number of professional venture capitalists on their staffs. The average firm represented on the panel had six general partners, twice as many as the average industry wide firm has (Venture Economics, 1989). The number of partners in the firms involved in this study's ranged from two to twenty.

The activity of a venture capital firm is measured by the number of deals, or investments, they make. The firms represented by the panelists had made over 1,800 deals since their inception, investing about \$5 billion. Of these, 48% were electronics-related.

Most venture capital firms have a balanced concentration on the various growth industries. In recent years, the biotechnology and health care industries have been receiving larger shares of their investments, but not even close to the 46% dominance of the overall venture capital industry's electronics investments in 1988 (Venture Economics, 1989).

Table 3   Demographics of 25 Participating Venture Capital Firms

	<u>Mean</u>	<u>Range</u>
Starting Year	1972	1902 - 1985
Number of General Partners	6	2 - 20
Capital Under Mgt. (\$ millions)	214	32 - 650
USA Geographic Preferences	none (64%)	west - east
Number of Deals Made Since Start	88	9 - 300
Number of Deals Made in 1991	11	1 - 50
Electronic Portfolio Success (%)		
Successful (ROI > 5 times)	37	20 - 70
Unsuccessful (ROI ≤ 5 times)	36	20 - 60
Living Dead	27	10 - 60

The growth of the other industries can explain the drop in electronics investments to 36% of the firms' deals made during

1991 (see Appendix L). Still, the success of their investments is rather high compared to investments overall.

Thirty seven per cent of their deals, returned over five times the firm's original investments, while 36% of their investments were unsuccessful. The balance of the success distribution statistics, 27%, was associated with the term *living dead*. This term is used to describe the companies in which the venture capital firm had invested which were not growing and/or which had not returned five times their original investment.

Delphi Analysis

Precedent to conducting the three iterative rounds of the Delphi Technique, a preliminary survey instrument was constructed containing the 32 most frequently mentioned entrepreneurial leadership factors isolated as a result of the literature review. This instrument displayed each of the success statements along with a five-point Likert scale (see Appendix B). Then, a pilot panel, consisting of three very experienced venture capitalists, was asked to comment on their degree of agreement or disagreement with each of these 32 statements.

The pilot panelists' responses were that the instrument required more time to complete than a busy venture capitalist would be willing to spend and that the 32 statements should be reduced and classified under major headings. These observations were taken into account in the design of the Round One survey instrument (see Appendix E).

Each of the three rounds of subsequent Delphi survey instruments yielded data which in turn were analyzed for consensus and then fed back to the panel for final agreement. A complete description of this process is shown in Figure 1 of Chapter III. The first survey instrument included the 11 bipolar entrepreneurial leadership success factors which had been isolated through the literature reviews (see Appendix E). Sufficient space was provided for panelist comments on each of the bipolar factors in an open-ended question format.

Each subsequent round, then, integrated the open-ended question responses into the original factor base. In some cases, factors were dropped when the panel indicated no preference for either end of the bipolar scale factor. Descriptive analysis of some of the bipolar factor responses disclosed bimodal trends. As a result, each of these bimodal factors were restated to form a single blended entrepreneurial leadership success factor.

Round One Results

The expert panelists responded to the Round One survey instrument (see Appendix E) by indicating their position on each of the 11 bipolar statements. They also provided a total of 101 comments and suggestions which they felt should be considered as the bases for constructing the Round Two survey instrument (see Appendix N).

During Round One, the panelists were asked to add any other important entrepreneurial leadership success factors which they

thought influence today's leadership. In addition, they were asked to identify factors which may be required in the twenty-first century. These data were used in Part B of the Round Two survey instrument (see Appendix H).

Panel Response to Closed Questions

The quantitative responses of the panel were analyzed using simple descriptive statistical measurements. The mean and standard deviations associated with each bipolar factor are shown in Table 4. For convenience of analysis, a 10-point scale was used for each bipolar factor. Generally, a panelist's response between 0 and 3.5 indicated that the panelist favored the subfactor at the left end of the bipolar scale. If the responses were between 6.6 and 10, then the subfactor at the right end of the scale was favored.

A panel mean response between 3.6 and 5.5 was indicative of the panel's neutral position with regard to both of the subfactor statements at each end of the bipolar scale. In the later round responses, it became apparent that the 3.6 to 5.5 mean range sometimes indicated that the subfactors at the ends of the particular scale were not mutually independent.

Histograms were developed to not only aid the analysis of the distribution of the panelist's responses, but to also respond to some of the panelists concerns (see Appendix M). Some felt that, there were factors in which the ends of a bipolar scale did not represent mutually independent statements. These items were Leadership Style, Importance of Vision and Constituent Empathy.

Each of these three bipolar factors did exhibit some bimodal distribution characteristics. As a result, the end-of-scale subfactors for each of them were subsequently blended into one item.

Table 4   Round One: Statistical Distribution of Panelists' Replies

	<u>Bi-Polar Factor</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Panel Preference</u>
1.	Leadership Style	4.8	1.9	Neutral
2.	Prior Experiences	8.4	1.0	Extensive
3.	Self Concept	7.4	2.4	Realist
4.	Ethical Behavior	7.9	2.0	Highest
5.	Gender	4.6	0.8	Neutral
6.	Importance of Vision	6.5	2.0	Neutral
7.	Commitment Faithfulness	7.2	2.0	Consistent
8.	Sense of Priorities	3.0	2.3	Immediate
9.	Constituent Empathy	3.9	2.5	Neutral
10.	Individual/Team as Heroes	6.3	1.9	Team
11.	Mentoring	7.4	1.5	Sought Out

Each of these three bipolar factors were presented as one blended factor in the Round Three survey instrument (see Appendix J, Factors A1, A4 and B1). The histograms reflected a unimodal distribution for the other six bipolar factors (see Appendix M).

The responses to the questions on "Prior Experiences" and "Gender" reflected a very narrow and peaked distribution. As such the panel response satisfied the consensus criterion. For consensus, a change in a factor between iterative rounds should be not more than 15% (Linstone & Turoff, 1978). The panel was therefore not asked to reevaluate these factors in the Round Two survey instrument.

Panel Responses to Open-Ended Questions

The panel added 48 specific suggestions (see Appendix N) in response to Round One open-ended questions which asked for other important success factors influencing today's entrepreneurial leadership and those factors which may be needed in the twenty-first century.

These entrepreneurial leadership success factor comments were analyzed and subsequently grouped into 16 factor statements. The 12 highest ranked factors are shown in Table 6 in the Round Two results section.

Round Two Results

The expert panelists' responses to the Round One survey instrument were used as the basis for constructing the Round Two survey instrument. The latter instrument consisted of two parts (see Appendix H).

Part A included the first round of statistical data which fed back both the individual panelist's position and the distribution and the mean values for each of Round One's 11 bipolar statements. Part B asked panelists to provide a Likert-type ranking for the 16 most dominant entrepreneurial leadership success factors which they had submitted in their responses to the open-ended questions of the Round One survey instrument.

Response to Bi-Polar Factors Consensus Request

The Round Two survey instrument was constructed so that panelists could be given an opportunity to re-evaluate their Round One position with respect to the averages of the entire panel (see Appendix H). In order to do so, the panelist's previous position on the particular bipolar factor was shown in relation to the panel's mean value for that factor, see Figure 6. The percentile distribution of the panel's responses was also included.

Figure 6 Typical bipolar factor feedback scale

The uniform non-numbered scale, with arrows at each end, was constructed to allow the panelists to qualitatively judge which sub-factor end of the scale he preferred. By his placing an "X" somewhere along the scale, he indicated how strongly he felt about either of the

sub-factors at each end of the scale. In addition, each bipolar questions was followed by a "Panel Emphasis and/or Clarification Statement" (see Appendix H). The panelists were asked to compare their own choices with the panel's mean values and to then indicate at what point on the scale they now believed the most positive influence on their financing decision would occur. Table 5 shows a comparison of the bipolar responses between the first two Rounds.

Table 5   Comparison of Round Two Bi-Polar Question Responses to Those of Round One

<u>Bi-Polar Factor</u>	<u>Mean</u>			<u>Std. Dev</u>		
	<u>Round Two</u>	<u>Round One</u>	<u>Change %</u>	<u>Round Two</u>	<u>Round One</u>	<u>Change %</u>
Leadership Style	4.7	4.8	2.1	1.6	1.9	15.8
Prior Experiences	8.5	8.4	1.2	0.8	1.0	20.0
Self Concept	7.5	7.4	1.3	2.2	2.4	8.3
Ethical Behavior	8.0	7.9	1.3	1.7	2.0	15.0
Gender	4.6	4.6	0.0	0.7	0.8	12.5
Vision	*	6.5	-	*	2.0	-
Commitments	7.3	7.2	1.4	1.7	2.0	15.0
Priorities	3.1	3.0	3.3	2.0	2.3	13.0
Empathy	4.2	3.9	7.7	2.1	2.5	16.0
Heroes	6.4	6.3	1.6	1.6	1.9	15.8
Mentoring	7.3	7.4	1.4	1.4	1.5	6.7

* This bipolar factor was not repeated in Round Two because the panel felt that its end points were not mutually exclusive.

As can be noted, consensus was reached on all factors. The Round Two responses indicated that the change from the panelist's Round One positions, in all cases, was less than 8%, well within the 15% consensus limit.

The standard deviations were significantly narrowed, indicative of a greater peakedness in the statistical distribution and also reflecting the tightening of the consensus parameter's range.

Panel Response to Likert Scale Ratings of Other Factors

Part B of the Round Two survey instrument, contained the 16 most dominant other factors which were distilled from the 48 open-ended question responses of Round One (see Appendix N). The panel was asked to rate each of these 16 factors on a five-point Likert scale as illustrated in Figure 7.

Figure 7 Typical ranking scale for evaluating Round One's open-ended question responses

	Rarely Consider		Impor- tant		Extremely Important
3. Displays high energy level.	☐	☐	☐	☐	☐

Of the 16 factors so rated by the panel, 9 were rated in the extremely important range as illustrated in Table 6. Factors which had been classified as those which might arise in the environments of the twenty-first century were rated at the bottom of the ranking list.

Table 6 Panelist's Rankings of Major Round One Open-Ended
Question Responses (Scale: 1-5)

<u>Likert</u> <u>Average</u>	<u>Leadership Factor</u>
4.76	Intellectually honest.
4.56	Capability of making hard decisions and then implementing them without procrastination.
4.56	A high sense of urgency.
4.52	Displays high energy level.
4.48	High commitment to long-term value creation for backers, customers, employees and other stakeholders.
4.36	Possesses communication skills sufficient to deal with his venture team and marketplace.
4.28	People management + team building skill competencies.
4.24	Ability to adapt to more rapid changes in product technological life cycles.
4.20	Ability to set high goals, then meet or exceed them.
4.20	Capability of creating very high standards of performance and rewarding superior performance.
3.68	Ability to handle oneself on one's feet in front of audiences.
3.52	Ability to create an environment demanding and sustaining fairness and equitable sharing of gains with other management.

These major factors were contributed by the panel as characteristics of a lead entrepreneur rather than that of the venture team. "Intellectual honesty", "capability of making and meeting hard commitments" and "a high sense of urgency" dominated the lead entrepreneur success factors added by the panelists.

Overall, the relatively high Likert rankings can be accounted for if it is recalled that every one of these factors came from the panelists themselves in response to the open-ended question sections of the Round One survey instrument.

Round Three Results

Since the Round Two responses showed a tighter variation around almost identical means than those which were submitted in Round One, panel consensus on all the factors seemed achieved. There was some concern expressed over three of the bipolar factors, Leadership Style, Vision and Constituent Empathy. A few panel members felt that those factors' scale end points were not mutually independent.

Another indication of this effect was the apparent bimodal nature of these factors' histograms. For example, consider the factor, Constituent Empathy. Its bimodal nature is clearly seen in Figure 8. Two separate but unequalled magnitude distributions are shown. To overcome this concern, the end-points were blended to make each former bipolar factor just one entrepreneurial leadership success factor. These new factors were incorporated into the Round Three survey instrument (see Appendix J).

Figure 8 Bi-Modal histogram example

The other two factors showed a broad, flat distribution over the entire rating scales. This is indicative of the scale end point statements not being mutually independent and thus requiring the factor to be converted to a unimodal statement rather than its former bimodal one. Figure 9 displays this phenomenon for the factor, Leadership Style.

Figure 9 Unimodal histogram example

The "Gender" factor was dropped in Round Two since the panel had made it quite clear, through their "Neutral" bipolar responses, that gender was definitely not a factor in making their investment decisions (see Appendix N). It also appeared, from the panel's commentaries, that the bimodal factor "Heroes" covered the same ground as the factor "Leadership Style". They both encompassed the characteristics of an autocratic leader in comparison to a consensus-seeking one. Thus, the 11 bimodal factors were reduced to 9.

These 9 factors were interwoven with the 14 Likert-scale factors which had been rated above "Important" in the Round Two instrument response. Further analysis was made to arrive at a clustering logic for these combined 23 factors.

The nature of the open-ended comment responses from the panel on their Round One feedback led to one clustering factor. It was observed that all but 2 of the 16 added entrepreneurial leadership success factors dealt with the characteristics of the lead entrepreneur.

The next step in the clustering process was to remove the individual lead entrepreneur factors from both the open-ended question responses and the bimodal factors. It became apparent, then, that the remaining entrepreneurial leadership success factors could be sorted into two clusters, those which affected the internal environment of the enterprise or those which impacted on the external environment in which the company vies.

Thus, 3 cluster groupings were formed, each containing 6 factors, all in all representing the 18 most dominant, that is the

highest panel rated factors of the original 23. These 18 factors were used as a basis for the Round Three survey Instrument (see Appendix J). The clusters were identified as:

- A. The Venture Team
- B. The External Environmental Influences
- C. The Lead Entrepreneur

In summary, the Venture Team cluster contained most of the highest ranked, panel-determined entrepreneurial leadership success factors. The External Environmental Influences cluster factors were not so strongly rated in importance. The Lead Entrepreneur factors were dominated by those from the Panel's Likert-scale inputs of Round Two.

The Round Three Survey instrument contained the 3 main groupings of, what the panel considered to be the 18 most dominant entrepreneurial leadership success factors (see Appendix J). The statements in each group were ranked in the order of their importance as seen by the aggregate of the expert panel. As previously discussed, six of these statements were judged by the panel to strongly favor the characteristic at one end of the two ends of the scale, thereby resulting in unimodal factors.

Each panelist was asked to either concur or differ with the panel rankings. Twenty-five of the 27 panelists in Round Two did participate in the re-ranking of the three clusters containing the eighteen most dominant success factors. The panelists responses were weighted and re-ranked using: rank 1 as equal to 10 points; rank 2 to 9 points and so forth (see Appendix O).

There were some changes in the new weightings between previously ranked factors. In all but three factors, the ranking movements were not sufficient to change any of the rankings contained in the original Round Three survey instrument (see Appendix J). In each of the three exceptions the panel indicated equal importance to the factor ranked immediately below it, rather than maintain the hierarchical relationships contained in the original survey instrument.

In The Venture Team cluster, the panel thought that the factors "Performance/Reward" and "Adaptability" should have equal rankings. Similarly, in The External Environmental Influences Cluster, "Mentoring" and Problem Resolution" were deemed to be of equal importance. The most dominant factors of The Lead Entrepreneur cluster, "Self Concept" and "Intellectually Honest", were equally ranked as number one in that cluster.

Summary of the Findings

The three rounds of the Delphi Technique used in this study were prefaced by an extensive literature search with respect to the most dominant entrepreneurial leadership success factors in order to develop the contemporary positions of researchers in the fields of leadership, entrepreneurship and organizational Behavior.

The Round One survey instrument incorporated not only the highlights of the literature review, but also the advice of a three member venture capitalist expert Pilot Panel. Two iterations of these factors and the addition of others added by the panel resulted

in a final compilation of the 18 most dominant entrepreneurial leadership success factors (see Appendix O).

Of these, the most dominant factors under each cluster are presented in Table 7 with their associated average weighted rankings. These factors seem to send a clear message. That is one of a strong emphasis by sophisticated investors, such as those on this study's expert panel, in requiring that lead entrepreneurs and members of the venture team possess the basic human characteristics of realism and honesty.

An overall observation of this study's results was that effective entrepreneurial leadership must be tempered with adherence to ethical processes as the lead entrepreneur and the venture team go on the way to achieve their visions.

Table 7   The Most Dominant Entrepreneurial Leadership Factors
               (ranking weighting: 1=10; 2=9; 3=8; 4=7; 5=6; 6=5)

<u>Success Factors</u>	<u>Round Two Weightings</u>	<u>Round Three Weightings</u>
A. <u>THE VENTURE TEAM</u>		
ORGANIZATIONAL STYLE - A strong leader and an effective team <u>blend</u> to operate in a participative environment.	10.0	9.8
ETHICAL BEHAVIOR - Very strong adherence to ethical business practices.	9.0	8.8
B. <u>THE EXTERNAL ENVIRONMENTAL INFLUENCES</u>		
CONSTITUENT NEEDS - Organization needs are satisfied, in parallel with those of <u>the other publics</u> the enterprise serves.	10.0	9.3
PRIOR EXPERIENCES - Extensive prior experiences are effectively applied.	9.0	8.3
C. <u>THE LEAD ENTREPRENEUR</u>		
SELF CONCEPT - Has a <u>realist's</u> attitude rather than one of <u>invincibility</u> .	10.0	8.8
INTELLECTUALLY HONEST - <u>Trustworthy</u> , his/her word is his/her contract. <u>Admits</u> what and when he/she doesn't know.	9.0	8.8
PACEMAKER - Displays a high energy level, sense of urgency.	8.0	8.2

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Over one million new ventures are started each year in the United States. Each of their founders face the threat of early failure. By identifying to these founders and other new leaders of social or political causes, the most dominant entrepreneurial leadership success factors it might be possible to increase the probability of success for future endeavors. These failure avoidance actions would represent a huge economic gain for this country and others in stabilizing and increasing employment.

Over 75 characteristics of the lead entrepreneur and the venture team, which influence entrepreneurial leadership success, were isolated during the literature review. Some of these factors included previous experiences, capabilities of the team members to work effectively in both the inside and outside environments of the venture and the degree in which adherence to ethical behavioral practices influenced their success.

The expert panel identified the eighteen most dominant entrepreneurial leadership success factors through the use of this Delphi Technique process. These findings could serve as base for establishing a new paradigm.

Summary of the Study

During the last decade, over a million new enterprises were formed each year in the United States. Virtually all the country's net new jobs came from these and other newly formed ventures. During the first 8 years of that decade, the top 10% of all these new companies created 96% of the 17 million new jobs, while the Fortune 500 companies eliminated a net 3.1 million people from their payrolls. Yet 60% of new ventures fail within two years (Timmons, 1990b)

The purpose of this study was to attempt to lessen this failure rate by isolating the dominant leadership success characteristics of a typical early stage, high-growth potential venture. Thus discovered, these factors would focus the enterprise's tactics on improving its probability of achieving its original visions.

This emergent study avoided the classic pitfall of obtaining opinions on entrepreneurial leadership success from a subject base which is normally highly ego-biased, that is, successful entrepreneurs. Instead, 25 senior U. S. venture capitalists, who had had extensive experience in funding and monitoring enterprises of this type, agreed to serve as members of an anonymous Delphi Expert Panel.

The subject base was electronics industry focused through survey sponsorship by the American Electronics Association. Three iterative rounds were used to obtain a consensus on the most dominant entrepreneurial leadership success factors which the panel felt would enhance the probability of new venture success.

The 18 most dominant factors were isolated. When the 6 factors describing the characteristics of a lead entrepreneur were sorted from the rest, it became evident that the 12 remaining ones could logically be sorted into two additional clusters. These clusters were associated with the internal and external environments of the enterprise and were respectively named The Venture Team and The external Environmental Influences.

In a metaphorical sense, entrepreneurial leadership success was identified with a *troika*, a Russian vehicle pulled by three horses of equal strength. The vehicle was driven by the entrepreneur's *visions* and *dreams*. Like the vehicle, entrepreneurial leadership success cannot be easily pulled without adherence to all of the clusters and their success factors. One of the three clusters included those factors which were associated with the venture's cultural or internal environment. It was identified as "The Venture Team" success factor cluster. Its factors were, in order of importance:

1. ORGANIZATIONAL STYLE - The lead entrepreneur and his team must blend their efforts to establish and operate in a participative environment.
2. ETHICAL BEHAVIOR - A very strong adherence to ethical business practices must be in place..
3. FAITHFULNESS - Stretched commitments must be consistently met or bettered.
4. FOCUS - Long-term venture strategies must be kept in focus as tactics are varied in order to achieve them.

5. **PERFORMANCE/REWARD** - High standards of performance must be created and superior performance rewarded fairly.
6. **ADAPTABILITY** - There must be rapid responses to changes in product or technological cycles.

Another cluster, "External Environmental Influences" included success factors which enhanced the venture's interface with its outside environments, the venture's constituencies and its mentors. These were, in order of importance:

1. **CONSTITUENT NEEDS** - Organization needs must be satisfied, in parallel with those of the other publics the enterprise serves.
2. **PRIOR EXPERIENCES** - Extensive prior experiences must be effectively applied.
3. **MENTORING** - The competencies of others must be sought and used.
4. **PROBLEM RESOLUTION** - New problems must be effectively solved or prioritized as they arise.
5. **VALUE CREATION** - High commitment must be placed on long-term value creation for backers, customers, employees and other stakeholders.
6. **SKILL EMPHASIS** - Marketing skills must be stressed over technical ones.

The last, but not least, troika "puller" included success enhancement traits of the entrepreneurial leader and was called, "The Lead Entrepreneur". Here again an ethical element dominated the characteristics, one requiring intellectual honesty.

The factors were, in order of importance:

1. **SELF CONCEPT** - He/she must have a realist's attitude rather than one of invincibility.
2. **INTELLECTUALLY HONEST** - He/she must be absolutely trustworthy. One's word must be one's contract. One must admit what one doesn't know when one doesn't know.
3. **PACEMAKER** - He/she should displays a high energy level and sense of urgency.
4. **COURAGE** - He/she should be capable of making hard decisions, setting high goals and then implementing and meeting or exceeding them.
5. **COMMUNICATION SKILLS** - He/she must maintain effective dialogue with the venture team, with the marketplace, and with the external environmental influence organizations.
6. **TEAM PLAYER** - He/she must be competent in people management and team building skills.

Timmons (1990a) noted that entrepreneurial success was achieved by a blending of the lead entrepreneur's efforts and goals with the capabilities of his or her team. in other words, not solely by the contribution of the hero-type entrepreneur. Adding to Timmons tenet, this research suggested that the venture's interfaces with its external environments must also be mastered and was of equal importance to the "pull" of The Lead Entrepreneur and that of The Venture Team.

Success enhancement cannot take place without attention to all of the troika's pulling horses. Additional entrepreneurial

leadership success factor areas, which appeared to need future investigation, were also identified in the study.

Objectives of the Study

The major purpose of this study was to isolate those dominant entrepreneurial leadership success factors which might enhance the probability of a new venture's success. This required review of the literature in two disciplines whose major themes overlapped. They were the fields of entrepreneurship and leadership. Early researchers in both fields had concentrated their efforts on the traits and characteristics of the individual entrepreneur and/or leader in order to find a basis for replicating success.

Trait and characteristics emphasis had proven ineffective in fully describing Entrepreneurial and Leadership. It was generally agreed that each of these terms represent processes (Burns, 1978; Timmons, 1990b). The reason for the original shortcomings in defining these terms was believed to have been some researchers' adherence to the use of the scientific paradigm, a set of research rules requiring quantification of all research data. They missed the importance of the qualitative elements of these processes (Harman, 1988; Bygrave, 1990).

The efforts which led to this study's results and conclusions were guided by the following purposes:

1. To contribute to a better understanding of the entrepreneurial leadership process.

2. To aid new venture financing entities to improve in the selection of more successful ventures for their portfolios.
3. To help new venture founders be aware of the factors needed for their enterprise to succeed.
4. To suggest areas for continued research of the entrepreneurial leadership economic success factors and their possible extrapolation to other fields of human leadership.

Methodology

The research methodology which best satisfied the goal of isolating the most dominant entrepreneurial leadership success factors was the Delphi Technique. This methodology encompasses Lincoln & Guba's (1985) guidance for qualitative research, that is, an emergent, naturalistic process rather than one based upon the conventional scientific paradigm..

"Project Delphi" was the name of a research technique developed in 1953 by Dalkey and Helmer of the Rand Corporation (Helmer, 1983). The technique's goal was to develop a consensus, by the use of group processing, of the sampled opinions of each member of an expert panel. Once chosen, the experts were repetitively sampled, as they completed a current round and review a previous round's results. The panel really never met face-to-face. Because of this, the Delphi process has been often referred to as "an anonymous debate."

Although the Delphi Technique was developed to provide an optimal prediction of the timing of future events, it has found another important application, studying trends in social science phenomenon through its emergent process (Helmer, 1983).

There were some limitations in the use of the Delphi Technique. One concern involved the difference between the perceived experiences of the experts chosen for the panel and reality. Another limitation was the generalizability of the survey's results to industries other than electronics.

All in all, the use of the Delphi Technique provided several advantages over other qualitative methodologies. It preserved the anonymity of the panel members thus overcoming a number of potential psychological barriers when committees meet face-to-face. Each expert's views were stated without bias or the type of coercion normally encountered in open group meetings.

Results

The study's dominant entrepreneurial leadership success factors were logically sorted into three clusters of six individual factors each (see Appendix O). These clusters, were metaphorically represented by a "troika", a Russian vehicle pulled by the equal efforts of three horses. The *driver* was representative of the dreams and visions of the entrepreneur. The *vehicle* was entrepreneurial leadership success and the clusters were the horses who must exert equal pull in order to take the vehicle to its *success* destination.

The research suggested that equal attention must be paid to each cluster in order to fully enhance the probability of entrepreneurial success. The clusters and their factors provided answers to the original research questions to varying degrees. The original eight research questions and their responses from the results of the study, are discussed next (see Appendix N).

1. *Is the most effective entrepreneurial leadership manifested through the dominance of the entrepreneurial leader, an effective team, or both?*

This research indicated that the most successful leadership was brought about by the venture which incorporated a blending of the capabilities of the lead entrepreneur and the venture team as they had established and operated in a participative environment (Organizational Style factor).

High on the expert panel's dominant success factor rankings were the characteristic which described the leader's self concept as one of a realist rather than one of being invincible (Self Concept factor).

2. *To what extent does the previous successes or failures of the leadership group impact the success of a new venture?*

Here again, the voice of the expert panel strongly supported the position that the entrepreneur and his/her team benefit greatly from extensive prior experiences, which were effectively applied (Prior Experiences factor).

3. *How important is the venture's adherence to ethical behavioral practices to success?*

Of all the success factors commented on by the panel, none had more frequent mention or emphasis than that of absolute adherence to ethical business practices (Ethical Behavior factor).

4. *What should be the optimum sense of timing and priorities of the entrepreneur and his/her team? Is it better to have the team focus on meeting short-term goals and modify their original long-term visions? It is better for them to be proactive or reactive in meeting their commitments?*

The effective entrepreneurial team must pay equal attention to both short and long-term goals. The necessity to blend the strategic planning objectives of an enterprise with its corresponding tactical goals resulted in this question being considered by the panel as unipolar rather than the statement originally expressed on a short/long-term bipolar end point scale. (Focus factor)

The success factors, Pacemaker and Courage, included the desired combinations of doing things right now, in the framework of a strong conceptual base and having enough foresight to set hard but achievable goals over the long run.

5. *What role towards enhancing new venture success should outside mentors play, if any?*

Threaded throughout this study was the strong need for the entrepreneur and his/her team to seek help, in whatever guise possible, to supplement the normally limited corporate governance experiences of start-up venture personnel. This need was reflected in both the factor, "Constituent Needs" and the factor, "Mentoring".

6. *Should the entrepreneurial team's main focus be on internally maximizing the organization's success or should the needs of the other constituencies, which the organization serve, temper this focus?*

This question's main response came from one of the blended bipolar factor results of the study (Constituent Needs factor). The organizations needs must be satisfied in parallel with those of the other public's which the enterprise serves.

7. *What other research questions, not in the above, which may arise during the study, either from the literature review or the panel's responses to the open questions, should be answered?*

There were a number of suggested factors from the panel as a result of their responses to the open-ended question. Most of them were either duplicative or could be assimilated into one of the original bipolar factors. But one did stand out and was important enough to include in the first two Delphi survey instruments: "Does the gender of the entrepreneur(s) abet or deter success?"

This factor, as indicated by the comments from the Round One feedback, did not appear to have any influence on the Expert Panelist's criteria for a successful venture financing (see Appendix N). As a result the gender factor was not included in the subsequent survey instruments.

8. *Can the entrepreneurial leadership success factors, identified in this study, be sorted into logical clusters to form the basis for developing an entrepreneurial leadership paradigm?*

In the process of searching for a logical type of classifying algorithm for the study's final 18 most dominant entrepreneurial

leadership success factors, it became clear that if the 6 individual lead entrepreneur factors were removed from the group, the remaining 12 factors could be easily sorted into those which either affected the internal or the external environments of the enterprise.

This clustering effort resulted in the formulation of a basis for a new paradigm named the "Entrepreneurial Leadership Success Troika". The research suggested that the enhancement of venture success was equally influenced by each of the success factor clusters. They were identified as: The Lead Entrepreneur, The Venture Team and The External Environmental Influences.

Conclusions

Based on the results of this study, three major conclusions were drawn. The first and most important was the suggestion that entrepreneurial leadership success may be enhanced by paying equal attention to each of three "Entrepreneurial Leadership Success Troika" clusters, which contained the 18 most dominant success factors.

The second conclusion was that attention to the morality codes under which the enterprise operates was deemed significantly more important than other factors normally associated with success. The success factors "Ethical Behavior" and "Intellectual Honesty" appeared higher in the ratings than factors such as "Prior Experiences" and "Courage".

The heaviest weighted panel response factor was "Organizational Style". This factor was a blend of two sub-factors

which the panel had ruled to be mutually dependent, a "Strong Leader" and an "Effective Team". This finding was indicative of the need for a collaborative effort on the part of both the leader and his/her followers. Their effectivity was enhanced by adherence to other dominant factors such as "Faithfulness" and "Adaptability".

The role of mentors and mentoring, although reflected in the final 18 success enhancement factors, needs a great deal of further investigation. It is believed that a great majority of successful entrepreneurs have been buoyed up by mentors who have kept in the background of the enterprise. They might have reaped financial reward but cared not to share public recognition with the entrepreneur.

Implications of the Study

A continuation of the investigation of the nature of the "Entrepreneurial Leadership Success Troika" could lead to a number of research studies which focus on its success factors (see Appendix O). These articles could be used as a guide for enhancing new venture success for both entrepreneurs, entrepreneurial teams and the financing entities who provide capital to these very important elements of the U. S. economy.

One other benefit, arising from this study, was that an opportunity was created to suggest a concise definition of entrepreneurial leadership. The definition of leadership used at the start of this study was presented in Chapter I and is repeated below:

Leadership according to James MacGregor Burns was, "The reciprocal process of mobilizing, by persons with certain motives and values, various economic, political and other resources, in a context of competition and conflict, in order to realize goals independently or mutually held by both leaders and followers" (1978, p. 425). In refining this definition, Burns added, "The ultimate test of practical leadership is the realization of intended, real change that meets people's enduring needs" (p.461).

Similarly, Stevenson & Jarillo's (1990a) concise definition of entrepreneurship as reflected in, "An *entrepreneurial* organization was that which pursued opportunity regardless of resources currently controlled (Stevenson & Jarillo, 1990a)." was also incorporated into the definition.

Therefore, taking the results of this study as supporting structure, the new definition of entrepreneurial leadership would drop Rost's tenet that intended changes need not be realized in favor of Burn's position that they can. This is to say that both entrepreneurship and leadership were processes which should ultimately conclude when the principal visions of the entrepreneur or leader were satisfied.

The educative and ethical factors of the study were certainly congruent with the personal beliefs I have held in my 45 years of new venture experiences. Of the 38 enterprises I have been associated with over that period, I have only seen but one survive by cunning and guile over the long-term. The ethical and educative emphases arising from this study were also strongly supported by Foster (1986a & b) in his scholarly works on leadership

Ethical business dealings with all of the enterprise's constituents, in my experience and view, enhance not only the ease of doing business but weld all constituents together with a spirit of mutual trust and respect. For example, the remarkable successes of Hewlett-Packard, Inc.(1990) and S. C. Johnson & Sons, Inc.(1988) were built upon these tenets.

The educative element follows from the concept of empowerment as reflected in the entrepreneurial leadership success factors. They were reflective of the leader's "Communications Skills", "Team Player" attitude and "Courage" as the leader jointly sets up high goals with his/her team and eventually meets or betters them.

With the above in mind, this study yields a working definition of entrepreneurial leadership as:

Entrepreneurial Leadership is a value-creating process wherein new venture leaders and followers, without regard to the resources they presently control, have seized the opportunity to bring about a realization of their mutually held visions of change. The process takes place in an environment based on mutual trust, ethical behavioral practices and with an educative intent to empower the followers to become leaders.

Recommendations for Further Research

I believe that this was one of the few studies which has looked pragmatically at the interdisciplinary ties and overlaps between the

processes of entrepreneurship and leadership. Cross-discipline researching, such as that which was used in this study, appears to offer a rich source of different viewpoints to these multi-disciplinary processes.

During the three years of study which encompassed this research, I was oftentimes disheartened in my discussions of leadership with Business Administration faculty members. I was continuously surprised to find out that some of them thought of and taught leadership as just being one element of the management process. On the other hand, I found some of the Leadership faculty just as biased. A number of them continued to be outspoken about the entrepreneurship and business management processes being steeped in greed, avarice, fear and underworld practices.

It is very hard to penetrate set-in-concrete academic biases of this sort. It should be done.

Need to Develop Uniform Entrepreneurship Semantics

The 18 most dominant entrepreneurial leadership success factors suggest a rich number of potential areas for future research. One which comes quickly to mind is to continue this study, using the three cluster success factor definitions of the Entrepreneurial Leadership Success Troika (see Appendix O). A study which compares these results with the paradigms proposed by Bygrave(1989) and Stevenson & Jarillo (1990a) could lead to a very focused new entrepreneurial leadership paradigm.

Integrity and ethical business behavior factors ranked much higher in the clusters than I had expected. Further research in this area should bring more focus to the pragmatic links which tie ethics to entrepreneurial leadership. The entrepreneurial research literature was dominated with the concepts of value creation as the main entrepreneur's motivation. Yet value creation, from the expert panelist's rankings, came out relatively low on the success factors rankings. This concept needs more study to place it in a proper context with perhaps other more important entrepreneurial qualities.

Also, many attempts have been made to arrive at a uniformly agreed upon definition of both leadership and entrepreneurship, to no avail. Perhaps the entrepreneurial leadership synthesis which was presented in the conclusions section of this chapter could be expanded and circulated for consensus using an emergent methodology similar to one used in this study.

More research is needed on gender and ethnicity factors. As this nation and others of the world become more aged, educated and diverse, additional leadership problems continue to arise whose solutions must take into account these cultural issues.

Need for More Focus on Mentoring

One of the entrepreneurial leadership suggested spin off research areas was the exploration of the influence on new venture success when the leadership element of the team consists of more than one dominant individual. The responses of the Panelist to the

dominant success factors of "Mentoring" and satisfying "Constituent's Needs" was indicative that leadership may be evidenced by a number of individuals.

It is recognized that not all mentors of an enterprise may be leaders, but certainly, most venture capitalists consider themselves leaders when they serve on the Boards of Directors of their fledgling companies.

Mintzberg (1976) had suggested that leaders sometime act differently because their actions were guided by the domination of one or the other of their brain hemispheres. He made a strong case for relating the performance of visionary managers and that of effective planners to the respective brain hemisphere which controls each type of these activities. He indicated that individuals whose activities tend to be right hemisphere oriented best served as visionaries. They were extremely adept at establishing and maintaining effective relationships. On the other hand, individuals with left hemisphere dominance strived for orderliness. They created and adhered to logical process.

This "organization as a Brain" metaphor was very prevalent in the literature (Morgan, 1986). This metaphor may be holistically applied to the "brain" of a venture team to explain a possible shortcoming in achieving success. The metaphor suggested that a high technologist type entrepreneur (right hemisphere dominant) may not be capable or interested in carrying out all the transactional (left hemisphere dominant) leadership requirements of his/her new enterprise and thus may fail.

Research Summary Feedback to the Expert Panelists

This study could not have been completed without the advice and cooperation of the 25 expert senior venture capitalists representing that many investment firms across the nation. Each panelist agreed to participate in the study for many reasons, including first access to the study's results and conclusions.

They made up a very prestigious Delphi Expert Panel. The 25 participating firms, represented by the expert panelists, had invested close to \$5 billion in new venture start-ups and subsequent rounds of financing since their inceptions.

The demographics also showed that the average panelist has been in the industry for 15 years and had been with his current firm 11 years. He was either a senior general partner or officer of the partnership or corporation he represented and his average age fell into the 46 to 55 year-old category.

With regard to the panelists functional experiences, 50% had had financial backgrounds, followed by 28% in engineering, and 10% in marketing. All but one were degreed with 67% holding Masters in Business Administration degrees and 17% holding doctorates. Eight per cent of the remaining panelist had earned Master of Science degrees and an equal percentage, Bachelor of Science degrees.

The feedback report, promised each participating expert at the time when he consented to participate in this study (see Appendix C) satisfied one of the research objectives, that is, providing a guideline to investors in identifying which success factors should enhance the probability of his/her investment's success.

The narrative part of the report included the identification of the "Entrepreneurial Leadership Success Troika", the three different but equally powerful clusters containing the most dominant factors as viewed by the Panel.

The experts were informed that in making investment decisions, the probability of success could be enhanced if their investment "fact finding" or checklist criteria included

1. For The LEAD ENTREPRENEUR troika component:
  - a. Is the individual's self concept one of realism and not one of invincibility?
  - b. Does the lead entrepreneur's past history reflect trustworthiness? Has his/her word been his/her contract? Does he/she admit what and when he/she doesn't know?
  - c. Does he/she display a high energy level and sense of urgency? Has he/she had the courage to make hard decisions and set high goals, then meet or better them?
2. For THE TEAM troika component:
  - a. Is the leader backed up by an effective and experienced team with whom he/she works on a collaborative basis to achieve mutually set objectives?
  - b. Can it be absolutely verified that the team and their subordinates have adhered to and will continue to adhere to very high standards of ethical business practices?
  - c. Have all members of the team accepted the venture's long term strategies and have they been creative enough to employ varied tactics in achieving them?

3. For THE EXTERNAL ENVIRONMENTAL INFLUENCES troika component:

- a. Has the organization accepted that their needs must be satisfied in parallel with those of the venture's other constituencies? These include shareholders, customers, suppliers, community and other publics they serve.
- b. Do the members of the staff have prior experiences in all the functional skills which will be needed to achieve their long term visions?
- c. Has the competencies of others, outside the organization, been frequently sought? Make sure that the members of the enterprise do not believe they possess all competencies needed to achieve their goals.

I have been a participant in and/or have directed over 40 enterprises during 45 years of business experience. During that time, I have had four careers, Research Scientist, Corporate Executive, Venture Capitalist and most recently Entrepreneurship Academic. I was very pleased to find that the majority of caveats arising from this study of success enhancement factors were included in those which I endorse and have always included in my practice.

Further dissemination of information and exploration of the extremely important world wide entrepreneurial leadership phenomenon as well as abetting and aiding others in the creation of successful new enterprises, has been and will continue to be my passion.

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Appendix A

Major Literature Review Sources

Journal of Business Venturing - (1988-1991) - published bi-monthly in cooperation with the Snider Entrepreneurial Center, University of Pennsylvania and the Center for Entrepreneurial Studies, New York University

Frontiers of Entrepreneurial Research - (1984-1991) - published annually by the Center for Entrepreneurial Studies, Babson College.

Harvard Business Review - (1986-1991) - published bi-monthly by the Graduate School of Business Administration, Harvard University.

Entrepreneurship Theory and Practice - (1988-1991) - The official journal of the United States Association for Small Business and Entrepreneurship - published quarterly by Baylor University.

USASBE Proceedings 1988-1991 (Annual)

Journal of Small Business Management - (1986-1991) - Published quarterly by the West Virginia University Bureau of Business Research for the International Council for Small Businesses and the Small Business Institutes Directors' Association.

Academy of Management Publications

AMR (Review) 1988-1991 (Quarterly)

Proceedings 1988-1991 - Best papers from the annual conferences.

AMJ (Journal) 1988-1991 (Quarterly)

The Executive (Quarterly)

Dissertation Abstracts International's data base

ABI/Inform's data base

Appendix B
Pilot Survey Instrument

American Electronics Association **AEA**
P. O. Box 180520 Coronado, CA 92178-0520 (619) 437-4706

ENTREPRENEURIAL LEADERSHIP SURVEY - QUESTIONNAIRE #1

Consider a relatively new electronics venture which has shown some growth and will soon deplete its first round of venture capital financing. The enterprise is now preparing to seek a larger new round to finance its forecasted growth. Please place a check mark in the attribute statement box which most closely represents it as a factor in shaping your decision to participate in the subsequent financing.

**VENTURE SUCCESS IS ENHANCED IF THE FOUNDING
ENTREPRENEUR(S) :**

	Strongly Agree	Neutral	Strongly Disagree
believe that decision-making by consensus slows down the enterprise's progress.	☐	☐	☐
have the ability to create value.	☐	☐	☐
know how to structure effective use of planning and control tools.	☐	☐	☐
are mediators, negotiators rather than authoritarians.	☐	☐	☐
create a helpful, coaching and educative environment.	☐	☐	☐
have the capacity for sustained and intense efforts.	☐	☐	☐
perform all dealings with integrity and honesty.	☐	☐	☐

(CONTINUED) VENTURE SUCCESS IS ENHANCED IF THE FOUNDING ENTREPRENEUR(S):

	Strongly Agree		Neutral		Strongly Disagree
have a good understanding of cost behavior.	☐	☐	☐	☐	☐
know when to ask for outside aid from the Board and/or Consultants.	☐	☐	☐	☐	☐
develop behavioral flexibility in effectively dealing with different stakeholders and situations.	☐	☐	☐	☐	☐
attract and retain quality personnel.	☐	☐	☐	☐	☐
have the ability to respond to all changes.	☐	☐	☐	☐	☐
handle conflict resolution in an open manner asking for expression from all team members.	☐	☐	☐	☐	☐
have temporal agility, the ability to shift time horizons from shorter to longer term and vice versa.	☐	☐	☐	☐	☐

Other individual entrepreneurial attributes which you believe the successful entrepreneur(s) should have:

SUCCESS IS ENHANCED IF THE VENTURE TEAM:

	Strongly Agree		Neutral		Strongly Disagree
creates non-coercive influences over others, both within and without the enterprise.	☐	☐	☐	☐	☐
has partners who complement each other from the behavioral standpoints of both rationality and relationally.	☐	☐	☐	☐	☐
has an <u>exceptionally qualified</u> management and a <u>good</u> product.	☐	☐	☐	☐	☐
has a <u>good</u> management and an <u>exceptionally qualified</u> product.	☐	☐	☐	☐	☐
has a uniform orientation toward opportunity rather than control of acquired resources.	☐	☐	☐	☐	☐
has founders who have previously worked in the same organization.	☐	☐	☐	☐	☐
shows consistent profit/loss performance.	☐	☐	☐	☐	☐
has good budget and cost controls in place.	☐	☐	☐	☐	☐
displays good planning and cash flow visibility.	☐	☐	☐	☐	☐
knows what stage their market is in.	☐	☐	☐	☐	☐
recognizes the market opportunity.	☐	☐	☐	☐	☐

(Continued) SUCCESS IS ENHANCED IF THE VENTURE TEAM :

	Strongly Agree		Neutral		Strongly Disagree
knows how to maximize their growth potential.	☐	☐	☐	☐	☐
understands market niche concepts.	☐	☐	☐	☐	☐
is consistently recommitted to their vision and ideas.	☐	☐	☐	☐	☐
follows their business plan commitments.	☐	☐	☐	☐	☐
has mutual trust among its members.	☐	☐	☐	☐	☐
has multiple entrepreneur founders rather than the single entrepreneur hero of the past.	☐	☐	☐	☐	☐
has multiple entrepreneur founders who enable it to satisfy growth processes better than enterprises led by a single entrepreneur.	☐	☐	☐	☐	☐

Other successful venture team attributes which you believe are important to consider:

Appendix C

Panelist Consent Agreement

American Electronics Association **AEA**
P. O. Box 180520 **Coronado, CA 92178-0520** **(619) 437-4706**

AEA Venture Leadership Survey - Consent Agreement *

I understand that AEA is asking that I and other senior Venture Capital industry experts share our knowledge and experience as anonymous participants on a Delphi Technique survey panel and that the unanimity of the panel's opinions will serve as the research database for the Survey Director's doctoral dissertation and that:

1. The panelists who participate in the survey will have first access to the data base and the analysis and conclusions arising from it.
2. The purposes of this study are to develop a set of guidelines which should enhance the probability of success of AEA new venture company members, aid in a venture capital firms funding decision process, and focus the need for further research in the field of entrepreneurial leadership.
3. The identity of each panel member and his/her individual opinions will be kept anonymous by the Survey Director. Participation on this panel is completely voluntary and may be withdrawn at any time.
4. There is no apparent risk to any individual participant because only panel consensus data is pertinent to the conclusions arising from this research methodology.

I have read and understood the above and have also had, prior to my decision to participate, the opportunity to ask the Survey Director clarifying questions regarding the study. There is no agreement, written or verbal, beyond that expressed in this consent agreement.

Therefore, on the basis of the above, I give my consent to voluntarily participate in this research.

_____
 Venture Capital Industry Expert Panelist

Date:

_____
 Director, AEA Venture Leadership Survey

Date:

* The University of San Diego requires that each participant in faculty and dissertation research studies complete this consent agreement.

Appendix D

Round One Letter of Transmittal to Expert Panelists

American Electronics Association**AEA****P. O. Box 180520****Coronado, CA 92178-0520****(619) 437-4706**AEA Venture Leadership Survey

November 25, 1991

«DATA expert list»

«name», «title»

«firm»

«address»

«city», «state/zip»

Dear «nickname»,

You and other selected senior venture capitalists, throughout the nation, are being asked to serve as industry experts in AEA's Venture Leadership Survey. The survey has been designed to only require a small amount of your time.

The objective of this research is to arrive at an electronics industry consensus regarding the dominant leadership characteristics of an early growth stage venture which would help attract new capital and enhance success. The results of this research should be of great help in guiding your funding decisions. Copies of the survey results will be available, without costs, to the Venture Capital firms which participate in the Survey.

Most of you probably are familiar with the Delphi Technique, a research methodology developed by the Rand Corporation for the U. S. Department of Defense some years ago. The Delphi Technique fits this type of research very well as it encompasses an iterative opinion sampling of each member on an anonymous "Expert Panel" in order to arrive at a consensus of their opinions.

Pilot tests have indicated that the Delphi opinion survey form enclosed, and the two following it, can each be answered in thirty

minutes or less. The subsequent mailings will include feedback statistics showing the progress the panel is making towards obtaining a consensus regarding the leadership success factors of a high growth potential enterprise.

In addition to the formal survey results, the data gathered will also form the research base for my doctoral dissertation at the University of San Diego. Your patience will be appreciated in complying with the University of San Diego's requirement that all individuals involved in any faculty or dissertation research project formally agree to participate. The Expert Panelist's Consent Form will be found on Page 8 of the enclosure.

I've tried to make the completion of the ELEVEN opinion statements, contained in the enclosed Venture Leadership Survey form, simple. You are only asked to decide on where to place an "X" on the scale accompanying each statement. Of course, you may use the open question areas to pencil in any other individual or team leadership factors which you feel are equally or more important in influencing a later stage funding decision.

After you complete the Survey form, remembering to sign the Consent Agreement on its last page, please fold the form in half and place it in the enclosed self-addressed stamped envelope. It would be greatly appreciated if you send it back to me no later than December 16, 1991.

I sincerely welcome your involvement. If you desire any further information regarding this research project, please don't hesitate to call me at (619) 437-4706.

Best Regards and Happy 1991 Holidays,

Alan J. Grant, Survey Director
(AEA National Chairman, 1973)

enclosures:

Venture Leadership Survey form with Consent Agreement on page 8.
Return Self-addressed Stamped Envelope

Appendix E

Round One Delphi Survey Instrument

American Electronics Association **AEA**
P. O. Box 180520 Coronado, CA 92178-0520 (619) 437-4706

VENTURE LEADERSHIP SURVEY - EXPERT'S FIRST OPINIONS

A relatively new electronics venture has shown satisfactory growth and appears to be meeting the objectives of its first round of venture capital financing. The enterprise has asked your firm to participate in a larger new round in order to finance its forecasted growth.

Eleven of the possible decision factor considerations you might want to make have been selected as a result of a venture capitalist pilot study and an extensive literature review. You'll notice that, below the first clause of each factor statement, there is a horizontal scale. Below that scale and placed at either end are two sentence-completing phrases representing disparate viewpoints about that factor.

Please place a cross on each scale at a point where you believe a positive influence on your financing decision would occur. In addition, it would greatly enhance this research if you would note, in the open area at the end of each factor section, other related decision factors which you believe are also important. Please complete the following statements:

I WOULD BE FAVORABLY INCLINED TO PARTICIPATE IN THE NEXT ROUND OF VENTURE FINANCING.....

(1) .....if the achievements of the first round objectives had come about through a leadership style based on.....

....personal direction.

....consensus building.

Please note below any other leadership style considerations which you believe are as important in helping you to arrive at a funding decision:

I WOULD BE FAVORABLY INCLINED TO PARTICIPATE IN THE NEXT ROUND OF THE VENTURE TEAM'S FINANCING.....

(2) .....because I consider their.....

....minimal prior experience
as a positive factor in helping
to establish the venture's
teamwork and culture.

....extensive prior experience
very important for enhancing
the team's integration and
progress.

Please note below any other prior experience considerations which you believe are as important in helping you to arrive at a funding decision:

---

(3) .....if the entrepreneur(s) have displayed a self concept reflecting their.....

....invincibility towards the
possibility of failure.

....belief that success
is dependent on realism.

Please note below any other self concept considerations which you believe are as important in helping you to arrive at a funding decision:

I WOULD BE FAVORABLY INCLINED TO PARTICIPATE IN THE NEXT ROUND OF VENTURE FINANCING.....

(4) .....if the ethical environment of the enterprise has been based on.....

....a belief in doing whatever is necessary to satisfy the venture's objectives.

....placing high emphasis on following some industry wide acceptable code of conduct.

Please note below any other ethical considerations which you believe are as important in helping you to arrive at a funding decision:

---

(5) .....if the lead entrepreneurs are predominantly.....

....male.

....female.

Please note below any other gender considerations which you believe are as important in helping you to arrive at a funding decision:

**I WOULD BE FAVORABLY INCLINED TO PARTICIPATE IN THE NEXT
ROUND OF VENTURE FINANCING.....**

(6) .....if the original vision of the enterprise has been
consistently.....

....modified in light of
short term events.

....kept in long term focus.

Please note below any other vision considerations which you believe are
as important in helping you to arrive at a funding decision:

---

(7) .....if the commitments of the leadership have been.....

....modified at times in light
of other priorities.

....consistently met.

Please note below any other commitment considerations which you
believe are as important in helping you to arrive at a funding decision:

**I WOULD BE FAVORABLY INCLINED TO PARTICIPATE IN THE NEXT
ROUND OF VENTURE FINANCING.....**

(8) .....if previous attempts to solve new critical problems
appear to have been.....

....handled immediately
as they arose.

....placed in a priority queue
and eventually handled.

Please note below any other sense of priorities considerations which you
believe are as important in helping you to arrive at a funding decision:

---

(9) .....if the venture's leaders have been treating the needs of
the organization.....

....as top priority.

....on par with the needs of
other venture constituents.

Please note below any other empathy considerations which you believe
are as important in helping you to arrive at a funding decision:

I WOULD BE FAVORABLY INCLINED TO PARTICIPATE IN THE NEXT ROUND OF VENTURE FINANCING.....

(10) .....if the success of the new venture, up to now, can best be attributed to the.....

....dynamism of the individual entrepreneur.

....combined efforts of the entrepreneurial team.

Please note below any other individual-hero or team-hero considerations which you believe are as important in helping you to arrive at a funding decision:

---

(11) .....if the entrepreneurs and their team have.....

....been relying solely on their own competencies.

....sought and used the competencies of others.

Please note below any other mentoring considerations which you believe are as important in helping you to arrive at a funding decision:

Please add any additional leadership or behavioral factors, not included in the above, which you believe are of prime importance in arriving at your decision to participate in the next round of financing:

Perhaps you might share some thoughts on what new or changed leadership factors might appear dominant in the Venture Capital Industry of the early Twenty-First Century.

NOW, PLEASE TURN OVER TO PAGE 8 AND COMPLETE THE EXPERT PANELIST'S CONSENT FORM BEFORE YOU FOLD THIS DOCUMENT IN HALF AND PLACE IT IN THE SELF-ADDRESSED STAMPED ENVELOPE.

THANKS FOR COMPLETING THIS FIRST EXPERT OPINION SURVEY. YOU WILL SOON GET A STATISTICAL FEEDBACK ON ITS RESULTS AS WELL AS IDENTIFICATION OF OTHER FACTORS WHICH HAVE APPEARED DOMINANT FROM THE EXPERT PANEL'S COMMENTS.

Appendix F

Round One Follow-up Mailing (Postcard)

American Electronics Assn.
Venture Leadership Survey
P. O. Box 180520
Coronado, CA 92178-0520

Executive Assistant To

<u>American Electronics Association</u>	<u>AEA</u>
<u>AEA Venture Leadership Survey</u>	
(619) 437-4706	Dec. 13, 1991

Dear Executive Assistant,

We would be eternally grateful if you would help us by encouraging your Senior Venture Capitalist to spend a few minutes in placing his "X"s on the scales of the eleven questions contained in the Survey Form mailed to him on November 25. His expert opinions are really vital to the quality of this study.

Please enclose your business card in the return mailing.
Thanks, Have a happy holiday season!

,Exec. Asst. to the Dir.

Appendix G

Round Two Letter of Transmittal to Expert Panelists

American Electronics Association AEA
P. O. Box 180520 Coronado, CA 92178-0520 (619) 437-4706

AEA Venture Leadership Survey - Round #2

January 17, 1992

«name», «title»
«firm»
«address»
«city», «state/zip»

Dear «nickname»,

Your thoughtful response to our first survey round was greatly appreciated. This second round should require less of your time than the first round did.

Feedback statistics are included which indicate the progress you and the rest of the panel are making towards obtaining a consensus regarding the leadership success factors for a high growth potential enterprise.

As you know, the objective of this research is to arrive at an electronics industry consensus regarding the dominant leadership characteristics of an early growth stage venture. Copies of the survey results will be available, without costs, to the panelists who fully participate in the Survey.

I sincerely welcome and encourage your taking a few moments to help in this very important research. If you desire any further information regarding this research project, please don't hesitate to call me at (619) 437-4706. Please try to get the form back to me by January 31, 1992.

Best Regards,

Alan J. Grant, Survey Director
(AEA National Chairman, 1973)

Appendix H

Round Two Delphi Survey Instrument

American Electronics Association **AEA**
P. O. Box 180520 Coronado, CA 92178-0520 (619) 437-4706

VENTURE LEADERSHIP SURVEY - FEEDBACK ROUND #2

The first round statistical data feedback and the panel's prevalent commentary concerning Round #1's questions are included as Part A of this feedback round.

Part B on page 7 & 8 asks that you to complete a short checkoff of the relative importance of the panel's Round #1 open question responses regarding other important factors which influence today's leadership and those new factors which may be required in the 21st Century. .

PART A - OPPORTUNITY TO RECONSIDER YOUR ROUND #1 RESPONSES IN LIGHT OF THE OVERALL PANEL RESPONSES

The responses to the question on "experience" and that on "gender" showed a very narrow and peaked distribution. As such they need not be reviewed as the data satisfies the consensus requirement of this research.

The question on "vision" was deemed redundant by the Panel and has been dropped. Since the aim of the Delphi research process is to arrive at a consensus on each question, please take this opportunity to reconsider your original opinions (green arrows) against the panel's average opinions (black arrows) for the EIGHT remaining questions still needing panel consensus.

You will note that each questions is followed by a Panel Emphasis and/or Clarification statement. Please review these statements and their corresponding statistics before you decide where to put a revised X on each question scale. The mean value (vertical arrow) and percentile distribution of responses to the original eleven questions appear below.

Place a cross (X) on each scale at EITHER your original opinion point(green arrow) OR, in light of panel feedback, where you now believe the most positive influence on your financing decision would occur.

- (1) I would be favorably inclined to participate in the next round of venture financing if the achievements of the first round objectives had come about through a leadership style based on.....

Panel Emphasis and/or Clarification:

The model for this research asked that you consider a second round funding decision. The intent of this question was to solicit your feeling regarding funding a venture led by a "hero" type entrepreneur or one in which the leader had built up good venture team rapport.

Expert VC's Afterthoughts?

-
- (2) (PANEL CONSENSUS REACHED - see mean value and percentile distribution, below)

I would be favorably inclined to participate in the next round of venture financing because I consider their....

- (3) I would be favorably inclined to participate in the next round of venture financing if the entrepreneur(s) have displayed a self concept reflecting their.....

Panel Emphasis and/or Clarification:

Although a venture's leadership needs both of these characteristics. (an understanding of the realities of business combined with an unshakeable faith in one's own abilities), reality can not be rationalized by ego.

Expert VC's Afterthoughts?

- (4) I would be favorably inclined to participate in the next round of venture financing if the ethical environment of the enterprise has been based on...

Panel Emphasis and/or Clarification:

High personal standards of ethics rarely inhibit doing whatever is necessary for success. If these are not evident at the outset, you will have a disaster. There can be no compromise on ethics.

Expert VC's Afterthoughts?

(5) (PANEL CONSENSUS REACHED - see mean value and percentile distribution, below)

I would be favorably inclined to participate in the next round of venture financing if the lead entrepreneurs are predominantly.....

(6) (**DROPPED** - A number of panelists felt that the end points were not mutually exclusive!)

I would be favorably inclined to participate in the next round of venture financing if the original vision of the enterprise has been consistently.....

....modified in light of short term events.

....kept in long term focus.

(7) I would be favorably inclined to participate in the next round of venture financing if the commitments of the leadership have been.....

Panel Emphasis and/or Clarification:

Although the venture's leadership must have the flexibility to deal with short term problems and opportunities without losing sight of its long term goals, performance to commitments must be consistent.

Expert VC's Afterthoughts?

- (8) I would be favorably inclined to participate in the next round of venture financing if previous attempts to solve new critical problems appear to have been.....

....handled immediately
as they arose.

....placed in a priority queue
and eventually handled.

Panel Emphasis and/or Clarification:

If a new critical problem arises, it must be evaluated for immediate response or queuing. If it's only another problem that has arisen before, then it has to fit in the queue. Running a venture is a constant battle of prioritizing critical issues.

Expert VC's Afterthoughts?

- (9) I would be favorably inclined to participate in the next round of venture financing if the venture's leaders have been treating the needs of the organization.....

....as top priority.

....on par with the needs of
other venture constituents.

Panel Emphasis and/or Clarification:

All ventures are comprised of various constituencies; investors, customers, employees, management, vendors, etc.. The needs of each constituent must be treated as a #1 priority, although, in fact, these many varied and sometimes conflicting interests have to be simultaneously juggled and balanced for long term vision and value-creation aims. A good leader must balance all.

Expert VC's Afterthoughts?

- (10) I would be favorably inclined to participate in the next round of venture financing if the success of the new venture, up to now, can best be attributed to the....

Panel Emphasis and/or Clarification:

The model for this research asked that you consider a second round funding decision situation. The intent of this question was to solicit your feeling regarding funding a venture led by a "hero" type entrepreneur or one in which the leader had built up good venture team rapport. At some point the dynamism of the leader must give way to the effective collaboration of the team as the venture matures.

Expert VC's Afterthoughts?

- (11) I would be favorably inclined to participate in the next round of venture financing if the entrepreneurs and their team have.....

Panel Emphasis and/or Clarification:

Many ventures have been successful because of a leader/mentor relationship, principally provided by an outside director or VC. Many "hero" type entrepreneurs have difficulty in knowing what they don't know & what to do about it.

Expert VC's Afterthoughts?

PART B - YOUR OPINION OF THE RELATIVE IMPORTANCE OF THE OTHER LEADERSHIP FACTORS IDENTIFIED BY YOU AND YOUR PEERS IN THE ROUND #1 RESPONSES
(please place a check mark, ✓, in the appropriate boxes)

OTHER LEADERSHIP FACTORS

	Rarely Consider		Impor- tant		Extremely Important
1. Ability to handle oneself on one's feet in front of audiences.	☐	☐	☐	☐	☐
2. Possesses communication skills sufficient to deal with his venture team and marketplace.	☐	☐	☐	☐	☐
3. Displays high energy level.	☐	☐	☐	☐	☐
4. Capability of making hard decisions and then implementing them without procrastination.	☐	☐	☐	☐	☐
5. Intellectually honest.	☐	☐	☐	☐	☐
6. Competent in people management and team building skills.	☐	☐	☐	☐	☐
7. Ability to set high goals, then meet or exceed them.	☐	☐	☐	☐	☐
8. High commitment to long term value creation for backers, customers, employees and other stakeholders.	☐	☐	☐	☐	☐
9. Capability of creating very high standards of performance and rewarding superior performance.	☐	☐	☐	☐	☐
10. A high sense of urgency and strong conceptual thinking.	☐	☐	☐	☐	☐

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NEW FACTORS NECESSARY FOR TWENTY-FIRST CENTURY LEADERSHIP

OTHER LEADERSHIP FACTORS

	Rarely Consider		Impor- tant		Extremely Important
1. Capacity to add value by being sensitive to and participating in worldwide markets.	☐	☐	☐	☐	☐
2. Ability to deal with more complex regulatory, environmental and financial issues.	☐	☐	☐	☐	☐
3. More leadership emphasis on marketing skills rather than technical ones.	☐	☐	☐	☐	☐
4. Ability to create an environment demanding and sustaining fairness and equitable sharing of gains with other management.	☐	☐	☐	☐	☐
5. Ability to adapt to more rapid changes in product/technological life cycles.	☐	☐	☐	☐	☐
6. Horizontal organization structures will replace the current monolithic structures of American business.	☐	☐	☐	☐	☐

page 8

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Appendix I

Round Three Letter of Transmittal to Expert Panelists

American Electronics Association **AEA**
P. O. Box 180520 Coronado, CA 92178-0520 (619) 437-4706

VENTURE LEADERSHIP SURVEY - Round #3, Final Confirmation

February 18, 1992

«name», «title»
«firm»
«address»
«city», «state/zip»

Dear «nickname»,

This is the last step in the Delphi research process. I am pleased to report that panel consensus on all the factors was achieved as a result of your Round #2 re-considerations

Enclosed are three major groupings of the panel's selection of dominant entrepreneurial leadership characteristics. The six factors in each group are ranked in the order of their importance as seen by the aggregate of the expert panel.

Please take a few moments to either concur or differ with the panel rankings. The last page of this survey form asks that you provide demographic data so that an overall profile on the panelists and their organizations can be constructed. Again, you do not need to specifically identify yourself or your organization.

All panelists who have participated in all three Delphi rounds will receive the end results of this study. Please try to return the survey by February 29, 1992.

THANKS AGAIN FOR YOUR COUNSEL IN THIS IMPORTANT STUDY.

With Best Regards,

Alan J. Grant, Survey Director

Appendix J

Round Three Delphi Survey Instrument

**EXPERT PANEL CONFIRMATION OF ENTREPRENEURIAL
LEADERSHIP SUCCESS FACTORS**

(Please place your rank order opinions in the second column of each of the three groupings)

<u>Success Factors</u>	<u>panel's ranking</u>	<u>your ranking</u>
A. <u>Overall Group Cultural Characteristics</u>		
ORGANIZATIONAL STYLE - A strong leader and an effective team. <u>blend</u> to operate in a participative environment. *	<u>1</u>	_____
ETHICAL BEHAVIOR - Very strong adherence to ethical business practices.	<u>2</u>	_____
FAITHFULNESS - Stretched commitments are consistently met or bettered.	<u>3</u>	_____
FOCUS - Long term venture strategies are kept in focus but tactics are varied in order to achieve them. *	<u>4</u>	_____
PERFORMANCE/REWARD - High standards of performance are created and superior performance rewarded fairly and equitably.	<u>5</u>	_____
ADAPTABILITY - Responsive to rapid changes in product/technological cycles.	<u>6</u>	_____

Success Factors (cont.)panel's
rankingyour
ranking**B. Venture Team Interface Characteristics**

CONSTITUENT NEEDS - Organization needs are satisfied, in parallel with those of the other publics the enterprise serves. *

1

_____

PRIOR EXPERIENCES - Extensive prior experiences are effectively applied.

2

_____

MENTORING - The competencies of others are sought and used.

3

_____

PROBLEM RESOLUTION - New problems are effectively solved or prioritize as they arise.

4

_____

VALUE CREATION - High commitment is placed on long term value creation for backers, customers, employees and other stakeholders.

5

_____

SKILL EMPHASIS - Marketing skills are stressed over technical ones.

6

_____

C. Lead Entrepreneur(s) Characteristics

SELF CONCEPT - Has a realists attitude rather than one of invincibility.

1

_____

INTELLECTUALLY HONEST - Trustworthy, his/her word is his/her contract. Admits what and when he/she doesn't know.

2

_____

Success Factors (cont.)

	<u>panel's ranking</u>	<u>your ranking</u>
PACEMAKER - Displays a high energy level, sense of urgency and strong conceptual abilities.	<u>3</u>	<u> </u>
COURAGE - Capable of making hard decisions and setting high goals, then implementing and meeting or exceeding them.	<u>4</u>	<u> </u>
COMMUNICATION SKILLS - Maintains effective dialogue with the venture team, in the marketplace, and with other venture constituents.	<u>5</u>	<u> </u>
TEAM PLAYER - Competent in people management and team building skills.	<u>6</u>	<u> </u>

* - These were originally bipolar factors. They were blended into one statement because their subfactors were not mutually exclusive.

Appendix K

Round Three Panel Mailing Follow-up FAX

American Electronics Association **AEA**
P. O. Box 180520 Coronado, CA 92178-0520 (619) 437-4706

FAX COVER SHEET

DATE: March 6, 1992

TO: «DATA Expert List - RD #2»
«name», «title»
«firm»
«address»
«city», «state/zip»

FAX #:

FROM: Alan J. Grant, Survey Director - FAX # (619) 437-4738

PAGES: 5 (Including Cover Sheet)

MESSAGE: Dear «nickname»,

We really need your help ! The enclosed FAX is a copy of the final survey questionnaire, sent to you recently, for this very important research. It should take less than ten minutes to complete. Your input is very important.

Please FAX your response back to me at

(619) 437-4738

THANKS !

signature

Appendix L

Panelist Demographic Questionnaire

American Electronics Association **AEA**
P. O. Box 180520 Coronado, CA 92178-0520 (619) 437-4706

(These data need only be approximate. They will be solely used to arrive at a composite demographic profile of the Delphi Expert Panel.)

VENTURE CAPITAL FIRM'S BACKGROUND

Type of Firm: L.P. ____, Corp. ____, Feeder Fund ____, Other ____

Starting Year : ____; **Number of G. P.s/Officers:** ____

Capital Under Mgt.:(\$millions): ____, **Geog.Prefs.:** ____

Approximate Number of Deals Made:

Since Start: ____; **% Electronics Related:** ____

During 1991: ____; **% Electronics Related:** ____

Approximate Electronic Portfolio Success Distribution (%):

ROI > 5X: ____, **Unsuccessful:** ____, **Living Dead:** ____.

VENTURE CAPITAL EXPERT'S BACKGROUND

Title ____; **Age:** 25-35 ____, 36-45 ____, 46-55 ____, > 55 ____

Expert's Years as V.C.: ____, **With Current Firm:** ____

% of Total V.C. Experience in Electronic Deals: ____

Major Functional Experience: ____; **Highest Degree:** ____
 (engineering, marketing, finance, operations, other)

Appendix M

Round One Response Statistical Analyses

1. Leadership Style (Mean = 4.8, Std. Dev. = 1.9)

2. Prior Experiences (Mean = 8.4, Std. Dev. = 1.0)

3. Self Concept (Mean = 7.4, Std. Dev. = 2.4)

4. Ethical Behavior (Mean = 7.9, Std. Dev. = 2.0)

5. Gender (Mean = 4.6, Std. Dev. = 0.8)

6. Importance of Vision (Mean = 6.5, Std. Dev. = 2.0)

7. Commitment Faithfulness (Mean = 7.2, Std. Dev. = 2.0)

8. Sense of Priorities (Mean = 3.0, Std. Dev. = 2.3)

9. Constituent Empathy (Mean = 3.9, Std. Dev. = 2.5)

10. Individual/Team as Heroes (Mean = 6.3, Std. Dev. = 1.9)

11. Mentoring (Mean = 7.4, Std. Dev. = 1.5)

Appendix N

Round One Panel Responses

(The format of the Round One Survey Instrument is repeated below, **bold faced**, with the addition of the statistics and comments from the 29 experts on the panel. The numerical values of the mean responses are indicated to the right of the mean position arrow on each scale; the standard deviations are in parentheses.)

**I WOULD BE FAVORABLY INCLINED TO PARTICIPATE IN THE
NEXT ROUND OF VENTURE FINANCING.....**

**(1) .....if the achievements of the first round objectives had
come about through a leadership style based on.....**

...other "leadership style" considerations:

- #14 - Consensus building indicates to me a leader. Personal direction is OK when small but must change as a firm grows.
- #13 - Successful early stage ventures very often proceed on the basis of the determination and drive of a single individual who, above all, has acquired the knowledge base to start the business. One does look for his ability to persuade his associates as to the direction their joint efforts must go.
- # 9 - The leader has to be able to "sell" his idea to the rest of the management team such that they buy into the plan with conviction.
- # 6 - Size of Market. Product Niche, Follow-on products.
- # 2 - I don't see these as mutually exclusive. Some of the best do both. If forced to pick one, I'd go with personal direction, but I assume that includes knowing when to build commitment and teamwork and when to make a decision that doesn't have time for consensus building.

(1) cont.

- # 1 - This is a very difficult aspect to measure. Another measure could be: Management team is in place and have collectively bought into the business plan.
  - #20 - Personal direction and leadership exerted by the President are key but in most ventures today a team needs to be broader than one person's capabilities can offer.
  - #15 - Strong direction, leadership and focus are needed at this early stage. Attempts to manage start-ups through consensus usually result in wishy-washy results.
  - #22 - A meld of pers. dir. & cons. bldg. is required in early stage hi tech ventures. After head count passes 30 or 40 pers. dir. becomes dominant quality.
  - #24 - Conviction. Confidence.
  - #25 - I look for strong leadership in each of the functional areas. - CEO, sales, marketing, operations and finance. The leaders must be strong, but flexible and able to listen and quickly adept to changing conditions.
  - #26 - Doesn't matter. The key is the results and having everyone understand which style is being used.
  - #28 - Ability of CEO to attract strong people.
Willingness of the CEO to delegate.
-

(2) .....because I consider their.....

....other "prior experience" considerations:

- #14 - Prior experience in launching products, market knowledge, judgment of competition.
- #13 - The professional qualifications and past business record are very important ingredients in your decision.
- # 6 - Success ratio.
- # 2 - Especially in start-ups and early stage.
Same market/distribution and technology area.
- #20 - Prior experience is key because most ventures are into existing industries. Occasionally a new industry is born & prior experience is simply not available.
- #15 - In depth knowledge of customers, markets and competition must be in place from the start. No time for on the job training.
- #19 - Previous experience should have been "successful".
- #22 - I don't give much weight to the guy who has founded co. A and made a bundle and now wants to do Co. B.

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(3) ....if the entrepreneur(s) have displayed a self concept reflecting their.....

....other "self concept" considerations:

- #13 - One looks for a belief in success in almost religious terms. Realism comes later.
- # 6 - Existence of overall management team.
- # 2 - Pretty obvious.
- # 1 - Personal confidence that storms can and will be weathered.
- #20 - And -- they are willing and eager to accept help & input from others and happy to "buy" rather than "make" if it is available.
- #15 - Short term shifts in strategy are inevitable. Only fools try to rationalize reality. Both cash and time are usually limited. Successful start ups can rarely accommodate an ego trip.
- #22 - Must have conviction. Ability to eliminate barriers.
- #25 - One really needs both of the above characteristics - an understanding of the realities of business, combined with an unshakeable faith in one's own abilities. (Plus an understanding of one's own weaknesses.)

-----

(4) ....if the ethical environment of the enterprise has been based on.....

....a belief in doing whatever is necessary to satisfy the venture's objectives.

....placing high emphasis on following some industry wide acceptable code of conduct.

....other "ethical" considerations:

#14 - I will not deal with unethical people. However, what is "traditional" in an industry must always be questioned in a new venture.

#13 - High personal standards of ethics very rarely inhibit doing whatever is necessary for success. If these are not evident at the outset, you will have a disaster.

6 - The industry in which the enterprise participates must be one that contributes to the ethical environment of the community in which it lives.

2 - Is there really any other long term choice?

#20 - Life is too short!

#19 - "Industry accepted code of conduct" may well be not acceptable.

#25 - No compromises on ethics.

#26 - Deliver what you commit whenever within your control.

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(5) .....if the lead entrepreneurs are predominantly.....

...other "gender" considerations:

- #14 - Not important --- it is personal individual experience, ability, etc. that counts.
  - #13 - I have little experience in dealing with very successful women in business.
  - # 9 - My attitude about this would be influenced by the industry involved and the prevailing mores within that industry.
  - # 7 - I seek political correctness in my answer -- so will your other respondents.
  - # 2 - Doesn't matter!
  - #20 - No preference.
  - #15 - I am indifferent. What you look for is talent.
  - #19 - This relates to necessity for successful prior experience. Males are more likely to have had this.
  - #22 - Male wins if venture is product based. Neutrality prevails if it is software or mainly marketing & distribution.
  - #24 - Don't care. No factor.
  - #25 - Both have made money for us.
  - #28 - But gender would have an influence as it relates to the rest of the team.
-

(6) ....if the original vision of the enterprise has been consistently.....

....other "vision" considerations:

- #14 - Need a balance, but give priority to long term so long as the vision is correct.
- #13 - A clarity of purpose and objective is always most important; but the bottom line is a good organization can create success by going in a new direction. An organization has to be very strong to do this.
- # 6 - Hard question! Must have the flexibility to deal with short term problems and opportunities without losing sight of long term goals.
- # 3 - You have to do both.
- # 2 - I know of no highly successful venture that did not shift or modify strategy in the face of market and competitive realities. These(end factors) aren't mutually exclusive. Can't answer it(this question).
- #20 - A long term vision is very appealing but things change. The vision must be broad enough to maintain its integrity as the details change.
- #15 - Both of these qualities are required; and I do not see them as antithetical.
- #19 - The balance is critical.
- #22 - 1-2 years outcomes seldom resemble business plans.

(6) Cont.

#25 - The "vision" should be success of the company. If the market tells management to change direction, they should be able to.

#28 - Shifting focus has generally led to sub optimal performance.

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(7) ....if the commitments of the leadership have been.....

....other "commitment" considerations:

#14 - Need to focus on a modest number of targets -- don't get too scattered in an early stage company.

#13 - Excuses are not a good tool in raising capital.

6 - Hard question! Must have the flexibility to deal with short term problems and opportunities without losing sight of long term goals.

#20 - A commitment is a commitment, certain things which are out of management control should be viewed as commitments.

#28 - Management must strive, but investors must be realistic and understand that not all goals are achievable.

- (8) ....if previous attempts to solve new critical problems appear to have been.....

....handled immediately
as they arose.

....placed in a priority
queue and eventually
handled.

....other "sense of priorities" considerations:

- #13 - Today is ten times more important than tomorrow.
  - # 3 - Depends on how critical the problem is.
  - # 2 - If it's a new critical problem, it can't wait in the queue. If it's only another problem, then it has to fit in the queue.
  - # 1 - If and only if the definition of "new critical" does not become a crutch.
  - #20 - Running a venture is a constant battle of prioritizing critical issues. Most need to be handled immediately for efficiency reasons.
  - #19 - Solving problems quickly is an absolute requirement for entrepreneurial success.
  - #22 - If the market is big enough to allow for a \$30M+ company in three years.
  - #25 - If the problem is truly critical, it must be responded to immediately.
-

- (9) ....if the venture's leaders have been treating the needs of the organization.....

....as top priority.

....on par with the needs of other venture constituents.

....other "empathy" considerations:

- #14 - I like co-investors that "work" a deal and add value.
  - #13 - Evidence of flexible response.
  - # 6 - Venture teams capabilities in the industry of the enterprise.
  - # 3 - There needs to be a healthy balance, but needs of the organization must come first in the minds of the entrepreneurs.
  - # 2 - To me the trick is to have each constituency believe it is the #1 priority while in fact, the many varied and sometimes conflicting interests are simultaneously juggled and balanced for the long term vision and value-creation aim.
  - # 1 - Needs of customers take high priority.
  - #20 - A venture is comprised of various constituencies; investors, customers, employees, management, vendors, etc. A good leader must balance all.
  - #19 - Balance is the operative word.
  - #22 - I don't understand "venture constituents" ?
  - #26 - I do not understand what you mean? (constituents)
-

- (10) .....if the success of the new venture, up to now, can best be attributed to the.....

....other "individual-hero or team-hero" considerations

- #14 - In a small firm the CEO is critical.
- #13 - At some point the dynamisms of the leader must give way to the effective collaboration of the team as the venture matures.
- # 2 - High quality, compatible team members; Culture of one-for-all and all-for-one.
- Shared equity incentives. Widespread performance based equity incentives.
- #20 - A dynamic leader sells better but a good team works better over the long term.
- #19 - The dynamic entrepreneur is the one who achieves the highest degree of combined effort of his team.
- #25 - I like a strong leader, but want to see depth in management.
-

(11) ....if the entrepreneurs and their team have....

....been relying solely on
their own competencies.

....sought and used the
competencies of others.

....other "mentoring" considerations:

- # 6 - Boards of Directors should be constituted so as to be able to make a major contribution.
- # 3 - Depends on what they need and how much of it they are capable of handling themselves. Some teams need more help than others.
- # 2 - The key is: do they know what they don't know and what to do about it?
- #20 - Also important to be willing to buy parts of the product rather than build it all in house if possible. i. e. Focus on what you are really good at.
- #19 - Knowing whom to consult and when is difficult and important.

Please add any additional leadership or behavioral factors, not included in the above, which you believe are of prime importance in arriving at your decision to participate in the next round of financing:

- #14 - I always look for a sense of urgency and strong conceptual (strategic) thinking ability in the CEO.

He also needs the communication skills to deal with his team and the market place.

Additional factors (cont.)

- # 9 - Toughness with fairness.
 Articulativeness
 Ability to handle oneself on ones feet in front of an audience.
 Energy level
 Ability to raise capital
- # 7 - The dilemma of studying leadership is that successful leaders are, in the end, people who create success in organizations. All leadership styles have succeeded and have failed depending on circumstances.
- # 6 - Marketing relationships.
 Competitive reactions.
- # 3 - Intellectual honesty.
 Capable of making hard decisions, like lay-offs, and implementing them without procrastination.
- # 2 - Integrity/ethics
 People mgt./team building skills: do people love to work there?
 Creating very high standards of performance and rewarding superior performance.
 Ability to set high goals and then meet/exceed consistently.
 High commitment to value-creation long-term for customers, backers, personnel and other stakeholders.
- # 1 - Being cognizant of building equity value on a long term basis. Many people are good operating managers, but do not understand equity.
- #22 - Intelligence. Track record - accomplishments. Leadership skills.

(Other Factors) Cont.

#28 - Ability to recruit excellent people; inspire subordinates; explain concept and strategy.

Anticipating (rather than reacting to) problems.

#29 - Able to attract and hold top talent.

Has a vision and puts his team in a position to achieve.

Is action rather than reaction oriented.

Full of enthusiasm and a motivator of people.

Perhaps you might share some thoughts on what new or changed leadership factors might appear dominant in the Venture Capital Industry of the early Twenty-First Century.

#14 - More knowledge and ability to deal on a worldwide basis.

Ability to deal with more complex regulatory, environmental and financial issues worldwide.

#13 - The emergence of marketing expertise overshadowing technical expertise has characterized investing in the last decade. I guess this trend will continue.

7 - I've had my best luck with leaders who are admired and respected by their workers. Often they have glamour -- some special charisma or mystery. Even the clever follow such leaders.

6 - To some extent I believe that the monolithic structure of American business will give way to more horizontal structures. That might even include shareholders and suppliers.

(21st Century factors) Cont.

2 - Can they add value beyond the money.

An insistence on fairness and equitable sharing of gains with management i. e. not unduly abuse the inherent power advantage of money source.

Zero or fixed management fees and quite graduated carry based on ROR so they just don't get rich on management fees on large deals with mediocre to weak returns

Capacity to add value on assessing foreign markets.

1 - Adapting to change. Product/technology life cycles change rapidly.

#20 - Communications is increasingly important. Managing both interpersonal and organizational communications is key because the organization is spreading to subcontractors, temporary employees, strategic partners, etc.

#29 - More marketing - less technology oriented.

Worldly in scope and networking.

Appendix O

Round Three Panel Weighted Response Comparisons

<u>Success Factors</u>	<u>Weighted Round #2 Responses</u>	<u>Weighted Round #3 Responses</u>
A. <u>The Venture Team</u>		
ORGANIZATIONAL STYLE - The lead entrepreneur and the venture team <u>blend</u> to operate in a participative environment.	10.0	9.8
ETHICAL BEHAVIOR - Very strong adherence to ethical business practices.	9.0	8.8
FAITHFULNESS - Stretched commitments are consistently met or bettered.	8.0	7.4
FOCUS - Long term venture strategies are kept in focus but tactics are varied in order to achieve them.	7.0	7.1
PERFORMANCE/REWARD - High standards of performance are created and superior performance rewarded fairly and equitably.	6.0	6.0
ADAPTABILITY - Responsive to rapid changes in product/technological cycles.	5.0	6.0
B. <u>External Environmental Influences</u>		
CONSTITUENT NEEDS - Organization needs are satisfied, in parallel with those of <u>the other publics</u> the enterprise serves.	10.0	9.3
PRIOR EXPERIENCES - Extensive prior experiences are effectively applied.	9.0	8.3
MENTORING - The competencies of others are sought and used.	8.0	7.4

<u>Success Factors (cont.)</u>	<u>Weighted Round #2 Responses</u>	<u>Weighted Round #3 Responses</u>
PROBLEM RESOLUTION - New problems are effectively solved or prioritize as they arise.	7.0	7.4
VALUE CREATION - High commitment is placed on long term value creation for backers, customers, employees and other stakeholders.	6.0	7.0
SKILL EMPHASIS - Marketing skills are stressed over technical ones.	5.0	5.3
C. <u>The Lead Entrepreneur</u>		
SELF CONCEPT - Has a <u>realists</u> attitude rather than one of <u>invincibility</u> .	10.0	8.8
INTELLECTUALLY HONEST - <u>Trustworthy</u> , his/her word is his/her contract. <u>Admits</u> what and when he/she doesn't know.	9.0	8.8
PACEMAKER - Displays a high energy level, sense of urgency.	8.0	8.2
COURAGE - Capable of making hard decisions and setting high goals, then implementing and meeting or exceeding them.	7.0	7.6
COMMUNICATION SKILLS - Maintains effective dialogue with the venture team, in the marketplace, and with other venture constituents.	6.0	6.1
TEAM PLAYER - Competent in people management and team building skills.	5.0	5.6