DEVELOPMENT OF STRATEGISTS: SIMULATED CASES

E. Paul Moschella, University of Hartford

ABSTRACT

The concept of strategy has achieved considerable prominence and acceptance in academe and in the world of business. It has been able to integrate several disparate disciplines. However, the continued attention given the concept has revealed several gaps, oversights and some flaws in its pedagogy. If its potential is to be realized, attention should be directed to goal-setting, uncertainty, search/scan, factor dynamics, futures and particularly, to the individual. The paper identifies the strengths and weaknesses of current pedagogy. Drawing from the many techniques, a proposal is presented for an augmented computer-based teaching system designed to remedy some of the existing discrepancies.

THE SITUATION

Several forces have converged to make it critical that academe, in general, and scholars of strategy, in particular, re-examine the teaching of strategy. (Note: throughout this paper strategy and strategy formulation are intended to embrace both strategy formulation and implementation.)

With increasing availability of education and access to instantaneous global communication systems, the world has become more dynamic, more volatile, more uncertain and more ambiguous.

In this turbulence, The United States appears to have lost its business and political leadership. Many complain that our students are too quantitative and inadequately, qualitative. We operate "by the numbers." A widely held view is that business education, particularly the MBA, might be part of the demise of American Management. Our entrepreneurial spirit has been pronounced dead (Lehr, 1981)(Wrapp, 1979).

Certainly, the correction is not that clear. Business authorities disagree as to what is needed. Drucker counsels that "the greatest danger in turbulent tines like ours is not the turbulence, but that you act rationally in terms of yesterday." (Drucker, 1980)

"What the educated person now needs is still breadth of education," says John Kemeny, president of Dartmouth College. "In particular, we desperately need individuals who can pull together knowledge from a wide variety of fields and integrate it into one mind" (Levitas, 1980).

As a consequence of the loss of domestic and international leadership, the process and content of the business school curricula have come under severe criticism (Hayes, 1980). Even the venerable Case Method is being assaulted as inadequate under today's demands (Argyris, 1980) (Yin, 1981) (Wrapp, 1979). Koontz on his return to the Management Theory Jungle unfortunately found the thicket more confusing than ever (Koontz, 1980). Fortunately, during the 1960's a promising concept was initiated in the seminal work of Ansoff (1965). The concept matured during and because of the difficult decade of the '70s and is now known as Strategy Formulation and Implementation.

Completion of several substantive pieces of research has raised the conceptualization to the level of a discipline in its own right.

More significant is that the strategy discipline holds out promise of being able to integrate and synergize the several diverse schools that are currently needed to manage successfully. Strategy formulations offers not to "thin" the theory jungle, but rather, to render its appearance less "thick."

However, to do so, the present state of strategy pedagogy will have to be improved and expanded if:

The "specialist" criticism leveled at the business schools from sources both internal and external to academe is to be met,

The benefits of quantitative and qualitative techniques are to be fully realized by managers,

Future managers are to improve their ability to manage people, stress, risk, uncertainty and a range of unknown futures,

The satisfactions, frustrations and rewards of entrepreneurship are to be experienced and appreciated.

Toward this end, it is proposed that the theory and pedagogy employed in strategy formulation be modified (1) to broaden the concept of strategy slightly, but significantly and (2) because of the inherent breadth and complexity of the strategy discipline, to make intensive use of the capabilities of the computer and communications technologies.

First, it is necessary to establish a basis for such a proposal. The basis is presented in five parts:

An overview of the state of the strategy discipline
Strengths and weaknesses of the current concept
Significant trends in strategy
Specific premises underlying the proposal
The Proposal

STATE OF THE DISCIPLINE

For purposes of an overview, J. Bowers' definition of strategy formulation will be used. Strategy is a process which results in a choice of goals, policies and programs to achieve those goals.

Acceptance. Perhaps, the singular most telling piece of evidence of the acceptance of strategy within academe as a major source of constructive management theory is the more than three dozen textbooks on business strategy that have been published during the past three years. These texts have brought organization, clarity and process to the extremely complex field of strategy. Seminars, training centers and consulting firms are being stretched to meet the demands for help in strategic

management. Many large corporations have modified their planning units to emphasize strategy formulation and have placed these units under the direction of senior corporate officers (Perhm, 1980). Still, strategy possesses a foundation that is far more substantial than is generally realized.

State of Research. While properly drawing on the work of a number of disciplines, strategic management enjoys a substantial body of research and knowledge of its own (Hofer, 1978)(Hofer, 1975b)(Hofer, 1976)(Schendel, 1979) Some of the concepts identified with strategic formulation are: strategy components, subsystems of strategy, environmental textures, strategy formulation models, predominant environment variables, product/business portfolios, strategic business units, goal formulation, strategy and structure, stages of corporate development, resources deployment, choice decision theory, ETO profiles, policy decision trees, synergy, situational theory, strategic assumption analysis, scanning -- to name a few.

Several, intensive and extensive studies have independently confirmed the positive impact of the theory and process of strategy formulation and implementation upon the organizational performance (Hatten, 1975) (Herold, 1972) (Ansoff, 1971) (Karger, 1975).

State of the Scholarship. Today, strategy boasts a significant number of internationally recognized scholars and researchers. An increasing number of competent faculty are being attracted by the challenge of strategy formulation. The population of experienced managers and students enrolled in strategy courses continues to grow.

Potential Indicated. The foregoing suggests considerable potential for the strategy discipline. But it must be recognized that strategy is a holistic, super- ordinate discipline that presses at the limits of cognitive complexity as it tries to integrate and apply 'the store of knowledge' contained in our several, disparate disciplines. The challenge to seek an applied integration of these disciplines must be clearly accepted at some point if man is to continue to improve the utilization of his intellect. Strategy formulation appears to be the specific crucible in which this fusion has chosen to start - where the difficult integration has begun.

State of the Pedagogy. It has been observed that nothing is more useful than a good theory. Others have noted what better use for theory than in teaching. Still, while strategy theory burgeons, its pedagogy remains static. In the face of accelerating complexity, the pedagogy remains a disturbing mix of lectures, cases, simulations, role playing and incident exercises. With its several limitations, the Case Method remains the dominant pedagogy (Hagerty, 1977). Computer-based, business simulations have been added to the pedagogy, but applications have been spotty.

Further, the teaching objectives for strategy formulation have changed. Revised approach is needed to accommodate the development and testing of action- plans for ill-structured situations (Haggerty, 1979) (Unteman, 1979).

TEACHING THE STRATEGY DISCIPLINE;
STRENGTHS

The work accomplished to date has created certain unique strengths in the field of strategy.

Many of the major forces and factors (economic, technical, behavioral, political, sociological, cultural, etc.) that have significant impact on strategy formulation have been outlined. The genesis of strategy out of business policy has forced scholars and practitioners to focus on synthesis, integration and subsystems of theories as a means for achieving organizational goals.

Prophetically, the concept of strategy is one that scholars and theorists as well as practitioners, government officials, corporate officers, managers, supervisors, students and individuals can easily relate to.

The concept of strategy appears to be a process that can realistically systematize the identification of goals and existent knowledge and theory for application in the real world to facilitate the achievement of those goals. And, it is suggested that achievement of goals is man's true temporal calling.

The objectives of education have been described as:

> Acquire knowledge
> Develop concepts
> Understand techniques
> Acquire skills in analysis
> Acquire skills in synthesis of action- plans
> Develop useful attitudes
> Develop mature judgement and wisdom
> > (Dooley, 1977)

Properly structured, the discipline of strategy has the potential to raise the performance level of the individual on all these critical dimensions.

TEACHING THE STRATEGY DISCIPLINE:
WEAKNESSES

The weaknesses that presently exist in the youthful discipline of strategy are numerous, falling into five general categories:

> Reality
> Missing strategy components
> Application
> Breadth and depth
> Implementation

Reality

While our scholars are aware that this is not yet a deterministic, predictable world, they appear reluctant to clearly postulate such a condition. Large gaps exist in man's knowledge of his world. Although the future is only coarsely predictable, strategy continues to slip rather quietly by this most disruptive condition.

Many scholars equate the managing concepts of problem solving and decision making with strategy. Strategy formulation should be viewed as a distinctly different and more goal-oriented, applied activity. Viewed critically, humans are not fundamentally concerned with problem solving and decision making. Human thoughts are monopolized by goals. They seek ways to achieve

their goals <u>over time</u>. To dwell narrowly on problem solving or decision making conceals the ubiquity of the strategy construct.

While commonality may exist across a narrow range of situations, in truth, every significant situation that is faced by the practitioner is <u>different</u>. To avoid this prevalent state only delays the strategy formulation process. Clearly, all research that <u>broadens and identifies</u> situational similarities and commonalities is of tremendous value to the discipline. The strategist acts on the basis of what he believes whether it be incomplete, erroneous or irrelevant. Although studied extensively, little is offered to the practitioner to explain how the manager <u>chooses</u> under these ambiguous conditions. Group decision making and consensus are often the implied preferred problem solving style. The danger here is subtle. Seldom is there an inference of the existence of a 'managerial mind.' In final analysis, strategy is <u>driven by the managing</u> mind. The role of the individual in strategy requires more emphasis.

Missing Strategy Components

Certain critical components of strategy have not yet been actively incorporated in the strategy pedagogy.

<u>Search and Scan</u>. The student of strategy is generally provided with all the information to be used in accessing a given situation. Actually, the manager first has to <u>decide</u> to analyze and to <u>initiate</u> his own search for possibly useful information. As a consequence, strategists, planners and managers are poorly prepared to design and direct the search of their changing environments (Moschella, 1981).

<u>Goal Setting</u>. Goal-setting and attainment are fundamental purposes in life. Yet, our pedagogy devotes scant attention to the formation of its own and man's objectives (Richards, 1977). Here, goal formulation is meant to embrace purpose, meaning, service, philosophy and ethics as contrasted to growth rates, bottom lines and related arithmetic.

<u>Creativity and Innovation</u>. Perhaps, the most significant component missing from current strategy paradigms is the creativity of the 'managerial mind.' The purpose of most environmental search and analysis is Co stimulate the strategist/manager mind to <u>create the alternative programs</u> that are so necessary for survival and improvement. Osborne and Gordon have made major contributions for enriching the use of the mind's creativity.

<u>Futures</u>. Current pedagogy provides little <u>direct</u> experience with the techniques and problems of forecasting. Failure to make these difficulties an integral part of the process slows the application of the strategy formulation process and perpetuates an image of running only "by the numbers." The strategist/practitioner is mainly concerned with the <u>future</u>, not the past.

Application

Although research has already produced many substantive discoveries, findings and conclusions, opportunity for active <u>utilization</u> of these theories by the student in strategy formulation is very limited.

<u>Cases Not Enough</u>. There is a growing recognition of the pedagogical limitations of the Case Method, particularly under the pressure of the emerging strategic management discipline. It has been attacked as 'story telling or not much better'(Miles, 1979). Dean William F Pound of MIT describes case teaching as a backward looking method with

little opportunity to <u>anticipate</u> things (Hayes, 1980).

<u>Universality</u>. Strategy is generic across social organizations of wide range; e.g. public, private, societal, familial, political, legal, illegal, moral, Immoral, athletic, religious. The research and pedagogy to date has concentrated on <u>large</u> corporations and conglomerates having portfolios of business units. True development of the discipline requires application of the process to the remaining 85% of the social organizations along with their <u>internal</u> levels of organization. When managers move among industries, sectors and levels, it will be <u>the generality of the discipline</u> that they will take with them.

<u>Analysis</u>. Among the pre-requisites for the business policy capstone course are several courses dealing with techniques of analysis, e.g., cash-flows, correlation, investment analysis, statistics, breakeven, unit costs, linear and multiple regression, time series analysis, dynamic programming, forecasting. Present strategy teaching methods seldom confront the practitioner with the need to decide when and where to initiate these analyses in an ambiguous, context. The required <u>longitudinal</u> data is not provided and the powerful analytical packages of curve fitting, linear programming, modeling, TSP and SPSS cannot be invoked.

<u>Implementation</u>. I remind the reader that at the outset of this paper, strategy formulation was defined to include implementation. The objective of strategy formulation is to achieve goals, <u>not to formulate strategies</u>. Without <u>successful</u> implementation, the best conceived strategies are still failures. A given strategy has to be implemented if the strategist is ever to determine its value and experience the frustration of incomplete logic.

TRENDS IN STRATEGY FORMULATION FIELD

Scholars of strategy are primarily concerned with the possible futures. I shall attempt to identify some of the major movements that are presently influencing the design of strategy pedagogy.

<u>Theory</u>. Micro-level concepts are being produced at an almost undigestible rate. As Koontz pointed out when research findings begin to confuse the manager, it is serious (Koontz, 1980). Richard Cyert, one of the field's eminent theorists and researchers after eight years as president of Carnegie-Mellon University, has questioned the usefulness of some management theory (Cyert, 1980). Greater emphasis will have to be on macro-theories of <u>integration and utilization.</u>

<u>The Individual</u>. The unique, idiosyncratic attributes of the individual will require a stronger introduction Into the strategy process. Otherwise, where does the leadership and entrepreneurial spirit that we lecture about to come from? More important, how are the initial, delicate, finespun shifts in the patterns of goal and environmental textures to be sensed in the absence of finely-tuned <u>human sensors</u>? The search and scan subprocess, generally called analysis, will be conducted by the individual's <u>asking questions</u> first, not analyzing first - a neglected skill (Moschella, 1981).

<u>Complexity and Uncertainty</u>. Without belaboring the point, expanding knowledge, intensive social and physical research, finer political and ideological differences together with higher levels of education and instantaneous communication will continue to yield a richer, more dynamic life accompanied by <u>greater com-</u>

plexity and ambiguity.

The Quest for 'Good Management.' Considerable effort has been expended on defining the concept of 'Good Management' and the effort should continue. Nevertheless, the discipline of strategy should not become mired in this philosophical search. Good Management is simply the achievement of goals; Bad Management, is not - regardless of the reasons, in either case. Strategy formulation offers the promise to increase the prevalence of 'Good Management.'

On this optimistic note and the foregoing overview, I shall proceed to present a proposal intended to improve the match between strategy formulation and its growing pedagogical demands.

PROPOSAL

Premises

To proceed in an ambiguous world, one must adopt many premises. The major premises of this proposal are: Philosophy. Strategy is a superordinate discipline which will progressively call upon and synergize the findings of other disciplines with its own.

Goals/Purpose. The objective of strategy formulation and implementation will be the achievement of goals regardless of changing or unforeseen conditions or events. Strategy is not problem solving or decision making; it is the complex intellectual and physical process for achieving goals.

Situational. Every significant situation is different. The practitioner starts with the assumption of situational uniqueness and searches for commonality by means of his theories, beliefs and concepts, not vice versa.

Individual. The individual grows by accepting and meeting challenges and will become more central to strategy formulation. To learn the individual must be involved and committed. There must be a "need to know" (Gilmoor, 1973). The managerial mind is the interpretative center of the strategy process. All summations interpretations, projections (logical and non-logical) are shaped and structured within this intellectual center (Levitt, 1975) (Mintzberg, 1976).

Learning. The strategy practitioner will have to learn certain skills; (1) to sense the need for revised goals, (2) to search (analyze) new and unfamiliar situations, (3) to assess the political and social acceptability of alternative strategies.

Futures. Emphasis will be placed upon the interaction of strategy formulation and the uncertainties of the future.

Innovation/Creativity. Added importance will be given to the role of the mind, guided by theory and research, in the creative formulation of alternative strategies.

Pedagogy. Research indicates that a mix of cases, simulations and role playing is a superior pedagogy, (Raia, 1966) (Wolfe, 1978). Permanent or "double- loop" leaning occurs when the detection and correction of errors requires changes in the underlying policies, assumptions and goals (Argyris, 1980). Thus, there will be an expansion of "mixed" pedagogies.

Pedagogical Technology. Recent developments in electronic technologies (micro computers, word processing, video recorders, telecommunications) will be particularly significant for the discipline of strategy.

A PROPOSAL: AN AUGMENTED SIMULATION STRATEGY TEACHING SYSTEM

Thus, in order to (1) meet the new pedagogical demands of strategy formulation, (2) more fully apply the strengths and correct the weaknesses of the discipline and (3) to utilize the unique and applicable capabilities of modern communications technology, the following proposal is made for an Augmented Simulation Strategy Teaching System.

First, extensions of current pedagogies are presented, then substantive augmentations are offered. The resultant Augmented Simulation Strategy Teaching System is outlined in Figure 1.

Extensions

Cases. The range of case materials currently available permits the selection of either a single case or a set of cases which can provide specific industry background for use in conjunction with a specific business simulation. Such matching can furnish cases with longitudinality, a major case deficiency. Generally, the attributes of a simulation can be adjusted to approximate those of the selected industry. The simulation permits 'testing' of perceived hypotheses and alternative strategies.

Simulations, Computer based simulations can now be placed on-line in an interactive mode so that managerial intensity, tension and constraints can be more appropriately simulated including occurrences of 'critical incidents.'

Role Playing. Several simulations make organizational provisions for corporate president and vice-president roles. The augmented system's environment is expanded to include interacting bankers, stockbrokers, unions, venture capitalists and suppliers.
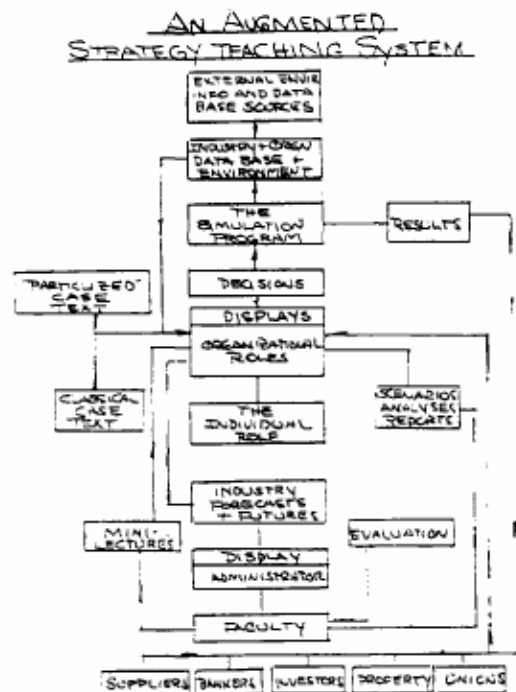

FIGURE 1

Augmentations

Cases. Case material is available in the augmented system in typical text form by video display for use by the individual student/manager and his organization. 'Expert' forecasts and industry assessments supplement the raw data files.

However, another major source of the case material is made available only "by asking questions" that are derived from strategy formulation theory and conceptualizations (Moschella, 1981). This 'packaging' of case type materials within the computer requires the practitioner to search by specifically recalling his learned theories and models. The student then must complete an analysis and synthesis of these informational *fragments'*. He prepares his own 'case' for the industry.

Simulation. The decisions, environment and results of each strategy-guided decision are written to a computer database, thereby providing a meaningful, longitudinal performance and the dynamics of environmental forces and trends. Most quantitative techniques can be applied to this database as well as the several relevant, external databases that are on-line. Graphs and plots are also displayed for quick environmental assessment.

Forecasts and Futures. Organization, environment and external databases provide the longitudinal data stream essential for the application of forecasting methods. The individuals and the organization are required to prepare Futures and Scenarios for use by the organization and evaluation by the faculty.

Organizational Performance Evaluation. The accumulating database (quantitative and qualitative) generated In the course of the simulation provides a detailed trace of individual and group performances. The reasoning, analyses, conceptualizations, theory recall, testing, leadership styles and achievement of both the individual and the group can be closely monitored and evaluated.

EDUCATIONAL OBJECTIVES[1]

	Impart Know-lege	Develop Concep-tions	Develop Skills Behavior	Skills Non-Behavior	Change Attitudes &Values
Lecture	G	F	P	P	P
Case	F	G	F	G	F
Role Play	P	F	G	P-F	G
Incident	P	P-G	P	G	P-F
Simulation	P	P-F	F	F-G	F
AUGMENTED SIMULATION	F-G	F-G	F-G	G	G

Figure 2

1) Modification of Hofer (1969)

ACQUISTION OF SKILLS[2]

	Lec-ture	Cases	Simulation	AUGMENTED SIMULATION
Dispense Knowledge	G	P	P	G
Acquire Knowledge	F	P	P	G
Synthesize Knowledge	G	F	F	E
Develop Concepts	G	P	F	G
Understand Techniques	G	P	F	G
Acquire Skills in use of techniques	–	P-F	F	V-E
Acquire skill in analysis of business problems	–	F	F	E
Acquire skill in synthesis of action-plans	P	F	G	E
Develop useful attitudes	–	F	G	G
Develop mature judgment and wisdom	P	F	F	G

Figure 3

2) Modification of Dooley and Skinner (1977)

SUMMARY

When fully implemented, it is projected that the Augmented Simulation System will compare very favorably with the classical policy pedagogies as shown in Figures 2 and 3.

"The management curriculum is concerned with providing the skills for dealing with broad, messy unstructured problem. ... Managerial problems are becoming more and more difficult to solve because they are less and less emenable to present knowledge and problem solving tools... Nonetheless, somehow, we must enable our managers to deal with these unknowns (Steiner, 1976).

It is suggested that the Augmented Simulation Strategy Teaching System presently under development at the University of Hartford will (1) capitalize on the inherent strengths of the strategy discipline, (2) correct existing deficiencies and, (3) in part, meet the goals of George Steiner.

REFERENCES

[1] Ansoff, H.I., J. Avener, R.C. Brandenber. "Acquisition Behavior of US Manufacturing Firms" Nashville, TN, Vanderbilt University Press, 1971.

[2] Ansoff, H.I., Corporate Strategy, (New York, McGraw-Hill, 1965).

[3] Argyris, C. "Some Limitations of the Case Method Experiences in a Management Development Program." Academy of Management Review. Vol. 5 No. 2, 1980.

[4] Cyert, R.M. "floes Theory Help?". Manager's Journal, Wall Street Journal, April 7, 1980.

[5] Dooley, A. and W. Skinner, "Casing the Case Method Methods." Academy of Management Review, April, 1977.

[6] Drucker, P.P., "Managing in Turbulent Times." Wall Street Journal, May 1981.

[7] Hagerty, W.H., Policy and Planning Research: Teaching Implications." in Strategy Management, (Eds) Schendel, D.L. and C. Hofer, Little, Brown, 1979.

[8] Hayes, T.C. "Harvard's Business Program is Scrutinized." New York Times, March 18, 1980.

[9] Hofer, C.W. and D. Schendel.(Strategy Formulation: Analytical Concepts, West Pub. Co., 1978)

[10] Hofer, C.W. "A Conceptual Scheme for Formulation of a Total Business Strategy." ICCH, 9-376-726, 1976, pp. 5-6.

[11] Hofer, C.W. "Toward a Contingency *Theory* of Business Strategy." Academy of Management Journal, Dec. 1975b.

[12] Koontz, Harold, "The Management Theory Jungle Revisited." Academy of Management Review, 1980 Vol. 5, No. 2, pp. 175-187.

[13] Lehr, S. "American Management: Performance is Sorely Lacking." New York Times, Jan. 4, 1981.

[14] Levitt, R.J. "Beyond the Analytic Manager." California Management Review, Summer, 1975, pp. 11-21.

[15] Mintzberg, H. "Planning on the Left Side and Managing on the Right." Harvard Business Review, July-August, 1976, pp. 49-58.

[16] Moschella, E.P. "Training the Strategist to Search." Academy of Management Proceedings, hug, 1981.

[17] Moschella, E.P. "Leadership Development In A Simulated Urban/Suburban Environment." Proceeding of the Association for Business Simulation and Experiential Learning, Feb., 1981.

[18]   Naumes, W. "Commentary' in <u>Strategy Management</u> (Eds) Schendel, D.E. and C. Hofer, Little, Brown Co., 1979, p. 469.

[19]   Raia, A.P. "A Study of the Educational Value of Management Games." <u>Journal of Business</u>, Vol. 39, 1966, 339-352.

[20]   Richards, M.D. <u>Organizational Goal Structures</u>. (West, 1977).

[21]   Schendel, D.E. and C.W. Hofer <u>Strategic Management</u>. (Little Brown, 1979).

[22]   Steiner, G.A. "Contingency Theories of Strategy and Strategic Management" in <u>Strategic Management</u> (Eds) Schendel, D.E. and C.W. Hofer, Little Brown, 1979.

[23]   Ungson, G.R., D.N. Braunstein, P.D. Hall, "Managerial Information Processing: A Research Review." <u>Administrative Science Quarterly</u>, 26, March 1981, pp. 117-134.

[24]   Unteman, I. "The Teaching Implication of Research In Policy: An Overview." in <u>Strategic Management</u> (Eds) Schendel, D.E. and C.W. Hofer Little Brown, 1979, pp. 486-487.

[25]   Wolfe, J. "The Effects of Game Complexity on Acquisition of Business Policy Knowledge." Decision Sciences, Vol. 9, 1978, pp. 143-155.

[26]   Wrapp, N.E. "A Plague of 'Professional' Managers." <u>New York Times</u>, April 8, 1979.

[27]   Yin, R.K. "The Case Study Crisis: Some Answers." <u>Administrative Science Quarterly</u>, Vol. 28, March, 1981.