

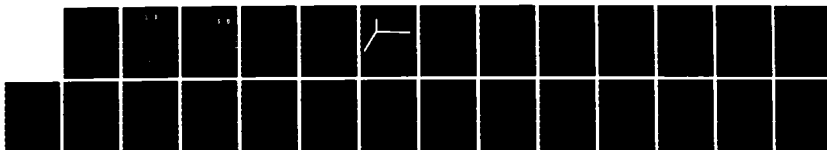
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PROGRESS REPORT ON
THE MINNESOTA INNOVATION RESEARCH PROGRAM
March, 1986

Andrew H. Van de Ven and Associates
University of Minnesota

Discussion Paper #51

THE STRATEGIC
MANAGEMENT
RESEARCH CENTER



UNIVERSITY OF MINNESOTA

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PROGRESS REPORT ON
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University of Minnesota

This report summarizes the progress of a major program of thirteen longitudinal studies on the management of innovation being undertaken by 34 faculty and doctoral students at the University of Minnesota. The research program is supported, in part, by a major grant from the Office of Naval Research (Code 4420E), under contract No. N00014-84-K-0016. Additional research support is being provided by 3M, IBM, Honeywell, Control Data, Cenex, Dayton-Hudson, First Bank Systems, Bemis, Dyco Petroleum, Magnetic Controls, Farm Credit Services Corporations, Bush Foundation, and Hospital Corporation of America.

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21. ABSTRACT (Maximum on reverse side of abstract card; identify by block number) The paper describes the progress of a major research program of 13 longitudinal studies on the management of innovation being undertaken by 34 investigators at the University of Minnesota. Begun in 1983, the investigators are tracking a wide variety of innovations while they are being developed and until they are implemented or terminated. This report also references the 75 research papers produced by the program for publication and conferences, and they are available upon request.		

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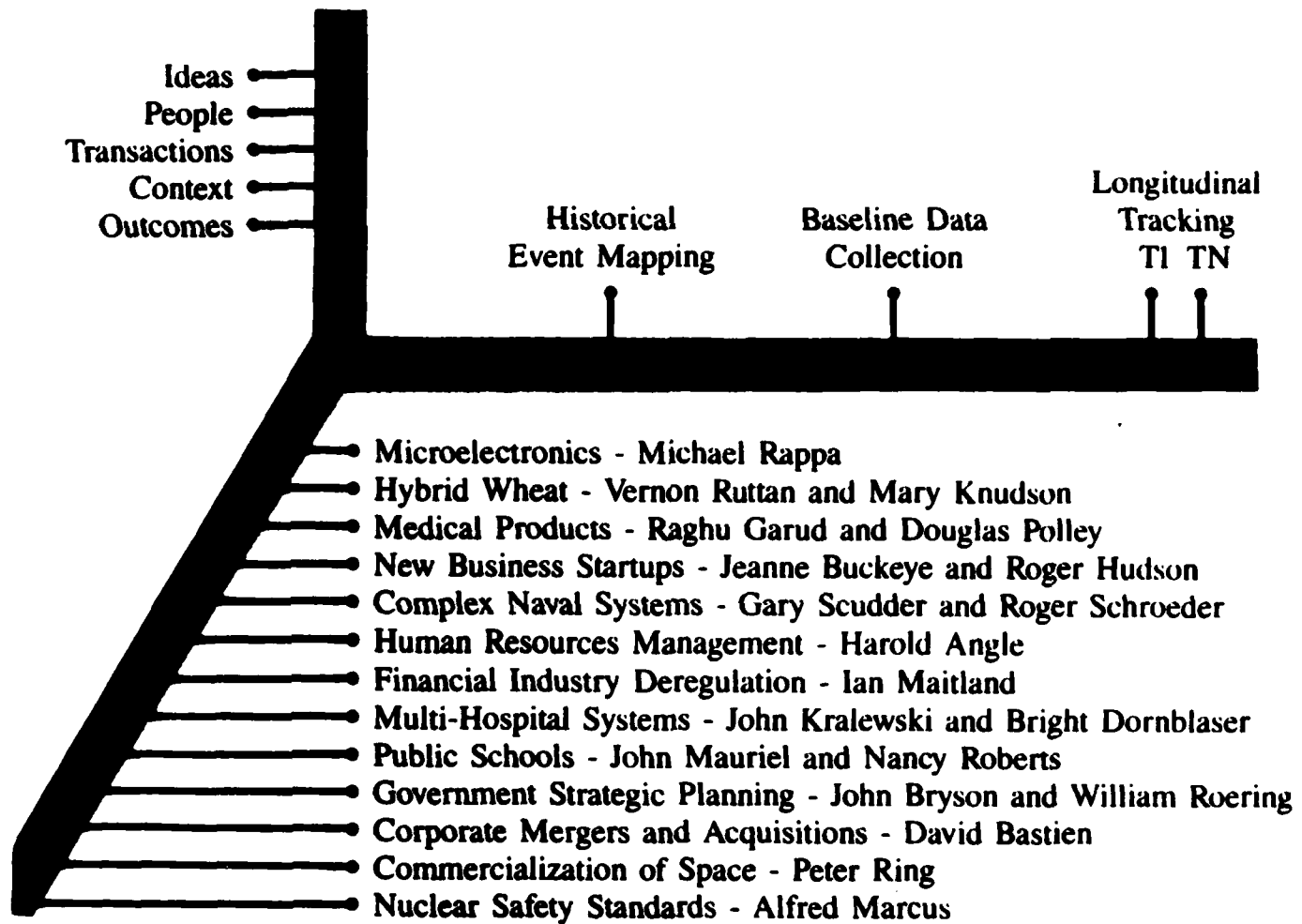
**Andrew H. Van de Ven and Associates
University of Minnesota**

Since this research framework has been described at length by Van de Ven (1986), it will be only briefly summarized here. The core framework centers on five basic concepts: ideas, people, transactions, context, and outcomes. In a nutshell, the process of innovation is defined as the evolution of innovative ideas which are carried by people who engage in transactions with others over time within an institutional context. Significant changes in these factors represent an event. A systematic mapping of events and their outcomes over time has been the central task for all studies in the innovation research program.

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Minnesota Innovation Research Program



Three key questions are being examined in all the innovation studies:

1. How do innovations develop over time? We wish to know how innovative ideas actually emerge over time -- including their inception, development, testing, adoption, and diffusion stages.
2. What forms of organization and management facilitate and inhibit innovations over time? As much as possible, we wish to compare different organizational settings for innovation: new business startups, corporate sponsorship of new businesses, inter-organizational ventures, mergers and acquisitions, and internal corporate entrepreneurship.
3. What individual, group, organizational and environmental factors influence the innovation process and success over time? In other words, we believe it is important to take multiple organizational levels into account to understand the process of innovation over time.

Answers to these questions can have significant impact on theory and practice. To our knowledge, no research program has carefully examined these questions over time. As a result, we know very little about the intended and unintended consequences of a variety of theories and prescriptions that have been offered to address these questions.

Three overlapping stages are being undertaken to conduct the innovation studies. Depending on the innovation, the time periods indicated below vary for these stages.

1. From January to May 1984 pilot studies were conducted to become familiar with each kind of innovation, to obtain access to specific sites to study the innovation, and to search for additional funding (beyond that provided by the ONR grant) as needed to conduct each longitudinal study.
2. During summer and fall, 1984, case histories and baseline data were obtained on each innovation. The case histories provide a mapping of events leading up to the present longitudinal studies of the innovations. The baseline information provides a broad measure of the institutional setting in which the innovation takes place. Information is based on published reports, interviews, and questionnaires.
3. The longitudinal tracking of the innovations begins as soon as it has become clear what specific aspects of each innovation should be studied over time and access to organizational sites has been obtained. Specific data

collection instruments were devised during winter, 1984. These instruments consist of on-site observations, interviews, questionnaires, and records to study the innovations as they develop over the next three (or more) years. Depending on the innovation, data collection occurs every 6 - 9 months.

Confidentiality of all information obtained is promised, and no individual or organization will be identified in any report unless explicit written permission is granted by those individuals or firms. Organizations which participate in the research are given repeated opportunities to participate in designing and conducting the research, and in receiving periodic feedback as the longitudinal research progresses over the years. Local and national expert review panels are also used each year to evaluate and redirect the innovation research studies. The research is disseminated through research monographs, scientific working papers, journal articles, and presentations at professional and scientific conferences (see appendix).

1986 Plans for the Research Program

There are three major objectives for the Minnesota Innovation Research Program during 1986.

1. Continue to track developments in the ideas, people, transactions, contexts, and outcomes of the innovations under study over time. These continued field observations are absolutely essential to this longitudinal research program in order to observe processes and outcomes of the innovations as they develop, and to determine what factors lead to innovation success or failure.
2. Analyze longitudinal data and understand the findings within and across studies in order to both test and develop specific theories and propositions about the management of innovation. Many specific propositions have already emerged in the bi-weekly meetings of the program investigators, which in turn, have have resulted in many subsequent research papers and conference presentations on the management of innovation (see bibliography).
3. Document, discuss, and re-examine longitudinal research findings with scholarly and practitioner communities. It is

often said that "if research terminates with a report, learning commences with discussion and reassessment of the findings." Four major activities are regularly scheduled to promote learning from this ongoing research program:

- a. Biweekly meetings of program investigators to share their preliminary findings and papers before they are ready for presentation to a public audience.
- b. In October 1985 we conducted the first of an annual series of one-day workshops on research program findings with practitioners from the organizations in which studies are being conducted. The workshop provides a unique opportunity to identify, share, and discuss the common themes, problems, and issues on the management of innovation that are emerging across studies in the program.
- c. A major conference on The Management of Innovation has been scheduled for May, 1987, at which major perspectives and findings from the research program will be presented and discussed with leading innovation scholars and practitioners from throughout the country. Agreement has been reached with Pitman Publishing Company to publish the proceedings from this conference for a broader audience.
- d. A second book, focusing on the innovating process is also being planned and underway. It will consist of research cases which track the historical and real-time development of the innovations being studied in this longitudinal research program. When rough drafts of cases are written (several are already completed), a workshop will be held among case authors, scholars, and practitioners to identify common themes on the process of innovation.

SUMMARIES OF THE INNOVATION STUDIES

Flexibility has been built into the Minnesota Innovation Research Program to encourage each research team to investigate questions and issues unique to each innovation. Summaries of the unique questions, approaches, and progress of each innovation study are briefly summarized below. While these summaries cannot do justice to the richness of each study, they show that each innovation study, by itself, represents a significant longitudinal research effort. Moreover, each study distinguishes itself by addressing novel and important questions on the management of innovation.

The Development of Gallium Arsenide Integrated Circuits

Michael Rappa (Director) and Andrew Van de Ven
Department of Strategic Management and Organization

This study examines the development and commercialization of gallium arsenide semiconductor integrated circuits, which will be an important component in future high speed data processing, communications and defense systems. The focus of this research is on understanding the strategies different firms choose in their approach to research and development, production, marketing, finance and human resource management.

During 1985, the data collected from a 1984 pilot survey of GaAs device manufacturers were analyzed and shared with survey participants. Based upon the results of that survey, another questionnaire is being developed. The new survey will be administered to well over one hundred firms in the U.S. and Japan, covering all aspects of GaAs materials, devices and equipment. In addition to laying the groundwork for the 1986 survey, a great deal of archival information (including trade press, technical journals, conference proceedings, and company publications) has been collected. The interest generated among the business community to the study findings has been substantial.

From June 15 to September 15, 1985, Michael Rappa was in Tokyo, Japan. During this period, a comprehensive analysis was completed of the major Japanese electrical equipment manufacturers' commitment to the development of GaAs integrated circuit technology. This work provides estimates of R&D manpower and annual expenditures, and looks at the role of government, recent technical achievements, and plans for implementation. This research was presented at the Minnesota Innovation Program Workshop this past fall as well as at several firms in the Twin Cities and the U.S.

The Development of Hybrid Wheat

Vernon Ruttan (Director) and Mary Knudson
Department of Agricultural and Applied Economics

Hybrid wheat development covers an extended historical period (1950 to present) and a number of major private and public organizations. At the onset of hybrid wheat breeding, scientists were eager for the introduction of a new technology that would enhance wheat yields. Private sector breeders took and have maintained the lead in hybrid wheat development ever since the publications in the early 1960's of Johnson and Schmidt at the University of Nebraska and Wilson and Ross at Kansas State. These seminal publications made hybrid wheat development a feasible dream. Cargill, DeKalb, Northrup King, Pioneer, and more recently, Monsanto, Rohm and Haas, and Shell have played key roles in developing hybrid wheat. Public sector breeders remained in hybrid wheat research only in the 1960s. Since then few resources have been devoted by the state experiment stations or the USDA to hybrid wheat development. North Dakota State is the only public-sector institution that still has an ongoing hybrid wheat project.

The historical and baseline studies of the development of hybrid wheat are approaching completion. A history has been written of the R&D of hybrid wheat and on the case studies of several firms and universities that were once involved with hybrid wheat research. This history uses Usher's Cumulative Synthesis Sequence Theory to describe the development of hybrid wheat. Consequently, endogenous factors within the wheat industry that characterize the R&D progress of hybrid wheat have been identified. Further consideration is now being given towards identifying exogenous factors that induced the wheat industry to undertake and continue in hybrid wheat development.

An industry-wide survey was conducted of 38 wheat breeders in spring, 1985 to gain information on the historical, baseline and longitudinal phases of the hybrid wheat development study. These surveys are currently being used to identify more explicitly factors within an institution that contributed to the successful progress of a biological innovation.

Progress has also been made in drawing comparisons with the R&D of semi-dwarf wheat, another biological innovation. Actors have been identified who have participated in the semi-dwarf stay.

Medical Product Innovations

Andrew Van de Ven (Director), Raghu Garud and Douglas Polley
Department of Strategic Management and Organization

This study focuses on the development of two medical proprietary products: a cochlear implant that permits some profoundly deaf people to discriminate sound, and a plasmapheresis procedure for removing pathogenic substances from blood and returning the plasma to the patient. Each of these product R&D efforts are being developed through joint interorganizational ventures among private firms. Moreover, each of these product development efforts, if successful, will create new industries. As a consequence, the study provides a unique opportunity to examine the product innovation process over time in joint interorganizational ventures and the emergence of new industries over time.

Case histories and have been completed on the two innovations in 1984, and were up-dated with real-time observations during 1985. Three rounds of interviews and questionnaire surveys were conducted with all key people involved in each product innovation in January and June 1985, and January 1986. After each data collection round, the findings were feedback to the management groups of the two product innovation teams -- and were found to be very useful by managers for assessing their progress. Using publicly available records, a tracking of the emergence of the industries for the two medical products was also initiated in 1985. These industry analyses will be expanded in 1986 by conducting a survey of all the major competitors worldwide who have R&D programs underway to develop the two medical products.

Currently, the research team is preparing two working papers to be submitted for publication and presentation at professional conferences during 1986: (1) "Tracking the Process of Innovation Over Time," and (2) "Innovation and the Emergence of Industries."

The Startup and Development of New Businesses

Jeanne Buckeye, College of St. Thomas

Roger Hudson, Andy Van de Ven and S. Venkataraman
Department of Strategic Management and Organization

This study examines several alternative models for creating new businesses: (1) independent entrepreneurs starting their own firms, (2) corporate sponsorship of new businesses with equity investments and training, (3) spin-offs of internal corporate departments and ventures into stand-alone businesses, and (4) a variety of joint ventures, licensing agreements, and contractual relationships among firms to transact business. These alternative models for new business startups vary from market to hierarchical arrangements. Two basic research questions are being examined in this study: What are the developmental patterns and problems over time of different kinds of new business startups? Under what conditions is each arrangement for new business startups appropriate and inappropriate over time?

During 1983, site visits were conducted to 14 new business startups in Massachusetts, Pennsylvania, Illinois, and Minnesota. The site visits were conducted to develop case histories and collect baseline data on the initial planning and startup of seven new businesses that followed model 1, and another seven who were formed according to model 2. Findings from this initial survey were published in a paper, "Designing New Business Startups: Entrepreneurial, Organizational and Ecological Considerations," Journal of Management (1984).

The second round of data collection began with site visits to the new businesses in Fall, 1984 and was completed with a questionnaire survey and telephone interviews in Spring 1985. It was found that significant performance reversals and shifts occurred between 1983 and 1985 for the 14 firms, and three had gone out of business. How and why did these changes occur? This question was addressed in a second paper completed January 1986, "New Business Startups, Part II: A Process Model of Small Business Failure."

During 1986 the research team will conduct a third round of data collection on the small businesses. In addition to tracking the development of the small businesses over time, this third round will focus on the many different forms of adaptation used by the small businesses to either survive or go out of business.

The Development of Complex Naval Systems

Gary Scudder (Director) and Roger Schroeder, Department of Management Science
Gary Seiler, Andrew Van de Ven and Robert Wiseman,
Dept. of Strategic Management and Organization
Loren Heerings, Department of Psychology

A study of the development of complex Naval systems is being studied over time in a large Navy contractor. The study focuses on the management of the transitions required to develop and integrate a new weapons system into an organization which is currently producing the prior generation of the same weapon type. This represents a major process innovation for managing the development of complex systems across functional, organizational and resource boundaries over time. This process of Transitions Management is critical for improving reliability, engineering, and manufacturing quality by contractors of complex military procurement and systems development programs.

This specific study is a longitudinal examination of the process by which a new weapon system will transition into a production environment. The primary focus of the study is on the Design-to-Production transition process, a new process specifically designed to link together all of the functional areas required to accomplish a half-billion Naval systems development contract. This process is being used to ensure that the final weapon design will be producible when introduced into the factory environment, within constraints of high quality and cost goals.

A case study of this innovation was developed in the first year of the study and is in the process of being updated to reflect changes which have been observed in the organization. Data collections occurred during November, 1984, and May and November, 1985 which included both interviews with key program personnel and the administration of a quantitative questionnaire. The research team has analyzed the data collected and feedback reports were delivered to top management of the company, as well as to the participants in the study.

In the past year, several research papers have been prepared which are partially or wholly based upon this research study. Papers on managing materials, innovation in manufacturing, and the innovation development process are complete and have been or will be presented at academic and business conferences. In the next year, more papers are planned on the transitions process.

Summaries of Minnesota Innovation Studies

Human Resource Management Innovation Study

Harold Angle (Director), Charles Manz and John Guarino
Department of Strategic Management and Organization

The study examines the effects of organizational socialization and relocation processes on member behavior and performance. It systematically tracks over time how different cohort groups (new hires, six-month employees, and over-two-year employees) are socialized by an organization and the effects this socialization has on the commitment of these employees to the organization over time. In addition, the research includes a study of the human resource implications of relocating some of a manufacturing firm's operating divisions from one part of the country to another. This natural field experiment provides the unique opportunity to study the influence of physical relocation by tracking cohort groups of employees at the original and new sites.

During 1985, impact surveys were administered to about 700 employees, representing about 72 percent of all those who were affected by this relocation during the year. In addition, similar surveys were administered to about 400 spouses of those employees (about 60 percent of all eligible spouses), in order to incorporate non-work and family aspects of the relocation impacts in the research. These surveys represent phase one of a longitudinal assessment of relocation impacts. In addition, preliminary work, including a series of interviews of new members of the organization has been completed, leading to a longitudinal series of repeated-measures surveys of all new members of the organization in the two geographic locations. This series of measurements will attempt to sort out causal relationships among environmental factors, individual differences, work experiences, work-related attitudes and beliefs, and behaviors and work performance.

Financial Industry Deregulation and Innovation

Robert S. Goodman and Ian Maitland (co-directors)
Department of Strategic Management and Organization

This study examines the strategic innovations undertaken by a sample of banks in response to deregulation. Until recently, the banking industry has been regulated along four basic dimensions -- geography, interest rate ceilings, range of products and services, and entry into related markets. As these regulations are being lifted, unevenly and partially, the industry has been changing rapidly to achieve a new equilibrium.

A systematic analysis of major banks in the country has been conducted based on publicly available archival data. And analysis is beginning on a database containing financial and operating statistics for all banks in the U.S. that has been obtained from the Federal Reserve Bank. The longitudinal (1972-1984) database is being used to derive a set of distinctive strategies that banks have adopted in the race of impending deregulation and changing economic conditions over time. The success of these strategic innovations will then be evaluated in terms of a set of performance variables.

Summaries of Minnesota Innovation Studies

Nuclear Safety Standards Innovation Study

Alfred Marcus (Director) and Mark Weber
Department of Strategic Management and Organization

This study investigates the adoption process by nuclear power companies of a set of new safety standards being implemented and regulated by the Nuclear Power Commission. This past year a presentation was made at the Innovation workshop which presented preliminary results. A framework for studying the innovation has been developed. Innovations may be internally generated in response to opportunities. They also may be externally imposed after accidents, scandals, or incidents shock an industry. The safety standards under consideration were externally imposed. Management has a variety of responses it can make to externally imposed changes. A typology of these responses has been developed based on the nuclear power study and the relationship between this typology, the dispositions of implementors, and organizational performance has been tested. A paper entitled, "The Effect of Externally Induced Innovation on Performance" has been submitted for review.

During summer, 1985, 25 interviews with industry safety review managers were conducted by phone. These indepth phone interviews were a very informative update of the original information on utility response to NRC standards. A survey was sent to safety review managers and twenty-two responses were received. This information will be used to do additional work in the area. A paper is planned that compares externally-induced innovations with internally-generated innovations based on the data obtained from a number of the innovation studies.

The Commercialization of Space

Peter Ring (Director), Gordon Rands, and Karen Silvas
Department of Strategic Management and Organization

This project explores the evolving set of intra and inter organizational relationships associated with the efforts of a private sector firm and a federal agency to coventure in the use of low orbit space for commercial purposes.

Commencing its second year, and funded independently, the research has produced a series of interviews with all the major participants in the private sector organization, from scientist to CEO. Survey data has also been collected. Archival Research on U.S. government policy on the commercialization of space is nearing completion. Initial discussion with NASA officials regarding an interview schedule with major players in that agency have been interrupted by the loss of the Challenger. A first draft of a case history of the initial two years of the coventure, from the perspective of the private sector coventurer, is under revision after having been reviewed by key players in the firm. A second round of survey data collection is scheduled for early summer. By that time, it is hoped that interviews with NASA officials will be under way.

The Development of Government Strategic Planning Systems

John Bryson (director) H. H. Humphrey Institute of Public Affairs
William Roering, Department of Strategic Management and Organization

While strategic planning has been in vogue in private-sector organizations for over twenty years, the concept is now just gaining good currency in general purpose units of government. Because government organizations exist in a much more politicized environment, it is not at all clear how private sector models of strategic planning can be applied to the public sector. However, the need for strategic planning has increased as public pressure mount to cut government spending and taxes while demand continues to grow for government services. Government officials, therefore, need to find ways to rethink what services they should provide and how to provide them.

The study of the development and implementation of strategic planning processes in general purpose units of government is being undertaken in two organizations -- a county public health nursing department and a suburban general purpose government. Baseline data were collected during December 1984 and January 1985. Time 2 data were collected in late 1985. The third and the fourth (and last) rounds of data will be collected during 1986.

Managerial and Organizational Dynamics of Mergers and Acquisitions

David Bastien (director), Department of Speech-Communications
Andrew Van de Ven, Dept. of Strategic Management and Organization

Although mergers and acquisitions are not new or innovative to the corporate landscape, they tend to be precedent setting and traumatic experiences to the individuals involved -- particularly when they are members of the junior firm. In addition, while an extensive literature and body of knowledge has developed on the financial, legal, and strategic aspects of mergers and acquisitions, little if any systematic scientific knowledge is available on what human dynamics unfold and what kinds of managerial behaviors facilitate and inhibit execution of a merger. Mergers and acquisitions also provide natural field experimental settings for observing significant changes in corporate cultures, structures, systems, and styles.

Historical case studies have been conducted of five corporate mergers and exploratory case studies are now being conducted over time of another four major organizations presently undergoing the merger process. Based on these case studies, a typology of different kinds of mergers/acquisitions has been developed which appears very robust in discriminating between the different dynamics and problems encountered in the mergers/acquisitions observed thus far. This typology is being used to test predictions about the likely success/failure of the mergers being studied over time. In addition, access is being negotiated to test the typology on a much larger sample of organizational mergers and acquisitions.

Summaries of Minnesota Innovation Studies

Site-Based Management in Public Schools

John Mauriel (director), Daniel Gilbert, and Karin Lindquist
Department of Strategic Management and Organization

This study examines the implementation of an innovative participatory process known as School-Based Management. School-Based Management is grounded on the fundamental premise that the individual school is the basic organizational unit in a school district. This assumption challenges the widespread educational administration practice of centralizing school decisions in a central hierarchical structure. School-Based Management involves the relocation of strategic decision-making responsibility from the district superintendent to the school principal and then to school site councils consisting of various stakeholders. As such, the intent is to institutionalize stakeholder participation in the decisions that matter most to each school's strategic operation.

Intensive longitudinal case studies are being conducted in three school districts that are implementing this innovation. Historical case analyses have been completed in two of the school districts in fall, 1985, and the third is now underway. Baseline surveys of questionnaires and interviews have been completed in two school districts and are scheduled for the other in January and February, 1986. In addition, a second round of data have been collected from the primary multi-school research site.

The research team has begun writing a three-article series on developments in school-based management as they relate to the innovation process -- one paper was recently submitted to the Academy of Management Conference for 1986, and two articles, one discussing reasons for school-based management, comparing it with business decentralization, and another describing implementation issues is in progress.

Mobilizing Innovations in A State Department of Education

Nancy Roberts (director), visiting at Naval Postgraduate School
Paula King, Department of Strategic Management and Organization

A study of innovation in public schools focuses on innovative leadership in a state department of education. This study examines the role of institutional leadership in creating an environment conducive for innovation in the department of education and local school districts. An intensive case study is being conducted for the purpose of describing, monitoring, and evaluating the process of institutional leadership and its effect on innovations in public schools. Thus far, the case study has provided Roberts and King the insights for developing a model of transformative change -- change which involves a restructuring of the educational system to meet the challenges and demands of the information age. Central to this model is the role of institutional leadership that weaves ideas, people, and transactions together in such a way as to promote this transformation.

Summaries of Minnesota Innovation Studies

Hospital Organizations Innovativeness Study

John Krlewski and Bright Dornblaser (co-directors)
Department of Hospital and Health Care Administration

This study focuses on factors associated with the relative innovativeness of hospitals. Changes in styles of medical practice and shifts to prospective and capitation payments schemes have placed hospitals in a very vulnerable position. Demand for inpatient care is declining and payment for those receiving inpatient services is being reduced. Consequently, many hospitals are financially distressed.

Theoretically, the hospitals that succeed in making a transition to new roles and more efficient operations will be those that are best able to nurture creative ideas and translate those ideas into innovative programs. We hypothesize that hospitals that are profit oriented will be more innovative and will pursue innovations that have higher risks and potentially greater payoff. We also hypothesize that there are important structural differences within both investor-owned and not-for-profit hospital systems which contribute to their ability to innovate.

To test these hypotheses, 42 investor-owned (for profit) and 41 not-for-profit hospitals are being studied. Data were collected on the types of innovations being developed and implemented in these hospitals, the organizational support for innovations (the innovation climate) and the risk and payoff of the innovations. Data are also being collected on the degree of centralization of decision making and the financial performance of the hospitals.

Now that the data have now been collected from all of the hospitals, and data files have been established, data analysis and reporting will be the major focus in 1986. In addition to testing the above hypotheses this study will provide important information about the innovative process in the hospital sector and how this process differs between investor-owned and not-for-profit organizations.

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October 1983 - February 1986

1. Stuart Albert, "The Arithmetic of Change," Working paper, December, 1984.
2. Harold L. Angle, Charles C. Manz, J. Guarino, and B. Edwards, "Management of the Human System and Organizational Innovation: Collectivism, Commitment and Control," presented at the National Academy of Management conference in San Diego, August, 1985.
3. Harold Angle, Charles Manz, and Andrew Van de Ven, "The Development of a Strategic Human Resources Strategy: The Case of 3M," ONR Technical Report #6 (October 1984), SMRC Discussion Paper #24 (February 1985), published in Human Resources Management, 24, 1, (Spring, 1985), 51-68.
4. Harold L. Angle, Charles C. Manz, J. G. Guarino, and B. Edwards, "Toward Human Systems Management: A Strategic Perspective," presented at Midwest Academy of Management conference, Urbana-Champaign, IL, 1985.
5. Harold L. Angle and Charles C. Manz, "Psychological contracts, Organizational Commitment and Intraorganizational Mobility," working paper, 1986.
6. David Bastien, "Common Patterns of Social and Communicative Behavior in Mergers and Acquisitions," SMRC Discussion Paper #47 (March, 1986).
7. David Bastien, "Sociolinguistic Studies of Mergers and Acquisitions," to be presented at the Minnesota Conference on Applied Sociolinguistics, 1986.
8. David Bastien and Andrew Van de Ven, "Managerial and Organizational Dynamics of Mergers and Acquisitions," SMRC Discussion Paper #46 (February, 1986), under review by Academy of Management Journal.
9. John Bryson, "The Policy Process and Organizational Form," Policy Studies Journal, Vol. 12, No. 3, pp. 445-463, 1984.
10. John Bryson, "Strategic Planning in the Public Sector: A Symposium on Approaches, Issues and Future Directions," presented at the National Academy of Management Conference in San Diego, August, 1985.
11. John Bryson and John Cullen, "A Contingent Approach to Strategy and Tactics in Formative and Summative Evaluations," Evaluation and Program Planning, Vol. 7, pp. 267-90, 1984.

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12. John Bryson, Edward Freeman and William Roering, "Strategic Planning in the Public Sector: Approaches and Future Directions," Chapter in Barry Checkoway (ed.), Strategic Approaches to Planning Practice, Lexington, MA: Lexington Press, 1985.
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14. John Bryson, Paula J. King, William R. Roering, and Andrew H. Van de Ven, "Strategic Management at the Amherst H. Wilder Foundation," December 1985, under review by the Journal of Management Case Studies.
15. John M. Bryson and Paul C. Nutt, "Approaches to the study of Planning Processes," paper presented at the 1985 annual conference of the Association of Collegiate Schools of Planning, Atlanta, GA.
16. Jeanne Buckeye, "How Entrepreneurs' Perceptions of the Personal Risks and Rewards of Starting a Business Relate to the Firm's Performance," unpublished doctoral dissertation, School of Management, Univ. of Minnesota, December 1984.
17. Jeanne Buckeye, Roger Hudson, Andrew Van de Ven, and S. Venkataraman, "New Business Startups, Part II: A Process Model of Small Business Failures," SMRC Discussion Paper #45 (February, 1986), under review by the Administrative Science Quarterly.
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