.956

BEBR

FACULTY WORKING
PAPER NO. 956

Crippling Effects of "Hyper-Rational" Planning

R. T. Lenz
Marjorie A. Lyles

College of Commerce and Business Administration
Bureau of Economic and Business Research
University of Illinois, Urbana-Champaign

BEBR

FACULTY WORKING PAPER NO. 956

College of Commerce and Business Administration

University of Illinois at Urbana-Champaign

April 1983

Crippling Effects of "Hyper-Rational" Planning

R. T. Lenz
Indiana University

Marjorie A. Lyles, Assistant Professor
Department of Business Administration

SYNOPSIS

Four processes occurring in and around organizations are propelling strategic planning processes in many firms toward a state that may be termed "hyper-rationality." This is a condition in which the entrepreneurial sprit essential for planning is supplanted by rigidity, excessive quantification and formality. Once hyper-rationality exists, the capacity of the planning process to insure innovative adaptation is lost. With this loss comes a diminished capacity of an organization for achieveing long-term competitive success. Both an alert executive group and certain administrative actions are necessary to prevent the onset of hyper-rationality.

CRIPPLING EFFECTS OF "HYPER-RATIONAL" PLANNING

> Quantification destroys the ideological cohesion of experience and knowledge turns into a perversely empty thing; and it soon becomes impossible to determine which scientist is doing something significant and something trivial.
>
> - Bernard James
> The Death of Progress

It is widely recognized that successful strategic planning systems exhibit, in one sense. a life of their own. That is, they change to both accommodate and encourage the long-term growth and development of an enterprise. Not only is it necessary that the overall structure, format and analytical procedures change to facilitate growth and strategic diversity, it is quite desirable. Indeed, without evolutionary adaptation of this sort a planning system can easily become an impediment to success.

As the use of strategic planning systems has become more widespread it is increasingly clear that the evolution of such systems must be carefully cultivated. This is due to the fact that the development of a planning system is not a "natural" phenomenon. Rather, it is a socio-technical phenomenon that may occur in "fits and starts" and take a variety of paths. Along the way, it is vulnerable to any of a number of forces that can influence its capacity to serve as a vehicle for organizational adaptation and growth.

Our basic thesis is that a variety of bureaucratic processes within organizations and technological developments from without are propelling many planning processes toward a state we describe with the word "hyper-rationality."

By hyper-rationality, we refer to a condition in which the strategic planning process has become inflexible, formalized, and excessively quantitative. In this state, the planning system seems to develop an inertia all its own that stifles creative thought and frustrates the most able managers. It appears to be a major contributor to the disenchantment experienced by line and staff members for whom planning has lost its glow.

HYPER-RATIONALITY: ITS BASIC CHARACTER AND ORIGINS

Nothing would be more comforting than to suggest that the tendency toward hyper-rationality in a planning system stems from a single, invidious force. If it were so, the problem would be easily recognizable and, probably, rather straightforward to resolve. Unfortunately, it appears that this tendency has multiple origins -- none of which are abnormal in organizational life and all of which occur over rather lengthy periods of time. Many independent decisions and commitments made in the midst of daily administrative affairs collectively result in the emergence of a hyper-rational state. Its early symptoms are felt by managers who sense that the demands placed on them to plan are excessive in terms of time requirements, and that creativity, innovation and entrepreneurship are not rewarded. As one consultant noted when reporting on the tension and frustration managers experience when the strategic planning process goes awry:

> Thank God it's over; now let's get back to work. This is my third strategy review. Same damn outcome. Nothing resolved. Every year we get together, fill in the forms -- some of which don't evey fit my business (and the planning instruction manual gets thicker by the year), make a two-and-one-half-hour presentation. We never get to the strategic issues. The discussion

gets bogged down in nitpicking and number crunching; then we simply run out of time. Nobody really cares what's in the strategic plans. We must put on a good show, appear to be innovative, and go through the ritual. What really counts is the one-year operating budget. (4)

It would be misleading to suggest that either researchers, consultants, or practitioners fully understand the constellation of forces that collectively make a planning process a rigid, over bureaucraticized, annual ritual. Precise answers to such questions will, undoubtedly, be forthcoming as more field studies of organizations are undertaken. As it now stands, however, it is clear that both basic administrative processes within most firms and technological developments from outside contribute to hyper-rationality. Figure 1 includes some of the more salient processes whose overall effect, if not guarded against, is to generate inertia within the planning system toward a hyper-rational state.

Take in Figure 1

Any classification of such diverse processes is at this point somewhat arbitrary. Nevertheless, the tendency toward hyper-rationality seems to be manifested in: (1) the growing professionalization of the planner's job, (2) the temptation to equate certainty in decision making with elaborate quantification, (3) the institutionalization of planning over time, and (4) the unqualified acceptance of sophisticated analytical techniques for strategy analysis. These processes influence each other in ways that can lead to a self-perpetuating cycle of organizational momentum. Gaining some appreciation for this requires more insight into each process.

Professionalizing the Planner's Job

One of the most important processes, particularly during the last decade, is the growth of planning as a profession. Both corporations and schools of business have done much to single out strategic planning as a high-potential career path. Fast-track programs in major business firms and university curricular developments have contributed to an aura and attractiveness that make careers in planning virtually irresistible. If popular business literature were to be taken at face value, one would come to believe that the corporate planner is a key influential who has the "king's ear" on every strategic decision.

A requirement for maintaining the professional mystique of planning is to cast it into the mold of an exact science. With the help of academicians and consultants this is precisely what has occurred. First came the necessary jargon. Terms such as strategic business unit, growth-share matrix, and GAP analysis became buzz words of the planning professional. These provided outward and visible signs required to gain and sustain respectability in organizational life. Accompanying this special vocabulary are a variety of research findings and analytical techniques reputed to reveal "laws" of the marketplace. Armed with both an arcane language and special knowledge of lawful (i.e., predictable) strategic relationships, corporate planning has come to be a "scientific" profession.

The hazards of permitting the planning function to gain professional and scientific status in organizational life are manifold, and more will be said of it later. What is worth noting at this point is that planners are first and foremost staff. Therefore, they feel vulnerable with respect to their organizational status -- particularly when going one-on-one with strong line managers. It should come as no surprise, then, that a safe harbor for the corporate planner is specialized knowledge and complex analytical procedures. These are more than tools of the trade; they are independent bases of power for offsetting the prerogatives and stature of line executives and serve as means for surviving the vagaries of corporate life.

Quantification Equals Certainty

A second process than can propel a planning system toward a state of hyper-rationality is excessive emphasis on quantification. This emphasis is directed at both (1) information used as inputs to the planning process and (2) the level of detail embodied in the corporate plan itself. In each instance there operates an implicit belief that the level of quantification and certainty are directly correlated.

At its core, strategic planning is simply a systematic approach for insuring the long-term growth and development of an enterprise. Strategic planning processes are usually introduced in order to rationalize corporate decision making by moving away from seat-of-the-pants administrative judgments. One unintended consequence of the need to become more systematic and rational is the establishment of rules of evidence that govern the admissibility of information used to establish planning assumptions. A pervasive belief among many line and staff members is that only quantifiable data are sufficiently reliable bases for planning. Other data, though interesting and certainly useful for explaining empirical relationships, lack the "hardness" or certainty required for planning. Beliefs of this sort are seldom expressed -- nor do they have to be in the give-me-the-facts world of administration. They greatly bias, however, the scope and character of information used to plan. Critically important qualitative information, especially that regarding such intangibles as subtle shifts in public attitudes, life-style changes, the ebb and flow of organizational morale, corporate-government relations, etc., are frequently lost in the shuffle. Partly, this is because models for strategy analysis and most management information systems can only accommodate numbers.

The desire of staff to establish solid planning assumptions is not the only antecedent in the drive for quantification and certainty. Line managers contribute, too. One of the most common phenomena in organizational life is the direct correlation between the age of a planning system and the level of detail used for analysis and exhibited in the strategic plan. There are exceptions, of course, but the tendency is for line managers to demand and receive more detailed information each year for preparing plans. Corporate planners are then expected to incorporate such detail into the plan itself. In circumstances with which we are familiar, the increasing emphasis on detail reflects a continuing quest for certainty -- a quest that in the end usually proves to be a mirage. What managers often encounter with increasing levels of detail is not greater certainty, but more ambiguity. As strategic problems are "sliced" into smaller and smaller pieces, they become fragmented and disjointed. What is lost is coherence.

Institutionalization of Planning

The third major process that can propel an organization toward a state of hyper-rationality is institutionalization. Institutionalization is a process in which new norms, values, and administrative procedures are incorporated into the social fabric and structure of an organization (13). Strategic planning processes are subject to institutionalization. When first introduced into organizational life, planning is often an exciting experiment that generates innovative entrepreneurial thinking. As time passes, its novelty diminishes, and its administrative efficiency improves, and it can become merely one more management task. Unfortunately, the dual forces of creative, innovative thinking and efficient planning system management usually pull in opposite directions.

The process of institutionalization causes many planning systems to become efficient, elaborate, and formalized, but less innovative, flexible and stimulating to strategic thinking. If institutionalization proceeds too far, a planning process can become hyper-rational. Stress shifts from creativity to compliance. The purpose of planning is reduced to that of simply struggling through the annual planning cycle with its seemingly endless reporting procedures, confusing forms, and rigid timetables.

Unqualified Acceptance of Analytical Techniques

Unqualified acceptance and application of sophisticated models and analytical techniques is a fourth process contributing to hyper-rationality in some firms. Findings stemming from the PIMS Program (18), contributions from finance concerning capital budgeting, the Boston Consulting Group's concept of portfolio analysis (3), and recent outgrowths of industrial organization economics (16) are milestones in strategic analysis. These and similar techniques are powerful tools for competitive analysis, but their function and limits are often ignored in the quest for certainty in strategic decision making. Hyper-rationality occurs when one or more of these techniques become the dominant framework for defining and evaluating strategic choices. The following problems are typical of this condition:

I. The particular analytical model used becomes a "filter" that frames managerial thinking. In this mode the model's parameters and structure define strategic problems in such a way that the model can deal with them. Thus, emerging, ill-defined strategic issues that often prove decisive may not be detected because they either do not correspond to variables in the model or fall outside its analytical scope. In a sense, unqualified acceptance of a model for strategy analysis can seriously impair the capacity of an organization to spot problems sufficiently well in advance to formulate and implement a response (2).

II. Many strategy analysis techniques place excessive emphasis on a single criterion as the basis for strategic decision making. Both the present value method and the Boston Consulting Group's portfolio model are primarily concerned with cash flows. Their implication is that the strategic significance of investment decisions and managing a portfolio of diverse businesses is summarized by streams of cash. For the executive, strategic choices are a complex, multidimensional problem involving matters that cannot be incorporated by a single measure. Unwarranted commitment to either of these or similar techniques can lead to strategic errors biased by short-term financial considerations that undermine the infrastructure of an organization necessary to sustain it over the long run (1,8).

III. Proponents of particular analytical techniques usually make it a point to remind potential users of the scope, limits and assumptions of each technique. Unfortunately, these are often ignored at great risk. The PIMS findings, for example, are based on product life cycle. Whether lawful relationships revealed in this program hold under other circumstances is not known. Thus, generalizing can be perilous. The portfolio model and experience curve (which underpins the BCG portfolio matrix) also have limits (1,10, 11,12). Managers lulled into a false sense of security with these models can wake up to find that competitors placing greater emphasis on product innovation are expanding into new markets with higher rates of return. Hyper-rationality occurs when assumptions and limits of analytical frameworks are ignored in strategic decision making.

IV. Deterministic thinking often supplants entrepreneurial creativity in strategy making. By this we mean when managers implicitly assume that relationships specified by an analytical model are inevitable, and result from irresitible economic and technological trends. For example, some drawing on PIMS research argue that high profits are the outcome of a large market share. Therefore, one should pursue share. This is a case of over generalizing a deterministic relationship. It ignores other factors such as profit margins, cost structure, barriers to industry competitors, etc. The potency of these factors is clear in the world of commerce which is replete with examples of firms with small market share that are extremely profitable. Deterministic thinking of this sort ignores two important facts: (1) models are simplified analogs of reality, not reality itself; and (2) a strategist's job is to invent a future for an organization that is a unique expression of its history, values and resource capacity. Deterministic thinking drives out this kind of creative thought.

The four processes presented in Figure 1 are primary sources of inertia that can drive a planning system to the state we refer to as hyper-rationality. Certainly, not all firms experience these in the same proportion. Some never experience them at all. The point is that such processes operate among evolutionary developments that facilitate the normal adaptation of planning systems as organizations grow. Hyper-rationality is an extreme case in which planning systems become onerous, dysfunctional procedures that are incapable of producing innovation strategic thinking. Organizational consequences of this condition can be quite serious.

ORGANIZATIONAL CONSEQUENCES OF HYPER-RATIONAL PLANNING

Effects of the condition we have described as "hyper-rational" planning are not localized. Rather, they affect persons in key roles throughout an organization. Of particular importance are the chief executive officer, the corporate planner, senior-level line managers, and board members. Each experiences the effects somewhat differently and for this reason deserves individual consideration.

Chief Executive Officer

There are two discernible effects on a chief executive when a planning system reaches a hyper-rational state. First, the shifting pattern of people, values, aspirations, and commitments that comprise the milieu of executive action seem strangely irrelevant. The organization is discussed as if it were an abstraction to be referenced by carefully defined strategic variables and subject to immutable competitive laws. Intangible qualities of organiztion sustaining its "social glue" and sense of collective purpose seem impotent in the wake of empirical data and the weight of statistically verified relationships. A second effect of hyper-rationality concerns the role of the chief executive. If strategy formulation is developed within the parameters of a single model, the specification of strategy becomes merely a constrainted choice problem. The executive's role is recast from that of institutional leader to one of clerk: in lieu of inventing a future for the organization is an annual endorsement of an inevitable course of action. Admittedly, these effects are exaggerated. But the central point remains that a hyper-rational planning process is devoid of meaning for many senior executives, due to its incapacity to capture the multidimensional complexity of strategic choice.

When executives confront this situation they exhibit a variety of responses. Two of these are particularly detrimental to the success of the strategic planning process. One response is to withdraw support from and active participation in the process. It goes without saying, that this seriously undermines the integrity of the planning effort by giving mixed signals to other executives. Without visible and enthusiastic support from the chief executive, strategic planning is doomed to failure (14,17,19).

A second and equally destructive consequence of hyper-rational planning is for the CEO to form a coterie of senior managers for making strategic decisions. Such a group is usually comprised of certain key executives that share basic values with the chief executive and possess a similar "view of the world." Matters of real strategic significance are confronted and dealt with by this group outside of the formal process of strategic planning. Relatively mundane aspects of planning occur within prescribed channels. In this situation the formal planning process can take on the role of a routine annual exercise that affords little in the way of innovative thought. Few other executive actions have a greater negative impact on the overall effectiveness of the strategic planning than withdrawing visible support from this process.

The Corporate Planner

Although to some it may seem ironic, corporate planners are often victims of hyper-rational planning. In their effort to attain organizational respectability as vital contributors to strategic decision-making, the trappings of the "science of planning" sometimes create a snare. The snare is slowly fashioned out of the increasingly intricate network of models, data, analytical techniques, and formal procedures. If the process goes too far, these factors establish an intellectual cocoon of abstractions whose relationship to the administrative experiences of line managers is, at best, tenuous. Increasing sophistication can breed increasing irrelevance and the development of a ponderous planning apparatus. One planning officer we interviewed provided an example of the case in point. When queried about his firm's strategic plan, he placed before us a three-inch-thick ring binder containing, in seemingly endless detail, the annual plan. He dubbed it "the beast"! Over several years his full-time preoccupation had become coordinating the development of the plan which was made more detailed and complex each year.

An organizational consequence of such circumstances is to prevent the planner from acting as an otherwise creative agent in the planning process. In place of internal consultant, counselor, and confidant to managers struggling with tough strategic choices, the corporate planner becomes merely a "gadfly" insuring that deadlines are met and procedures adhered to. The process ceases to be an instrument, and becomes an end in itself. Administrative success is equated with completing the plan on schedule and in the correct format. For the planner there is little time for creative analysis of strategic opportunities sensed by line managers, since such projects are often precluded by the formal demands of the planning system. Innovation suffers as the planner's role changes from one of catalyst to one of weary coordinator.

Senior Line Managers

By now it must be clear that line managers too are victims of hyper-rational planning. They suffer at the hands of executive leadership when hyper-rationality causes the CEO to withdraw from or by-pass the strategic planning process. Such executive actions communicate contradictory signals to upper-level managers. In one breath they are reminded of the importance of strategic planning. It is made clear that planning will require much of them and be rewarded if well done. If, simultaneously, the CEO personally disengages from the planning process, what are line managers to do?

Under such circumstances, executives expected to conduct the planning process experience role stress and feelings of ambiguity about planning (15). These experiences often surface in the form of dysfunctional behaviors which reduce the effectiveness of the planning process. Upper-level managers often send the same mixed signals to subordinates that they have received from their chief executive. Thus, the facade of planning is maintained while the substance of planning is lost. There develops a mere chain of compliance. Managers at all levels come to view the strategic planning process as the nearly unbearable annual ritual that in the end means little.

When the quality of participation in the planning process gravitates from enthusiastic support to reluctant compliance, the capacity of the system to facilitate adaptation is severely impaired. Missing are the priceless inputs from line managers that help an organization sense out shifting environmental contingencies. Early signals of strategic significance are ignored. Without antennae of this sort, the corporation is, at least with respect to subtle changes in competitive conditions, "flying blind." If the planning process ceases to be a forum in which entrepreneurial thought and action are encouraged, ambitious, able managers are forced to find other outlets for their creativity. If these are not available, morale declines and a generation of future executives are compelled to conclude that strategic planning is simply another administrative burden they must bear while ascending the organizational hierarchy.

Board Members

Board members are, perhaps, the most unwitting victims of hyper-rationality in planning. This stems from the fact that they are usually trying to reach an accommodation between two conflicting pressures that make board membership difficult. One source of pressure is rising public expectations of a board member's responsibility for a corporation's strategic behavior (6). Such expectations are reflected in a raft of litigation and the redefinition of directors' liability and responsibility. A second source of pressure is the difficulty even able board members have in comprehending the complexity and scope of corporate actions. Many directors, despite good intentions, have an inadequate understanding of both current strategy and broad issues affecting strategic success.

To the besieged board member the appearance of certainty conveyed by a hyper-rational planning process is alluring, indeed. Its pseudo-scientific trappings provide a sense of stability and predictability in a world that often appears turbulent. Armed with hyper-rational planning procedures, executives can bring to board members in simple "black and white" the relevant array of strategic alternatives and the immutable logic supporting their chosen course of action. If questions arise, staff can be summoned to deliver a litany of arcane terminology and statistical mumbo jumbo sufficient to blunt the most earnest inquiry. For the board member, hyper-rational planning can become an opiate for coping with the stress of rising public expectations and the increasing complexity of strategic choices.

If a planning system becomes hyper-rational and directors accept, with a carefully concealed sigh of relief, the resulting strategic analysis, trouble is afoot. Board members whose innate sensibilities are numbed by hyper-rational planning have abnegated their personal responsibility and public duty. This places all in jeopardy. Under such circumstances issues of fundamental strategic importance seldom surface for open discussion and debate. In the absence of this vital administrative function an organization's executive group and trustees can sleepwalk into the future. When a board is, in effect, anesthetized by hyper-rationality, how can its members judge executive action and flush out critical issues so often buried in the assumptions underpinning empirical strategic analysis?

GUILDELINES FOR PREVENTING HYPER-RATIONAL PLANNING

The occurrence of hyper-rationality in strategic planning is a result of a myriad of complex administrative and technical processes. However, these processes are not inevitable in the sense that nothing can be done to arrest momentum toward a hyper-rational state. At first blush, it may appear to be fruitful to directly engage the sources of hyper-rationality presented in Figure 1. This approach, however, will probably yield only modest results. Instead, our suggestion is to take action on three broad fronts with the intent of blunting the overall inertia toward hyper-rationality.

First, it is imperative that a planning culture be developed in which the purpose and limits of strategic planning are widely recognized and fully understood (4,5,7). This is a particularly important function of the chief executive officer and corporate planner (14). Persons must be reminded that the strategic planning process is a means for the continual identification and interpretation of strategic issues that may affect the long-term growth and development of an enterprise. In this capacity, it should facilitate problem formulation, sensing out of values and aspirations, consensus building, and settling on a strategy consistent with a firm's strategic capability. In no sense, however, is strategy making an exact science. It is, instead, a combination of analytical techniques, administrative processes, and human judgment that bear elements of both art and science. With this in mind, executives must affect a synthesis between analyses provided by limited, but powerful, techniques and equally important non-quantifiable properties of an organization (e.g., knowledge, values, aspirations and acknowledged societal responsibilities). Synthesis is impossible, however, when hyper-rationality squeezes out intuition and seasoned judgment.

Second, one mechanism for insuring that plans are well thought out is to include in the planning process techniques for testing assumptions. Every strategy alternative and final strategic plan are underpinned by a host of assumptions. Some assumptions may stem from data used during analysis (e.g., interest rates, GNP). Other assumptions are peculiar to specific analytical techniques (e.g., declining costs, cash flows, rates of technological innovation). If assumptions in either of these areas are unwarranted, conclusions that result are also likely to be unwarranted. In light of these circumstances, we suggest that staff and line executives be encouraged to examine in considerable detail assumptions supporting strategic alternatives facing a firm. Very often we have found that deadlocks over which course of action is best can be clarified, and sometimes resolved, by probing, critical examination of assumptions that otherwise go unchallenged.

Finally, beyond cultivating essential organizational values and using assumptions testing, a more formal procedure may be required to arrest the momentum toward hyper-rationality in planning. We recommend periodic reviews of the strategic planning process. These may be conducted by a task force comprised of both participants in the planning process and those with no direct involvement. The latter could be a consultant, an outside board member, or an executive from another firm or division. The team should develop review criteria before initiating their evaluation. The following are some criteria for getting started, which are by no means all inclusive:

1. Do those engaged in the planning process understand its basic purpose and structure?
2. Does the strategic planning process facilitate the identification and interpretation of strategic issues?

3. Is there a balance between quantitative and qualitative information that sets the stage for innovative thought and action?
4. Given the utility of information obtained, is the time required to gather and interpret it excessive?
5. Does the planning process provide means for fully discussing dissenting viewpoints?
6. Are managers encouraged and rewarded for entrepreneurial initiatives?
7. Are intangibles such as managerial values, aspirations, and acknowledged responsibilities society explicitly incorporated into final strategic choices?
8. Does the process provide adequate time for strategy implementation and evaluation?

CONCLUSION

We have suggested that four basic processes found in and around most organizations can generate momentum that propels the strategic planning process toward a state of hyper-rationality. The term hyper-rationality refers to a condition that is present when a planning system becomes excessively rigid, formalized, quantitative, and deterministic. Hyper-rationality does not arise suddenly, nor are all organizations necessarily susceptible to its debilitating effects. Managers in many firms recognize its early symptoms and take corrective action. Other managers do not. As a result they suffer a decrease in the level of effectiveness of their strategic planning process.

In order to lessen the inertia toward hyper-rationality, we suggest that action be taken on three fronts. First, it is necessary to instill and cultivate organizational values about planning that put into perspective its purpose, proper role, and limits. Second, assumptions testing procedures should be incorporated into the planning process. Finally, periodic reviews of the planning process could be vitally important for arresting a drift toward hyper-rationality. If these steps are successful, they will contribute to the maintenance of a viable planning process sufficient to insure continued adaptation to a changing competitive environment.

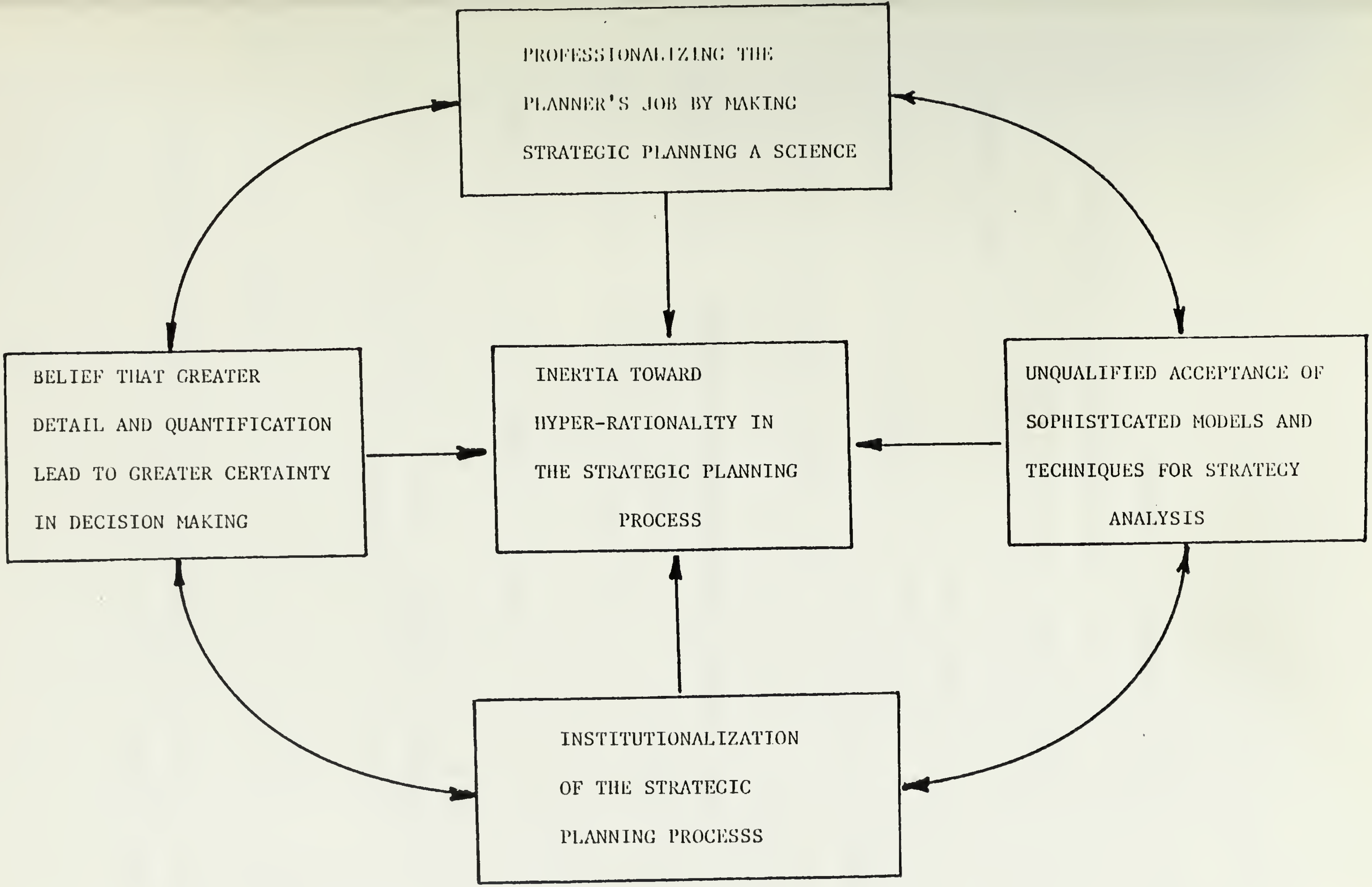

FIGURE 1

ORGANIZATIONAL AND TECHNICAL FORCES
GIVING RISE TO HYPER-RATIONALITY

REFERENCES

1. Abernathy, W. and K. Wayne, Limits of the Learning Curve, <u>Harvard Business Review</u>, 1974, <u>52</u>, (5), 109-119.

2. Ansoff, H. Managing Surprise and Discontinuity: Strategic Response to Weak Signals, H. Thorelli (Ed.) <u>Strategy + Structure = Performance</u>, Bloomington, Indiana: Indiana University Press, 1977.

3. The Boston Consulting Group, Growth and Financial Strategies, <u>Perspectives</u>, Boston: Boston Consulting Group, 1971.

4. Charan, R., How to Strengthen Your Strategy Review Process, <u>Journal of Business Strategy</u>, 1982, <u>2</u>, (3), 50-60.

5. Cleland, D. and W. King, Developing a Planning Culture for More Effective Strategic Planning, Working Paper #31, University of Pittsburgh, 1973.

6. Donnell, J., Sixteen Commandments for Outside Directors, <u>Business Horizons</u>, 1976, <u>19</u>, (1), 45-58.

7. Emshoff, J. and I. Mitroff, Improving the Effectiveness of Corporate Planning, <u>Business Horizons</u>, 1978, <u>21</u>, (5), 49-60.

8. Hayes, R. and D. Garvin, Managing As if Tomorrow Mattered, <u>Harvard Businss Review</u>, 1982, <u>60</u>, (3), 71-79.

9. James, B., <u>The Death of Progress</u>, New York: Alfred Knopf, Inc., 1972.

10. Kiechel, W., The Decline of the Experience Curve, <u>Fortune</u>, October 5, 1981, 139-146.

11. Kiechel, W., Three (or Four, or More) Ways to Win, <u>Fortune</u>, October 19, 1981, 181-188.

12. Kiechel, W., Oh Where, Oh Where Has My Little Dog Gone? Or My Cash Cow? Or My Star?, <u>Fortune</u>, November 2, 1981, 140-154.

13. Kimberly, J., Issues in the Creation of Organizations: Initiation, Innovation, and Institutionalization, Academy of Management Journal, 1979, 22, (3), 437-457.

14. Lorange, P., Corporate Planning: An Executive Viewpoint, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1980.

15. Lyles, M. and R. Lenz, Managing the Planning Process: A Field Study of the Human Side of Planning, Strategic Management Journal, 1982, 3, (2), 105-118.

16. Porter, M., Competitive Strategy, New York: The Free Press, 1980.

17. Rothschild, W., How to Ensure the Continued Growth of Strategic Planning, Journal of Business Strategy, 1980, 1, (1), 11-18.

18. Schoeffler, S., R. Buzzell and D. Heany, Impact of Strategic Planning on Profit Performance, Harvard Business Review, 1974, 52, (3), 137-145.

19. Steiner, G., Strategic Planning, New York: The Free Press, 1979.

Biographical Notes

R. T. Lenz is Associate Professor of Administrative and Behavioral Studies at the Graduate School of Business, Indiana University. After receiving his bachelors degree from Indiana University and MBA degree from the University of Louisville, he spent one year in marketing with the Brunswick Corporation and five years in manufacturing with General Electric. Dr. Lenz' current research programs include studies of human behavior in the context of planning systems, and the use of environmental analysis in strategic planning.

Marjorie A. Lyles is Assistant Professor of Business Policy at the University of Illinois. Her primary research interests are in long-range planning, strategic decision-making, and management information systems. She has published articles in Administrative Science Quarterly, Journal of Management, and Management Information Systems Quarterly.