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CRITIQUE OF HENRY MINTZBERG'S 'THE DESIGN SCHOOL: RECONSIDERING THE BASIC PREMISES OF STRATEGIC MANAGEMENT'

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Mintzberg's (1990) critique of the 'design school' of strategic management is evaluated on two criteria: methodological soundness and factual veracity. The critique is found to be deficient on both criteria. Mintzberg's own proposal for the basic principles of strategic management is critiqued using the same criteria. It is found that the exposition is deficient methodologically and that Mintzberg's descriptive and prescriptive assertions are at variance with facts observable in the current practice of strategic management. The variance is found to be due to several factors: lack of coherence in Mintzberg's presentation; his use of a definition of strategy which is at variance with the current practice of management, his failure to differentiate between prescriptive and descriptive statements; and his failure to define the context for his prescriptions. Using recent empirical research results on strategic success behaviors, Mintzberg's model is placed in a limited but important context in which it is a valid prescription for successful strategic behavior.

INTRODUCTION

The key conclusions of Mintzberg's (1990) paper are the following:

1. The 'Design School' at The Harvard Business School, having enunciated in the 1960s a set of prescriptive concepts for strategy formulation, 'denied itself' the opportunity to adapt these concepts ever since.
2. The 'other' prescriptive schools of strategy formulation (which are vaguely named, but not described by Mintzberg) shared the basic concepts of The Harvard Business School (HBS).
3. Like the Design School, the other prescriptive schools remained frozen in time.
4. The design principles shared by the design schools were, and still are, generally invalid except in a narrow specific context.
5. Interspersed with the critique of The Design School, are Mintzberg's own descriptions of the nature of strategy formation and prescriptions for the use of the 'emerging strategy' formation process, based on 'trial and experience'. Mintzberg argues that in unpredictable environments it is impossible to formulate an explicit strategy before the trial and experience process has run its course; and that it is not necessary to make strategy explicit in predictable environments.

Thus, according to Mintzberg, for all intents and purposes, all of the prescriptive schools for strategy formulation should be committed to the garbage heap of history, leaving the field to the 'emerging strategy' school which he represents.

Many readers will recognize that the author of this paper is a 40-year-long card-carrying member of one of the schools which Henry confines to

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obscurity. These readers are also likely to know that my entire professional career has been focused on helping organizations manage their strategic behavior in unpredictable environments.

Thus, if I am to accept Henry's verdict, I have spent 40 years contributing solutions which are not useful in the practice of strategic management.

Therefore, it should not be surprising that I rise in defense of at least one prescriptive school (the one to which I belong) in an effort to set the record straight and thus salvage a lifetime of work which has received a modicum of acceptance by practicing managers.

In situations like the present, it is easy to fall prey to a game of polemic charge-countercharge in the hope that the louder voice will carry the day. I will attempt to avoid this trap in two ways. First, I will show that the methodology by which Mintzberg disposes of the prescriptive school will hardly stand its day in the court of logic, and persuasiveness. Second, I will offer evidence of repeated instances in which Mintzberg's key assertions are factually wrong. Thirdly, I will fault Henry on the fact that, having confined the prescriptive schools to a narrow context, he does not place his own in an appropriate context.

Finally, I will identify the context which is appropriate for Henry's prescriptions. It is ironic that this context will appear very similar to the context to which he confines the prescriptive schools, but is somewhat larger in scope. Thus, to borrow a phrase which Henry uses in his critique of Professor Kenneth Andrews, his paper emerges as 'a caricature of his own model.'

MINTZBERG'S PROOF THAT THE DESIGN SCHOOL DENIED ITSELF THE CHANCE TO ADAPT

Generalization from a sample of one

The writings of Professor Kenneth Andrews (1971) are the only source used in construction of this proof, and the Harvard Business School is made to appear to be solidly united behind him as the School's idealogue and spokesman.

Any reader who spent time in the halls of academe would automatically suspect this assumption of absence of differences in viewpoints and of conflicts which are typical of academic life. Therefore, Henry's generalization from a sample of one requires factual support.

Such support is not offered. Instead, Mintzberg attempts to minimize evidence to the contrary. Since world-wide visibility of Michael Porter cannot be left unnoticed, Mintzberg tries to minimize his influence on The Design School on the grounds that the HBS classic text on policy devotes only one chapter to Porter. Thus the reader is asked to believe that Porter's influence in the Harvard Business School has been confined to one chapter in a book!

Proof by implied intent

Having chosen Andrews as the 'mouthpiece' of the Design School, Mintzberg uses Andrews' own writings to prove that the school 'refused itself the chance to adapt' over time.

This is done by challenging Andrews' statements which suggest that the School's original design principles should be enlarged and modified.

The methodology is simple. First, having quoted a paragraph from Andrews, which suggests to an intelligent reader that the Design School did indeed continue to elaborate the original principles, Henry asserts (without any further evidence) that Andrews did not really mean what he said!

An example of one of several such 'proofs' should suffice to illustrate this 'methodology'. According to Mintzberg the second design principle advanced by the Design School (1990: 176) is as follows:

> Responsibility for (strategy formulation) must rest with the chief executive officer (CEO): that person is THE strategist.

In discussing Andrews' qualifications of this premise, Mintzberg quotes the following paragraph from Andrews' writings:

> False hope, oversimplification, and naiveté, as well as zest for power, have often led. . . .to the assumption that the chief executive officer conceives strategy single-mindedly, talks the board of directors into *pro forma* approval, announces it as a fixed policy, and expects it to be promptly executed by subordinates under

> conventional command and control procedure (Andrews, 1987: 82).

Admittedly, the paragraph is turgid and elliptical, but a careful reading makes clear the author's intent: 'It is an improper assumption that the CEO should be THE only strategist.'

Mintzberg arrives at the same interpretation and then summarily and flippantly dismisses it in a half sentence.

> '. . . . . .we see it (the quotation), as a not unreasonable caricature of his own text (Mintzberg, 1990: 179).

A reader will find in Mintzberg's paper several other such 'proofs' by assertion that, whenever Andrews tries to enlarge the original principle, he really does not mean what he says.

PROOF THAT OTHER PRESCRIPTIVE SCHOOLS HAVE ALSO REMAINED 'FROZEN IN TIME'

'Proof' by sweeping assertion

As mentioned before, Mintzberg offers no description nor discussion of 'the other' prescriptive schools. However, this does not prevent him from making the following sweeping assertion:

> The reader is asked to bear in mind that although the other prescriptive schools of planning and positioning have broken with certain of the premises of the design school . . . . . *the fact that they have accepted the most basic ones renders most of the following a critique of those schools as well* (Mintzberg, 1990: 181). (italics added for emphasis).

In scientific practice, sweeping assertions, such as the preceding one, are not accepted as proofs and must remain suspect until proven to be true or false. I will use two generally accepted proofs to show that the above assertion is false.

The first is an epistemological proof suggested by Alfred North Whitehead (1962), who states that sweeping assertions should be tested for credibility against common experience.

Here is what Mintzberg expects his readers to accept as credible:

That a sizeable group of idiosyncratic individuals who derive a substantial part of their living by selling their intellectual capital to practicing managers, would forego their idiosyncracy and their competitive advantage, for the privilege of following intellectual leadership of The Harvard Business School.

To this author the above picture of academia is just as ludicrous as the earlier picture painted by Mintzberg of monolithic ideological unity within the HBS.

Contradictory factual evidence

The credibility test is subjective. A more persuasive proof is a factual one. In such proof a single fact which contradicts the assertion is sufficient to falsify it. In mathematics this is known as the *Gegenbeispiel* principle of testing theoretical propositions.

Presented below are two facts which contradict Mintzberg's assertion that in the 1960s all prescriptive schools were basically alike.

The first fact may not have been available to Mintzberg. It is derived from a three-way meeting which took place at the Harvard Business School in 1962. The participants were two senior faculty members from each of the following major business schools: Sloan School of Management at MIT, Harvard Business School, and Graduate School of Industrial Administration at Carnegie-Mellon University. This writer was one of the participants.

During an intensive 2 days of discussion the participants explored two basic questions about strategy formation. The first was whether strategy has a distinctive content of its own or whether it was simply on integration of functional inputs, such as marketing, R&D, etc.

The second question was: if one assumed that strategy was a distinctive subject, is it possible to describe it in a structured manner, or must it of necessity remain an ephemeral concept which defies structuring and must, therefore, be studied by the verbal case method 'without writing anything down' (as was advocated in an early version of Harvard's classic case book on policy formation).

For the purpose of the present concern, suffice it to say that, at the end of 2 days, the three participant schools enunciated fundamentally

different views which led to different 'design principles,' thus denying Mintzberg's assertion that all prescriptive schools were alike.

The second fact which contradicts Mintzberg's assertion should have been known to him, because it is discussed at length in a book published in 1965 (Ansoff, 1965), which he references in his paper.

This fact is that the concept of strengths and weaknesses, ascribed by Mintzberg to the Design School, was conceptually criticized in this book, and a detailed alternative method was proposed for identifying future strengths and weaknesses of an organization. Incidentally, this method met (in 1965) many of the objections which Mintzberg makes in 1990 to the strengths/weaknesses concept of The Design School.

Factual contradiction of assertion that all of the prescriptive schools denied themselves a chance to adopt with times

One factual counterexample will suffice to prove this assertion false. In this example, I will briefly trace the evolution of one of the prescriptive schools, which through the years, has stayed in close touch with the changing practice of strategic management, adopted many prescriptions which have emerged in practice, and in recent years made several original contributions to the practice of management.

I will refer to this School as the School of Holistic Strategic Management. (Because of his off-handed dismissal of 'the other' prescriptive schools, it is not possible to tell whether Mintzberg is aware of the existence of this school.) However, as shown below, its origins and its progress are well documented.

The extent of progress of The School of Strategic Management between 1965 and 1990 can be assessed by comparing two books by this author: *Corporate Strategy*, first published in 1965 (Ansoff, 1965) and *Implanting Strategic Management*, which first appeared in 1984 (Ansoff, 1984).

Following are the milestones of the School's Evolution:

1. As already discussed in a book published in 1965 (Ansoff, 1965), this School enunciated a concept of strengths and weaknesses which was drastically different from that of the Design School.
2. The same book presented a structured method for analytic strategy formulation (which was a codification of its author's practical experience), a procedure which at the time was being used in practice but was considered impossible at The Harvard Business School (Ansoff, 1965).
3. In 1978, the concept of strengths and weaknesses was replaced by a comprehensive concept of *Organizational Capability*, (Ansoff, 1978).
4. The original concept that strategy formulation should be centralized in the hands of the CEO was replaced by the concept *strategic bi-centralization* (Ansoff, 1984).
5. The concept of *Strategic Myopia* of key strategic managers and of *resistance to strategic change* were formulated and a practical procedure developed for overcoming both of them during strategy formulation and implementation (Ansoff, 1984).
6. A *diagnostic procedure* was developed *for sequencing strategy/structure development*, according to the degree of urgency of strategic response being experienced by a firm. (Ansoff, Declerck and Hayes, 1974).
7. In 1972 the overall perspective of the subject was broadened from strategy formulation to the overall process by which organizations adapt and succeed in turbulent environments, and the concept of Strategic Management was introduced (Ansoff, 1972).
8. The concept of *real time response* was developed, as an alternative to periodic strategy planning, and three practical real time response procedures were proposed: (i) *Strong Signal Issue Management*; (ii) *Weak Signal Issue Management*; and (iii) *Surprise Management* (Ansoff, 1984; Ansoff, Kirsch and Roventa, 1980).
9. In 1979 an *applied theory* of strategic behavior was developed and published (Ansoff, 1979).
10. A *Strategic Success Hypothesis*, which is a keystone of this theory, was repeatedly tested and validated in a variety of organizational types and several countries. (Hatziantoniou, 1986; Salameh, 1987; Sullivan, 1987; Chabane, 1987; Lewis, 1989; Jaja, 1990; Ansoff and McDonnell, 1990; Ansoff, Sullivan *et al.*, 1990.)

11. Based on the findings of this research a practical *Strategic Diagnosis* procedure was developed for determining the strategy and capability changes which an organization will have to make in order to succeed in the future (Ansoff, 1984; Ansoff and McDonnell, 1990).
12. *Interactive Computer Software* for strategy formulation in turbulent environment was developed (Ansoff, 1986) and marketed.

In summary, at least one prescriptive school cannot be accused of having been a carbon copy of The Design School, either at its inception, nor during its subsequent evolution. Thus Mintzberg's assertion that *all* prescriptive Schools 'have accepted the premises' of The Design School and that they 'denied themselves the chance to adapt' is demonstrated to be false.

Many additional counterexamples can be found in the bibliography attached to Mintzberg's paper. One of these deserves particular attention because it occurred within the Harvard Business School. It is found in the work of Michael Porter. Having banished Porter from the design school, Mintzberg totally ignores his massive and distinctive contribution to the literature on strategy formulation which certainly does not qualify for inclusion among the original design school principles at the Harvard Business School.

Items 10 and 11 above show that The Holistic Strategic Management School, not only contributed new prescriptive principles, but also empirically identified the types of strategic behavior and their appropriate contexts which lead to organizational success. These findings will be used later in this paper for defining the appropriate context for Mintzberg's Model.

MINTZBERG'S MODEL OF STRATEGY FORMATION

Mintzberg leaves the reader in no doubt about his central theme:

> Our critique of the Design School revolves around one central theme: its promotion of thought independent of action, strategy formation above all as a process of *conception*, rather than as one of *learning* (Mintzberg, 1990: 182).

The critique is not confined to proving that The Design School's and other prescriptive Schools' principles are wrong. Interwoven with the critique are Mintzberg's own descriptive assertions about the real world, which he proceeds to convert into prescriptions for the manner in which strategy formation should take place in organizations. These prescriptions are sprinkled throughout the text and they are not summarized, nor logically connected.

Therefore, the summary given below is this writer's attempt at a faithful summary of Henry's proposals.

1. The central prescription is that, with minor exceptions, all organizations should use what Mintzberg calls the 'emergent strategy' approach to strategy formation, using trial and experience process.
2. The output of this process is an observable strategy which is the logic pattern underlying the historical sequence of successful trials.
3. Except for minor exceptions, this strategy should not be made explicit:

> Explicit Strategies. . . . .are blinders designed to focus direction and so to block out peripheral vision (1990: 184).

4. It is not possible to formulate strategy in unpredictable environments:

> . . .during periods of unpredictability. . . .(organizations) cannot possibly hope to articulate any viable strategy (1990: 184).

5. Nor is it possible to formulate a viable strategy in predictable environments:

> The point we wish to emphasize is: how could the firm have known ahead of time? The discovery of what business it (firm) was to be in could not be undertaken on paper, but had to benefit from the results of testing and experience (1990: 182).

The same quotation logically gives rise to the following conclusion, which is not articulated by Mintzberg:

6. It is not possible to forecast the future with complete confidence.

Mintzberg's concern with managers' need 'to be sure,' and his assertion that they 'cannot' act before they are 'sure,' permeates the paper and is used as a basis for several descriptions and prescriptions, including the following:

7. Managers should not make statements about the future if they are not totally sure of what they are saying.
8. Managers should not evaluate their organization's strengths and weaknesses until they become evident from the trial and error experience.
9. In complex organizations it is not possible to plan and coordinate an organization-wide process of strategy formulation. This assertion is contained in the following quotation from Brian Quinn, used and approved by Mintzberg:

> It is virtually impossible for a manager to orchestrate all internal decisions, external environmental events, behavioral and power relationships, technical and informational needs, and actions of intelligent opponents so that they come together at a precise moment (Quinn, 1978: 184).

Mintzberg makes no direct reference to the context in which his prescriptive principles should be used. But in his concern with what to do with The Design School, after he has demolished it, he does identify two contexts in which the explicit strategy formulation championed by the prescriptive schools may be applicable.

One of these contexts is:

> a new organization. . . .(during). . . .the period of initial conception of strategy. . . . (1990: 191).

(In this case Mintzberg implicitly suspends his earlier claim that in unpredictable environments strategy cannot be formulated and allows the founding entrepreneur to have a 'vision'.)

The other context is one in which:

> the design school model would seem to apply best. . .(is when) an organization (is) coming out of a period of changing circumstances and into one of operating stability (1990: 191).

With these two exceptions recognized, we can infer the following prescription implied by Mintzberg:

10. The 'emerging strategy approach' should be used in all situations with the exception of the two specified above.

In summary, Henry's prescription can be named as one of *implicit strategy formation*, under which strategy need not be a part of manager's concern, except under special circumstances. Managers should allow strategy and capabilities to evolve organically, through trial and experience, and focus their attention on the operating efficiency of the organization.

Thus, Mintzberg prescribes a world free of explicit strategy formulation and free of strategic managers.

CRITIQUE OF MINTZBERG'S MODEL

While reading the first part of the paper, one wonders why Mintzberg went to such length to prove that the prescriptive schools were identical and have jointly 'denied themselves' the opportunity to adapt to the changing times.

The reason becomes clear in the second part: Mintzberg is now free to criticize all of the prescriptive schools as if they were still adhering to their original design principles of 1965.

In the light of the methodological and factual deficiencies pointed out earlier in this paper, it is hardly worthwhile to challenge Mintzberg's criticisms of the original design principles, since they have been outstripped by developments, both in the practice of strategic management and in the writings of the prescriptive schools of thought. But Henry's own model of reality summarized in the preceding pages cries out for a critical appraisal. It is to this task that we now turn our attention.

As a person who has spent over 40 years of his life as manager, consultant, educator, and a close observer of the business scene, I have difficulty accepting Henry's model as description of strategic management reality.

And yet, Henry is an intellectually outstanding person, globally respected, and recognized as one of the leading contributors to the literature on strategic management.

As I studied his paper several explanations of

this apparent paradox became clear. In the following pages I will present these explanations. As before, I will base my critique on methodological deficiencies and on factual contradictions between Henry's claims and the real world of strategic management.

Self-denial of a chance to study business environment

It is strange how in his paper Mintzberg repeatedly commits sins of which he accuses the Design and the other prescriptive schools. One of these is the accusation directed at the Design School that it 'slight(s) the environment in favor of a focus on the organization' (1990: 182).

Henry's paper shows that he commits the same sin. Below is the sum total of his references to the environment.

One learns that managers:

> cannot be sure of the future. Sometimes organizations need to function during periods of unpredictability. Sometimes organizations come out of a period of changing circumstances into a period of operating stability.

Nothing is said about how often is 'sometime', what is meant by 'unpredictability', by 'changing circumstances' or how long and how prevalent are the 'periods of operating stability.'

The only complete sentence devoted to the environment does not help very much:

> . . . .environment is not some kind of pear to be plucked from the tree of external appraisal, but a major and sometimes unpredictable force. . . (1990: 185).

This cryptic statement begs all kinds of questions: whose environment is being discussed, what kind of influence does the force exert on organizations; under what circumstances is it exerted; what impact does it have on strategic behavior, etc?

This slight of the environment is unfortunate. If Henry had taken the minimum trouble to peruse the cover pages of *Business Week* for the past 4–5 years, he would have easily found answers to most of the above questions. In brief, he would have found the following information.

1. In today's world, different types of organizations have different environments. Thus, since the 1940s the environment of many business firms has progressively become more and more turbulent, unpredictable, and surpriseful. On the other hand, the not-for-profit organization had enjoyed a relatively placid environment until the 1970s (Ansoff, 1984).
2. Within the two classes of organizations, the environments of different industries became differentiated. At one extreme, some organizations continue to enjoy a relatively placid existence and at the other extreme are organizations which are experiencing very high turbulence (Ansoff, 1984).
3. The level of environmental turbulence has become a driving force which dictates strategic responses necessary for success (Ansoff and Sullivan, 1990).
4. In high turbulence environments success comes to firms which use strategies which are discontinuous from their historical strategies (Ansoff and Sullivan, 1990; Ansoff *et al.*, 1990).
5. In low turbulent environments success comes to firms which use strategies of incremental development of their historically successful product-development, (op cit.).
6. The final characteristic of the environment neglected by Mintzberg is the acceleration of the speed of change in the environment which has occurred during the past 30 years (Drucker, 1980).

The latter aspect of the environment puts in doubt the major prescription which Mintzberg offers in his paper. In turbulent environments, the speed with which changes develop is such that firms which use the 'emerging strategy formation' advocated by Mintzberg endanger their own survival. The reason is that when they arrive on a market with a new product/service, such firms find the market pre-empted by more foresightful competitors, who had planned their strategic moves in advance.

Thus, the first reason for the contradictions between Mintzberg's picture of reality and the observable real world is his failure to observe the current business environment.

Failure to meet validity tests for prescriptive and descriptive observations

To be valid, a descriptive observation must meet a single test: it must be an accurate observation

of reality. A prescription must pass a much more rigorous test: it must offer evidence that use of the prescription will enable an organization to meet the objective by which it judges its success.

Mintzberg seems to be oblivious to the need for evidence to support his descriptive statements, and he converts descriptions into prescriptions without any offering evidence that they will bring success to organizations using them.

An example of such conversion is offered by Mintzberg's treatment of experience with related diversifications. He starts with a descriptive statement about the 'vast majority of experiences reported in the popular press' which shows that firms make a number of mistakes in their diversification programs and, without batting an eyelash, converts it into a prescriptive statement: 'acquiring firm *has to make* a number of mistakes until it gradually learns what works for it, if it ever does' (1990: 183) (italics added for emphasis). Thus a described pattern of successive failures is automatically transformed into a prescription for success.

I am not sure that Henry appreciates the consequences of advocating use of trial and error in diversification programs. Having been in charge of a diversification department of a major American firm, I can testify to the fact that trial and error diversification is enormously expensive. The successive acquisitions require major investments by the acquirer, and disinvestment from mistakes multiplies the costs, because an acquisition cannot be sold-off overnight as one would sell a portfolio of poorly performing shares.

But, even more importantly, the mere fact that 'the vast majority' of experiences has led to repeated mistakes is not a valid basis for recommending that others should follow the same path. What is being reported by Mintzberg are cases of failure and the fact that there are many of them does not mean that success seeking firms should follow their example.

In fact, a major research study of mergers and acquisitions has shown that it is the planned approach to diversification, and not the trial and error approach, that produces better financial results (Ansoff *et al.*, 1971).

A second example is of critical importance to Mintzberg's model of strategic management. Without any prior evidence Henry offers the following description:

> . . . .sometimes organizations. . . .need to function during periods of unpredictability, when they *cannot possibly hope to articulate any viable strategy* (1990: 184) (italics added for emphasis).

Having stated the description, Henry offers the following prescription, again without any supporting evidence:

> When strategists are not sure, they had better not articulate strategies, *for all the reasons given above* (1990: 184) (italics added for emphasis).

However, a careful and multiple rereading of the proceeding text fails to reveal any 'reasons' unless it is the unarticulated conviction of Mintzberg's, which permeates the paper, that strategy formulation is impossible unless the environment is 'stable and predictable.'

We must now deal with the origin of this conviction.

Descriptive definition of strategy

If Henry had taken the trouble to acquaint himself with the history and current practice of strategic management, he would have found widespread use of explicit *a priori* strategy formulation. Furthermore he would have found that explicit strategy formulation is typically used in environments in which managers are not 'sure' about the future (Steiner and Schollhammer, 1975).

Thus, once more, Henry's assertion is contradicted by facts. In this case the explanation is twofold.

The first is the black and white picture of the environment painted by Mintzberg: managers are either 'sure' or totally 'unsure' about the future. In the real world of management these two extremes are rarely observable (Schwartz, 1990). In practice managers are typically partially 'unsure' (see concept of partial ignorance in Ansoff, 1965). And they formulate strategy precisely because being 'unsure' makes it dangerous to assume that the firm's future will be an extrapolation of the past.

The second explanation is found in the difference between Henry's definition of the concept of strategy and the definition used in practice. His definition is descriptive since, in

order to identify the strategy, it is necessary to wait until a series of strategic moves has been completed.

But the concept used in practice is prescriptive and it stipulates that strategy should be formulated in advance of the events which make it necessary.

Thus Henry's failure to differentiate between descriptive and prescriptive statements once again places him in the position of contradicting observable reality.

Use of existential model of learning

The model of organizational learning advocated by Mintzberg consists of a sequential trial and error process, neither preceded nor interrupted, nor followed by cognitive strategy formulation.

To be sure, under special circumstances, he allows the possibility of postexperience strategy diagnosis. But nowhere in the paper does he suggest that the diagnosed strategy should in any way affect the choice of subsequent strategic moves. In fact, as cited before, Mintzberg considers explicit strategies to be 'blinders designed to block out peripheral vision.'

This model of learning is the oldest one in human history. It was the model of the prehistoric man when he ventured from his cave in search for food. It was also the model of the master builders in The Middle Ages who created glorious cathedrals by repeating lessons learned from past successes, without understanding of what made the cathedrals stand or fall. This was also the model which was used to train new apprentices by putting them to work under direct guidance of experienced master builders. We shall refer to it as the *existential model* of learning.

Henry's insistence on exclusive use of this most rudimentary model of learning in formation of strategy is ironic because it is the model on which The Harvard Business School Case method, which he criticizes at length, was originally built.

The age of enlightenment ushered a new model which recognized importance of cognition in the affairs of man. In this model decision-making is the first stage, followed by implementation of the decision. It became the standard model of the natural sciences, and it was the model used in the early prescriptions for strategic planning. We shall call this model the *rational model* of learning.

The rational model has several advantages over the existential:

1. In cases in which decision-making is less time-consuming than trial and error, the rational model saves time by selecting action alternatives which are most likely to produce success. This time saving is of great importance in organizations which find themselves in rapidly changing environments.
2. It permits additional savings of time through starting strategic response in anticipation of need to act—a process called strategic planning.
3. It reduces the number of strategic errors and reduces costs by eliminating the probable 'non-starters' from the list of possible strategic moves.

Thus, the rational model becomes particularly important when the cost of a failed trial is very high, as in the case of diversification by business firms.

Mintzberg makes no mention of the fact that the rational model is a legitimate alternative to the existential model. But he does devote a great deal of energy to proving that the existential model should be the only one used in strategic management. To support this claim, he makes a number of descriptive assertions which, as we have shown, are in conflict with factual evidence.

First, he declares that cognitive strategy formulation is not possible in unpredictable environments, a claim which is contradicted by the fact of habitual strategy formulation in business firms.

Second, he argues that, even in environments which are predictable, managers should not formulate a strategy unless they are sure of its consequences. He does this in the face of factual evidence that strategy formulation is typically found in firms whose managers are unsure about the future.

Thirdly, he claims that explicit strategy makes strategic action rigid and forecloses opportunities which were not anticipated by the strategy.

In making this claim, Henry neglects two facts which are readily available in the literature of the prescriptive schools (Ansoff, 1965).

The first is that the strategy concept used in practice does not specify alternatives. On the contrary, it sets guidelines for the *kinds of opportunities* the firm wants to develop through search and creativity.

The second fact is that successful practitioners of strategy typically use a *strategic control* mechanism which periodically reviews and, if

necessary, revises the strategy in the light of experience.

Thus, use of explicit strategy in successful practice is not rigid and does not foreclose attention to new opportunities which are outside the scope of strategy. But use of explicit strategy does control erratic deviations from the strategy. This point was well made in a quotation from Andrews used and rejected by Mintzberg:

> Strategy will evolve over time, no matter what. . . . .But the elucidation of goals can transcend incrementalism (and). . .result in the deliberate amendment of strategy or in curtailment of strategic erosion (Christensen *et al.*, 1982: 553–554).

Use of strategic control converts the rational learning mode into a more sophisticated one. The model becomes a chain of cognition-trial-cognition-trial etc. We will refer to it as *strategic learning* model (See Chapters 2.6, 2.9, 5.3 in Ansoff and McDonnell, 1990).

Finally, Mintzberg attacks the rational model of learning by pointing out that it decouples strategy formulation from implementation, which causes organizational resistance and even failure of implementation.

This point underlines the irony of Mintzberg's insistence on criticizing outdated original principles of the Design School without acquainting himself with their subsequent evolution. As discussed earlier in this paper, the problem of resistance to change has been recognized and treated back in the 1980s without abandoning explicit strategy formulation (Ansoff, Part 6, 1984).

In summary, Mintzberg's 'proofs' that the rational model of learning does not apply to strategic management are contradicted by facts of management practice. And his insistence on universal use of the existential model invites managements to abdicate their role as strategic thinkers, and to confine their attention to optimizing the operating behavior of their organizations.

Failure to identify relevant context

The most curious and damaging aspect to Mintzberg's Model of strategy formation lies in his failure to identify the context in which his model is valid. It is curious because, as already discussed in this paper, Mintzberg does identify the context for the Design School Model. And in his other work he was one of the first researchers to call attention to the importance of contextual view of organizational structures (Mintzberg, 1979).

His failure to identify the context for his own work is damaging because it exposes his model to counterexamples from the entire field of 'organizationatives' and from the complete range of organizational settings. As a result, in the absence of contextual limits, Mintzberg inadvertently ventures to make comments on contexts to which he has had little exposure.

And yet, it is the opinion of this writer that, if streamlined and put into proper context, Mintzberg's model of strategy has demonstrable validity, both descriptively and prescriptively, and represents an insightful and important contribution to Strategic Management. In the remainder of this paper I will describe the appropriate descriptive and prescriptive contexts for Mintzberg's model.

VALID CONTEXT FOR MINTZBERG'S PRESCRIPTIVE MODEL

Modification of Mintzberg's Model

A complete description of Mintzberg's Model was presented in this paper. From this model we abstract the following core concepts which can be shown to be valid in specified contexts.

1. To succeed, an organization should use the 'emergent strategy' trial and experience process of strategy formation.
2. No attempt should be made to formulate the firm's strategy in advance of the trial and experience process.
3. No formal organization-wide strategic planning should be used.
4. Except under special circumstances, the strategy which is implicit in the historical sequence of successful trials should not be made explicit.

Description of the relevant research

The relevant empirical research which makes it possible to identify the context within which the above Model is a valid prescription, was briefly

referred to earlier in this paper. A somewhat more detailed description follows.

The research was addressed to testing the Strategic Success Hypothesis which was proposed by Ansoff in 1979. The Hypothesis states that an organization will optimize its success when the aggressiveness of its strategic behavior in the environment and its openness to the external environment are both aligned with the turbulence level of the organization's external environment.

The key contextual variable in this research was the concept of environmental turbulence which is an enlargement of the concepts of unpredictability and uncertainty used by Mintzberg.

In the research, five distinctive levels of observable environmental turbulence were identified, ranging from stable to creative. For the purpose of identification of context it is useful to aggregate turbulence levels into two categories: (1) *Incremental turbulence* in which environmental changes are a logical evolution of the historical change process, and the speed of the changes is slower than the response time of the organizations; and (2) *Discontinuous turbulence* in which successive changes are discontinuous from the preceding ones, and speed of change is greater than the speed of the organizations' response.

To date the Strategic Success Hypothesis has been empirically tested in six different settings:

1. A cross-section of U.S. firms (Hatziantoniou, 1986)
2. Banks in United Arab Emirates (Salameh, 1987)
3. Public Service Organizations in the U.S. (Sullivan, 1987)
4. Parastatal firms in Algeria (Chabane, 1987)
5. Banks in San Diego County (Lewis, 1989)
6. Major U.S. banks (Jaja, 1990)

In all six settings, the hypothesis was statistically sustained in all settings at 0.05 or better confidence level. And the levels of success in organizations which are aligned with the environment were substantially higher than in organizations which were out of alignment (Ansoff and Sullivan, 1990; Ansoff, Sullivan *et al.*, 1990).

The relevance of the research results to Mintzberg's model lies in the fact that Mintzberg's prescription for strategy formation is virtually identical with the type of strategic aggressiveness which was found to optimize firms' success in the extrapolative environment.

Thus, empirical research described above shows that *Mintzberg's Prescriptive Model is a valid prescription for organizations which seek to optimize their performance in environments in which strategic changes are incremental and the speed of the changes is slower than the speed of the organizational response.*

It should be noted that, except for difference in the language (academic vs. practical), Mintzberg's model is identical to the injunction to firms to 'stick to their strategic knitting' which was offered in a world famous book *The Search of Excellence* by Peters and Waterman (Peters and Waterman, 1982).

(It should further be noted that, while recommending conservative strategic behavior, Peters and Waterman recommend very aggressive competitive behavior by firms which aspire to succeed in extrapolative environments, a matter not mentioned by Mintzberg.)

The size of the domain of applicability of Mintzberg's model to the business sector can be determined from an extensive unpublished survey by this author (which was briefly described in the introduction of this paper). According to the survey, roughly 20 percent of the firms in developed economies will need to use the Mintzberg/Peters/Waterman model in order to succeed in the 1990s.

It must be mentioned that, in discontinuous environments, which constitute the remaining 80 percent of the sample, the research described above (and the aftermath of the Peters–Waterman research) both show that firms which persist in 'sticking to their strategic knitting' will not be among the successful performers and may jeopardize their own survival.

Finally it is necessary to recognize that the context of the *descriptive validity* of Mintzberg's is much larger than the prescriptive. This context includes firms which are successful in the extrapolative business environments (in the business jargon those are called market driven firms); firms in discontinuous environments which are suffering from loss of competitiveness; and, in 1990, it includes a majority of the not-for-profit organizations in the U.S.

Thus the paradox of a world-famous researcher opening himself to criticism could have been

avoided if Henry had stuck to his own strategic knitting which is a deep knowledge of descriptive strategic behavior, particularly in not-for-profit organizations.

CONCLUSIONS

In this paper, the thrusts of critique of Mintzberg's proofs and concepts were two: methodological weakness of the arguments, and contradiction to factual evidence.

The conclusions of this critique are the following:

1. Mintzberg's proof that the Design School failed to adapt with times is methodologically unsound.
2. The assertion that other prescriptive schools shared their design principles with the Design School is factually inaccurate.
3. The assertion that the other prescriptive schools failed to adapt is factually inaccurate.
4. Because of the above conclusions, it is unproductive to address Mintzberg's specific criticisms of the Design School principles.
5. However, it is productive to critique the alternative to the Harvard Business School's design principles which is advanced by Mintzberg.
6. This critique finds that Mintzberg's proofs of his design principles are deficient on the following points:
   His 'self-denial' of knowledge of practice of strategic management in the business sector, which leads him to many assertions that are in direct contradiction to observable facts.
   Failure to meet validity tests for prescriptive and descriptive observations, which leads to unsupported claims for descriptions and arbitrary announcement of prescriptions.
   Use of a descriptive definition of strategy, which is different from the definition used in practice, which makes Mintzberg's conclusions appear contradictory to facts.
   Insistence on universal applicability of the existential learning model, which leads to assertions which contradict observable reality.
   Failure to specify the relevance context for his own model.
   By abstracting a set of coherent concepts from Mintzberg's model it is possible to show that the 'emerging strategy' model is a valid prescription for success in incremented environments, a valid description of poorly performing firms in discontinuous environments, and a valid description of the behavior of a majority of not-for-profit organizations.

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