



## Management Science

Publication details, including instructions for authors and subscription information:  
<http://pubsonline.informs.org>

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To cite this article:

Richard O. Mason, (1969) A Dialectical Approach to Strategic Planning. Management Science 15(8):B-403-B-414. <http://dx.doi.org/10.1287/mnsc.15.8.B403>

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## A DIALECTICAL APPROACH TO STRATEGIC PLANNING \* †

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This paper develops a new approach to the planning process. It begins by examining the critical role played by the planner's assumptions. Two criteria for a good planning technique are suggested by this examination: (1) It should expose the assumptions underlying a proposed plan so that management can reconsider them and (2) it should suggest new and more relevant assumptions upon which the planning process can proceed.

Existing techniques often fail these criteria. Consequently a dialectical approach is presented which, it is proposed, satisfies the stated criteria. The realm of corporate strategic planning was chosen as a testing ground for the new approach. Evidence obtained in a field study/experiment concerning RMK Abrasives' strategic planning problem is cited in support of the method and its ability to reveal assumptions.<sup>1</sup>

### Organizational Planning and Strategy

Man lives by his imagination. This is as true of the modern organization as it is for an individual. The particular set of beliefs or assumptions about the world that an organization adopts guides its activity and dictates its success or failure. This is especially true of an organization's strategic plan.

For the business enterprise, a strategy is a statement in broad conceptual terms of "what business the company is in or is to be in and the kind of company it is or is to be."<sup>2</sup> It has as a purpose the setting of "formal guidelines and constraints for the behavior of the firm,"<sup>3</sup> and involves a choice of goals for the firm as well as a choice from among alternative behavior patterns for attaining them.

The planning process which culminates in a strategy requires deliberation and particular style of managerial thinking. While this process is exceedingly complicated, three key characteristics of a management that engages in planning can be identified:<sup>4</sup>

1. It is concerned with future states of the world and hence makes *predictions* about them.
2. It seeks to secure a preferred future status according to its underlying *value system* (i.e. it seeks certain ends).
3. It believes it has a *choice* from among two or more *behavior* patterns (plans) for the firm's activity (i.e. it chooses means). It is important to note that each of these items involves management's basic *assumptions* about the planning problem it faces.

In corporate strategic planning these assumptions involve such personal conceptions as management's definition and interpretation of (to list a few examples): the industry the company serves, product/market relationships, its competitors, available tech-

\* Received November 1968

† This research was supported in part by the National Aeronautics and Space Administration under General Grant No. NSG-243 under the University of California.

<sup>1</sup> The research reported in this paper is addressed to some of the basic problems in planning such as those set forth in [3]. Although the discussion here pertains to any type of organization, it has bearing on several aspects of Ansoff and Brandenburg's categories A-F [3, pp. 231-236].

<sup>2</sup> This is the definition of strategy used by Learned, Christensen, Andrews and Guth [16, p. 17].

<sup>3</sup> Ansoff and Brandenburg, *op. cit.* [3, p. 230.]

<sup>4</sup> These assumptions about the manager who plans are similar to those I. D. J. Bross (5) imputed to the decision-maker. They are also consistent with Ackoff's (1) minimal conditions for a problem.

nologies, consumer reaction to its product and social-political-economic conditions. These assumptions represent the world of his business as the manager sees it. They underly every decision he makes. A rational manager uses these assumptions to interpret the data provided by his information system and then using logic he concludes the best plan of action.

To date the main thrust of the research effort in management science has been directed toward the task of finding "optimal solutions" to planning type problems *once they have been formulated and defined*.<sup>5</sup> In these approaches, the underlying assumptions delimit the solution "phase space" in terms of already specified predictions, values and alternative means. This type of research, then, seeks a solution technique, such as mathematical programming, that determines the optimal policy within this phase space. Mathematical logic guarantees that the policy is "optimal" *given* the assumptions.

However, the *real* validity of a plan depends as much on the relevancy of the particular assumptions that management brings to bear on the problem as it does on the accuracy of the logical process employed. Consequently, the important research questions become: "How might we expose management's underlying assumptions?" and "How might we stimulate management to adopt a broader and more considered view of the planning problem?" These questions suggest criteria for evaluating a planning technique. To answer them we must consider the source of management's planning assumptions.<sup>6</sup>

Management's world view is a product of his social-psychological environment. The fundamental predictions, values, and criteria for choosing means that underly his plans are deeply rooted vestiges of his cultural heritage. Through his experience the manager develops habitual ways of viewing his organization and coping with its problems. Life in most modern organizations only serves to reinforce these stereotyped responses to organizational problems.

Moreover, the theory of "cognitive limits on rationality"<sup>7</sup> suggests that some simplification and abstraction in the conceptualization of the problem is inevitable. The collection of these habitual ways of viewing the business and its planning problem forms the underlying assumptions (or world view) of a plan. This world view becomes so implicit that management is normally unaware of the full import of its influence on the planning process.

This theory indicates that if one intends to improve the planning process, it is important that these assumptions be exposed and subjected to conscious deliberation and reflection. This is true in those situations where the manager assumes the entire planning function. But, it becomes crucial when the manager turns to a planning staff for advice. Since the role of the advisor has become so commonplace in large organizations we shall concentrate our attention on the relationship between the staff planner or advisor and the manager.

The ultimate goal of this study is to apply a new approach to the ill-structured prob-

<sup>5</sup> i.e. Management science has concentrated on "well structured problems" (23). However, strategic planning problems are "ill-structured" and, to use Professor Horst Rittel's very descriptive label, "wicked." See C. West Churchman's comments in *Management Science* (11).

<sup>6</sup> The following is a psychologically oriented approach to planning deriving in part from Boulding's discussion of *The Image* (4) and Miller *et al's* interpretation of the role of the image in an individual's plans (20). In a sense our argument states that an organization's management also forms such an image of the organization itself.

<sup>7</sup> This notion is applied to organizational decision making by March and Simon (17, pp 151-158). However, see also Suppes (25), Osgood (22) and Miller (21).

lem of developing a corporate strategic plan.<sup>7</sup> However, a brief illustration of the approach in the context of a well-defined problem serves several purposes. It shows that certain of management's assumptions about the business as a whole are critical in even the most rigorously defined problem and it reveals that a straight forward way exists for exposing them. A highly simplified inventory type problem has been chosen to illustrate these points.

### An Example of Management's World View Influencing the Plan

One of the important assumptions underlying an inventory stocking level decision is the one that specifies the financial theory used to determine the value of the "holding cost" coefficient. At least two different theories can be employed.

Suppose, for example, we observe that a corporate treasurer maintains a quantity ( $q$ ) of \$5,773 in a one year revolving cash fund for the purpose of paying part-time workers in cash. We judge him to be a rational man. Inquiring into the *data* upon which he based his decision (i.e. his plan to carry \$5,773) the following is noted:

1. Each time funds are withdrawn from the bank to reimburse the fund, a lump sum charge ( $C_1$ ) of \$10.00 is levied.
2. The total cash demanded ( $B$ ) over the one year time horizon is \$100,000.
3. Management's announced goal is to minimize costs.

The question we might pose is: "Given this plan (i.e.  $q = \$5,773$ ), goal and data, for what view-of-the-world is this an optimal policy?"<sup>8</sup>

In this case we can assume that the treasurer drew upon inventory theory and formulated the following (rational) total cost equation:<sup>9</sup>

$$TC = \frac{B}{q} (C_1) + \frac{q}{2} (C_2)$$

*set up*      *holding*

where  $C_2$  represents "holding cost". The well known "optimal" solution to this formulation is:

$$q = \left( \frac{2BC_1}{C_2} \right)^{1/2}$$

Since the cost of holding cash ( $C_2$ ) was not explicit in the data bank, it can be inferred by solving:

$$C_2 = \frac{2BC_1}{q^2} = \frac{(2) \times (100,000) \times (10)}{(5773)^2} = .06$$

Thus, the treasurer imputes an approximate cost of 6¢ to each dollar he holds idle in cash inventory. For what view-of-the-world is this the optimal policy?

Six cents would appear to be the appropriate rate if, in the treasurer's overall conception of his business, the relevant rate for financial evaluation is the external rate of return. There is a very credible and plausible theory of finance which essentially says that money is worth what it costs to borrow it. Given this assumption, the treasurer's plan to carry \$5,773 is optimal. But is this the correct assumption to make?

A contrary view-of-the-world exists for which the treasurer's plan is definitely *not*

<sup>8</sup> This question is similar to the one that Mordecai Kurz (15) termed the "inverse optimal problem." However, Kurz restricts his investigation to inferring "from a given savings function what class of utility functions could give rise to the given savings function as an optimal solution . . ."

<sup>9</sup> The Reader will recognize this as the Wilson economic lot size formula cf. Buchan and Koenigsberg (7).

optimal. For there is also another credible theory of finance in which the opportunity cost of assets is determined by the earning power of these assets when they are employed within the business itself. In this case, the relevant rate of return is the internal rate of return, which may be, for example, 25 percent. Conceiving the business from this point of view, the same goals and data can be interpreted to arrive at a new (or "counter") plan:

$$q = \left( \frac{(2) \times (100,000) \times (10)}{.25} \right)^{1/2} = \$2,830.$$

These two different concepts of the business logically (and mathematically) imply strikingly different plans. Which should the treasurer adopt? Perhaps neither. The important point of this example is not to resolve this problem in financial theory. It is, rather, to demonstrate the intrinsic role that world view assumptions play in deriving plans. Once management is made aware of these assumptions they can reconsider and, perhaps, reformulate them. What we have seen demonstrated in this simple example is accentuated many fold in the complex problems of organizational long range strategic planning. For in strategic planning the assumptions are of an even broader and often more implicit nature.

There are a variety of organizational designs that have been used to cope with the strategic planning problem. One is to establish a planning department to serve as the "alter ego" of management. We call this the "expert" approach. Another, frequently used in divisionalized organizations, is to have the managers and planners of an organizational unit submit plans for extensive cross-examination by top management. This is a "Devil's Advocate" approach. In the next two sections these "ideal types" are discussed in relation to two criteria for a good organizational design for planning:

(1) It should expose the assumptions underlying a proposed plan so that management can reconsider them.

(2) It should suggest new and more relevant assumptions upon which the planning process can proceed.

### The Expert Approach to Planning

Some managements, recognizing the gravity of the planning problem, have established planning departments or turned to consultants in order to gain expert advice as the plans they should follow. It is the task of the planner to make a study of the organization's environment (opportunities and threats), its resources (strengths and weaknesses), its personal values and its ethical and social responsibility.<sup>10</sup> The study concludes in a recommended plan which is usually presented to management in the form of a strategic briefing session.

But the planner, as with the manager, also possesses a world view through which he interprets the organizational data to conclude the recommended plan. These assumptions are "hidden" behind the arguments contained in the "staff paper,"<sup>11</sup> man-

<sup>10</sup> This approach to strategic planning follows Learned *et al*'s procedure (16) and is consistent with the definitions employed by Steiner (24), Chandler (9) and Cannon (8). It includes setting the organization's purpose, missions and goals. It should be mentioned that some authors do not include the choice of goals within their definition of strategy. Igor Ansoff, for example, takes this position:

"Strategic decisions are primarily concerned with external, rather than internal, problems of the firm and specifically with selection of the product-mix which the firm will produce and the markets to which it will sell." (2, p. 5)

<sup>11</sup> For a discussion on the failure of "staff papers" to fully communicate and expose underlying assumptions cf. Jackson (14)



agement report or other planning documents and are infrequently communicated to management.

Often the expert planner is an economist. The economist (as is true of practitioners in any discipline) by virtue of his training and perspective, abstracts and considers only certain aspects of the total planning problem (e.g. "costs," "benefits," "efficiency").

With deft analytical fingers, the economist abstracts from the untidy complexities of social life a neat world of commodities.<sup>13</sup>

This was Boulding's picturesque way of describing his chosen profession. Management has the broader responsibility of determining the organization's plan from *all* points of view—social, political, psychological, and cultural to name a few.

Moreover, there is a tendency for some expert advisors to bury some of the assumptions of their plan within the jargon of their trade. Sophisticated techniques (e.g. mathematical programming) and complicated technologies (e.g. computers) tend to obscure the assumptions which underly their use. Indeed, the aura of "mystic" which surrounds the technological solution can serve to give credibility to a plan beyond that that it rightfully deserves.

The point of this discussion is to show that the expert advisor, too, has a particular way of viewing the organization and that his method of communicating to management can serve to conceal the assumptions which underly his recommended plan. Thus an expert advice approach to planning does not meet the requirement for exposing assumptions and bringing them to management's attention. It does not serve as a test to check the criticality of assumptions; nor does it serve to suggest to the manager a new managerial world view.

### The Devil's Advocate Approach

One technique which some organizations employ can be referred to as the Devil's Advocate approach.<sup>14</sup> In this procedure (which is normally used internally rather than with consultants) the planner appears before the organization's management and advocates a plan in a manner similar to that of the expert approach.

Management, however, assumes the role of an adverse and often carping critic of the plan. It attempts to determine all that is wrong with the plan and to expound the reasons why the plan should *not* be adopted.

Those who employ the Devil's Advocate approach assume that truly good plans will survive the most forceful opposition and that a sound judgement on a plan occurs when that plan is subjected to censure. These assumptions are partially valid, but there are several disadvantages inherent in the Devil's Advocate approach:

1. While it exposes some underlying assumptions, it does so in the context of what is wrong with them rather than what they *should* be. It does not serve to develop a new managerial world view.
2. If the censure prevails and the plan is rejected there is no new plan to replace it.
3. There is a tendency for management's attitude to be destructive rather than constructive.
4. There is a possibility that the planner's psychological response to extended criti-

<sup>13</sup> See Boulding *op. cit.* (4, p. 82).

<sup>14</sup> One corporation that appears to employ this Devil's Advocate approach is I.T.T. under the leadership of Harold Geneen. See (6).

cism results in his demoralization and, at best, in a tendency for him to develop "safe" plans rather than progressive ones.<sup>14</sup>

The dialectical approach presented in the next section retains the advantages of the Devil's Advocate approach but it also purports to eliminate these disadvantages.

### A Dialectical Approach to Organizational Planning and Strategy

A system may be said to be *dialectical* if it examines a situation completely and logically from two different points of view. The dialectical approach begins by identifying the prevailing or recommended *plan* and the data which were used to derive it. The question is posed: "Under what view-of-the-world is this the 'optimal' plan to follow?" This results in an attempt to specify a set of plausible and believable assumptions that underly this plan. That is, they serve to interpret the data so as to logically conclude that this plan is best for achieving the organization's goals.

In order to *test* the assumptions underlying this plan a search is initiated to find another plausible and believable alternative—the *counterplan*. It may well be one of the alternatives considered and rejected in the original planning process. This counterplan (as with the plan) should have the attributes of being feasible, politically viable and generally credible in the organizational context. The view-of-the-world for which the counterplan is "optimal" is then specified.

The principal theme of dialectical advice is that management learns about the fundamental assumptions of its planning problem and comes to understand them by observing the *conflict* between the plan and the counterplan and their attendant world views. The vehicle for inducing this reflection is a *structured debate*.

Contrary to the "well staffed paper" or the traditional management briefing, the structured debate consists of the most forceful presentation possible of the two opposing plans, given the constraint that each side must interpret, in its entirety, the same organizational databank. Following a statement of the problem, the structured debate begins with the advocate of the plan stating his world view or model of the situation. Advocate of the counterplan does likewise. Then as each item of data is introduced it is interpreted by the opposing advocates to demonstrate that it can be interpreted as supportable evidence for their plan and negative evidence for their opponent's plan. The process continues until the databank is exhausted.

In this dialectical design we are following a scheme suggested by Churchman's interpretation of Hegel.<sup>15</sup> Here the plan (thesis) is opposed by the counterplan (antithesis) both of which are constructed and argued for from the same databank (the essence). Hegel's theory leads us to predict that the manager—observer of the conflict—will integrate and form a new and expanded world view (the synthesis). The synthesis includes exposing hidden assumptions and developing a new conceptualization of the planning problem the organization faces. The results obtained in applying the theory of dialectical advice to the strategic planning problem of a major U. S. Corporation are reported in the following section.

<sup>14</sup> Of course he may quit! Some observers attribute I.T.T.'s high turnover rate within the higher echelons of management and staff to the use of what we are calling the Devil's Advocate approach cf. (26).

<sup>15</sup> Churchman's interpretation can be found in (10). Hegel's original work is (13). Mason's application of these ideas to the strategic planning process is found in (18).

**RMK Abrasives: A Field Study/Experiment in Dialectical Advice<sup>16</sup>**

With the cooperation of the management of RMK Abrasives<sup>17</sup> the dialectical technique was applied to their strategic planning problem. The firm had settled on two primary goals:

1. To increase *after tax* corporate earnings by a minimum of 10 % per annum (compounded) over the 10-year planning horizon.
2. To be earning a rate of return on assets (ROA) of at least 8 % by the terminal (tenth) year of the plan.

Faced with the problem of devising a strategy to achieve these goals the planning department collected considerable data—market trends in the abrasives industry, demand forecasts for the next 10 years, studies identifying their customers and factors influencing purchase, a determination of nonabrasive products which could be substitutes for their product, technological and economic factors influencing customers, figures on the current and future use of abrasives in a variety of foreign countries, tables of manufacturing costs in various worldwide locations, transportation costs, and general social-political data.

On the basis of a thorough analysis of this data, the planners concluded that the existing strategy would not result in the accomplishment of the corporation's goals. They recommended that a new strategy be adopted. This new strategy essentially involved the firm's becoming an international marketing-oriented organization. Within the framework of this strategy various particular countries and product-market relationships were explored. These recommendations and supporting analysis were spelled out in a strategic planning document and also presented to management orally in a briefing session. It should be noted that this procedure is basically the expert advice approach to the planning problem—one point-of-view (the planning department's) analyzed the data, considered alternative strategies and recommended a "best" course of action.

Several weeks following their presentation the dialectical study began. Given the data, the goals, and the planning department's recommended plan, a set of assumptions was imputed to the planner to bring "closure" to the argument.<sup>18</sup> That is, a set of assumptions was imputed that had the property that when used to interpret the data the recommended plan was a logical conclusion. For example, one apparent assumption underlying the recommended plan was that most of the inhabitants of foreign countries are basically motivated toward improving their own standard of living and that they viewed the company's entry into their economy as satisfying this need. Another imputed assumption was that most abrasive user problems were similar and accordingly the strategic decision hinged on finding additional markets for existing products. With the aid of these assumptions and others it was possible to interpret the

<sup>16</sup> This is a summary of the more extensive study which appears in Mason (18). The method is referred to as a "field study/experiment" because to some extent this researcher selected subjects and measured existing conditions in the organization (i.e. field study) and he also manipulated certain variables in order to determine causal relations (i.e. field experiment). cf. French (12).

<sup>17</sup> RMK Abrasives is a pseudonym for the real firm. The situation is disguised in order to preserve the confidential nature of RMK's strategy.

<sup>18</sup> The concept of bringing closure to an argument is employed as follows: A formula  $X$  is said to be a *closure* of a formula  $Y$  if and only if  $X$  is a sentence and either  $X = Y$  or  $X$  is the result of pre-fixing a string of universal quantities to  $Y$ . cf. (19, p. 128). Here, we look for a set of assumptions ( $Y$ ) such that the plan ( $X$ ) approaches closure with the assumptions, goals and data, (i.e. the imputed assumptions and the goals and data should logically imply the recommended plan).



data to conclude that the international marketing-oriented plan was best for achieving the corporate long range goals.

In general there were 10 basic assumptions underlying this international plan. They are listed below in postulate type form:

- I-1 RMK Abrasives is a seller of abrasives products and services supplying the steel, metal working and woodworking industries.
- I-2 All abrasives problems are basically similar.
- I-3 Management techniques are translocatable.
- I-4 Host countries are xenophilic, riskless.
- I-5 RMK's competitors are quantity, expansionist oriented. They will cut prices.
- I-6 RMK's customers are conservative, slow to change.
- I-7 R & D is a "necessary evil" required to keep up in the business.
- I-8 Merger opportunities are available, receptive.
- I-9 Other companies will not integrate into the abrasives business.
- I-10 RMK's parent corporation will supply adequate financial, administrative and managerial support for a program of expansion.

In order to establish the credibility of these assumptions a study was made of the corporation's communication stream. By reviewing statements made in interviews, inter-office memos, corporate directives, magazine articles and public announcements, considerable evidence was found to substantiate the fact that many members of the corporation did indeed believe (or at least espouse) the point of view set forth by the plan's imputed assumption set. Thus, this was a set of plausible and credible assumptions for this organization. However, the study also revealed that there was not complete unanimity in these beliefs. This divergence of opinion served as a clue for developing a counterplan.

There were indications that some executives favored the firm's concentrating its efforts on the domestic market and emphasizing technological innovation. Thus a domestic technologically-oriented counterplan was formed and a set of assumptions was sought that closed its argument. The counterplan's world view included several assumptions which were contrary to those of the plan. One counterplan assumption was, for example, that the inhabitants of most foreign countries are motivated primarily by strong nationalistic tendencies and that this would make doing business abroad risky. Another assumption was that each abrasive user has unique problems and accordingly a successful company must broaden its product line to meet the varying needs of its customers. Again, it could be demonstrated that this new set of assumptions could be used to interpret the data and to conclude that the counterplan was best for achieving the corporate goals.

The 10 basic assumptions for this domestic counterplan were as follows:

- D-1 RMK is in the business of applying special skills directed towards solving the problems of shaping, forming and smoothing materials.
- D-2 Every abrasives problem is unique.
- D-3 Management techniques are specific to a particular environment.
- D-4 Host countries are xenophobic, risk laden.
- D-5 RMK's competitors are quality-product oriented. They will seek to produce a better product.
- D-6 RMK's customers are dynamic, responsive to technological innovation.
- D-7 R & D is the "heart and lifeblood" of the firm and is required to keep ahead of competition.
- D-8 Merger opportunities are available, receptive.
- D-9 Other companies will not integrate into the abrasives business.
- D-10 RMK's parent corporation will supply adequate financial, administrative and managerial support for a program of expansion.

Having established the plan, the counterplan and their supporting world views, the next step was to prepare a structured debate. This structured debate was presented to RMK's management in both written document form and orally in a strategic planning briefing session. In order to eliminate variances in personality and persuasive ability the author assumed the role of both the advocate of the plan and the advocate of the counterplan. An excerpt from the actual structured debate follows:

*Data-Item*

Ferrous Industry

The ferrous and iron and steel metal working industries account for a large percentage of the domestic abrasives business today. By 1977 it is anticipated that this percentage will decline. Some important factors are:

- (1) Continuous casting will replace soaking pits and grow in importance. This process requires hot cutoff and hot grinding capabilities.
- (2) There is an increased demand for finer, microscopic tolerances, faster removal rates of excess stock, and reduced fixturing and set-up costs.
- (3) Steel companies are spending about \$2.4 billion this year (greater than their cash flow) on revolutionizing the steel-making process.

*International Plan Advocate:*

Our international manager sees the reduction in abrasives sales to the domestic iron and steel industry as a good reason for RMK's not depending as heavily in the future on this source of income as it has in the past. He also views technological changes, such as the switch to continuous casting, as imposing greater cost burdens on RMK's new product development without substantially increasing revenues. Many of these costs could be absorbed if the market were larger. For example, he sees a need for pilot plants to develop and test new products, but a firm must be large to afford a pilot plant. Expanding into the international market appears to be the best and fastest way of gaining the necessary size.

Once RMK increased its overall size of operations, then it would be in a better position to cope with the problems of technological change within the domestic ferrous industry. A source of increased revenues and a "listening post" for new ideas is the role of the foreign subsidiary in keeping the company competitive in the iron and steel market.

He fears that the domestic plan places far too much reliance on the somewhat unstable domestic ferrous metals market.

*Domestic Counterplan Advocate:*

Our domestic manager interprets the "leveling off" of sales to the ferrous industry and that industry's change in iron and steel-making processes as a response on their part to increased competition from abroad (Japan, for example) and from domestic plastics, brick and aluminum. They are now more cost conscious and are willing to pay for products which have a higher "worth" in their operations. These users want higher tolerances, faster operations, and reduced abrasive costs. The abrasives supplier who can develop a "package" of products and services which solves these steel-industry problems will capture a much greater market share.

The domestic manager believes that these changes in the domestic ferrous industry are occurring *now* and are going to take place rapidly. Hence, he asserts that RMK must concentrate on R & D and on devising new services for the iron and steel industry immediately. He believes that once one falls behind in the R & D race it is almost impossible to catch up. Instead of looking for foreign acquisitions, he would seek domestic acquisitions which would add new skills and help build RMK's technological base rather rapidly.

He fears that the international plan does not adequately provide for improving the company's position in light of *current* changes in iron and steel. The domestic market will not wait for foreign successes to provide the R & D funds that are needed now. Failure to become a leader in the domestic ferrous market today, in his opinion, means that this important market may be irretrievably lost to RMK tomorrow.

The central hypothesis of the study is that the manager-recipients of the debate form a new, more encompassing conceptualization of the problem—the synthesis. Evidence gained from questionnaires, interviews and a recorded log of events sup-

ports this hypothesis.<sup>19</sup> For example, the 6 top RMK executives<sup>20</sup> all reported that the presentation had forced them to reconsider the assumptions of the corporate strategy and each of the executives mentioned at least one implicit assumption which had been exposed to him. Each, in some way, mentioned the assumption of timing in the execution of the final plan. A consensus began to grow among these executives that the plan and counterplan were not really mutually exclusive alternatives but rather should be considered as part of a grander strategy which involved a well timed execution of both domestic and international expansion. One executive, who articulated a rather detailed new strategy, said that he devised this new strategy in order to "get the best from both sides of the dilemma" presented by the structured debate. This timing concept was not made explicit in either the original plan or the counterplan; however, approximately six months following the structured debate presentation it had become an integral part of RMK's (still evolving) strategy. Several executives attribute that change to the counterplanning presentation.

In addition to exposing underlying assumptions, the structured debate also suggested new alternative courses of action (plans) to the recipients. One executive who proposed a rather complete new plan described the mental process that led to its development:

It (the dialectical presentation) structures creativity by stimulating thought. The two well developed points of view pull you both ways at the same time. You begin to ask yourself "How can we get the best of both?" It becomes the vehicle for amalgamating the best plan you know how to develop.

All interviewees indicated that the presentation had caused them to reconsider the corporate goals (subsequently RMK modified its original goals) and that it had caused them to re-evaluate the relevancy of the databank. In particular several studies were initiated in order to obtain information that was not currently available but that now seemed critical. All executives reported that they had developed a new and improved conceptualization of the problem and each provided specific incidences to support his statement. Thus we can infer that a synthesis did occur. This synthesis had the effect of providing a new set of planning assumptions that ultimately lead RMK Abrasives to a new strategic plan.

### Conditions for the Employment of Dialectical Advice

Every organizational design has advantages and disadvantages in its use. The dialectical approach to strategic planning is no exception in this regard. However there are at least four circumstances which, if they are present in an organization, make the dialectical method very effective. These are:

1. Management is unaware of some important assumptions and is in doubt as to both the appropriate assumptions to adopt and the particular plan to choose. In this event there is no basic agreement on assumptions between the manager and the advisor (staff planner).

<sup>19</sup> A full discussion of the methodology and techniques used is given in Mason (18).

<sup>20</sup> Twenty RMK personnel actively participated in the study. Three—the V. P. General Manager, Director of Corporate Planning, and Manager of Planning for abrasives were involved in the study from the beginning and not included among the 6. The remaining personnel were classified as staff (planners, operations research, information systems, etc.). Their reactions were interpreted as deriving from an advisor's point of view. This paper reports only the responses interpreted as deriving from a managerial or executive viewpoint.

2. Management acknowledges that there may exist multiple interpretations of the data, each of which indicates a different relevancy of the organization's databank to the choice to be made. Consequently, the dialectic's alternative interpretation of the data is meaningful.

3. In cases of decision-making under uncertainty, management looks to the advisor to point out the *incidence* of the uncertainty or the key assumptions upon which it turns instead of resolving or "absorbing"<sup>21</sup> the uncertainty inherent in the situation. Thus, in the dialectic the advisor communicates different conclusions that are derived from different assumptions. Management, then, relies on its own judgement to formulate a synthesized set of assumptions upon which the validity of his ultimate choice will depend.

4. Management believes that the expected cost associated with (a) developing both a plan and a counterplan<sup>22</sup> and (b) involving himself in the development of a new set of assumptions (a synthesized world view) *is less than* the expected cost of an advisor's error in assumptions.

Expert advice, the Devil's advocate approach, or some other organization design may be more effective than the dialectical approach if these conditions are not met.

### Summary

This study began by asserting that an organization's plan is based on management's assumptions about the world in which it operates. Specifically these assumptions were said to include predictions, a value system or ends, and a choice from among available behavior patterns or means. This point was demonstrated by showing the role of assumptions in a simple inventory model.

We concluded, then, that there is a need for a planning technique which serves to "test" the assumptions of a plan by exposing "hidden" assumptions and, ideally, by suggesting new and potentially more relevant assumptions upon which the manager can base his future plan. It was argued that the traditional "expert approach" to planning fails to adequately test assumptions and that the Devil's Advocate approach, while in a sense testing assumptions, also tends to destroy the plan without replacing it with an improved plan. Hegel's triad—thesis, antithesis and synthesis—was drawn upon in order to design a dialectical approach to planning that averted the deficiencies of both the expert and Devil's Advocate approaches. It was proposed that the resulting counterplanning problem technique would stimulate a new and embroadered concept of the planning problem—the synthesis. Evidence obtained in a field study/experiment at RMK Abrasives supported this hypothesis. Since this evidence was obtained in the context of a real and ongoing organization it is necessarily sociological in nature. Research is currently under way to add to these findings by means of a treatment-type experiment.

<sup>21</sup> The concept of uncertainty absorption derives from March and Simon *op. cit.* (17)

<sup>22</sup> To date no study has been made to determine the amount of additional cost incurred in developing a counterplan. Our experience at RMK Abrasives suggests that it is minimal (clearly less than twice that of preparing a single plan). In fact there is some evidence to suggest that the dialectical approach, when used in the day to day interactions among planners and in their thinking processes, actually facilitates the process of developing a plan. Indeed, there is a possibility that the total cost of implementing the dialectical approach is less than that of implementing a single plan (e.g. expert) approach. This is without regard to the potential costs associated with the possibility of adopting incorrect assumptions under the single plan approach.



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