

CONTRASTING PERSPECTIVES ON RATIONALITY
AND THE ANALYSIS OF PERFORMANCE OUTCOMES

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ABSTRACT

The normative view of rationality has been used for many years as the principal framework from which to analyze performance outcomes. Analyses of managerial behavior from this essentially reductionist view contain the argument that decision makers often fail to "correctly" observe and act upon the situations they face. A growing number of behavioral decision theorists, however, argue that conclusions about behavior which have been derived from the normative view are misleading because they may be artifacts of the theoretical assumptions or empirical approaches used by analysts. The questions that this distinction raises are particularly important to systems scientists because they bear directly on whether powerful reductionist models of inquiry and evaluation, firmly entrenched in traditional scientific norms, will or should continue to dominate holistic perspectives for thinking about behavior in complex systems. The purpose of this paper is thus to review and explore differences that exist between the normative and non-normative views, and to use this synthesis as a framework for understanding the relative importance of the viewpoints as they relate to evaluating managerial performance.

This book is concerned with...the pursuit of policy contrary to the self-interest of the constituency or state involved. Self-interest is whatever conduces to the welfare or advantage of the body being governed; folly is a policy that in these terms is counter-productive.

... Mental standstill or stagnation--the maintenance intact by rulers and policy-makers of the ideas they started with--is fertile ground for folly. ...In the first stage, mental standstill fixes the principles and boundaries governing a political problem. In the second stage, when dissonances and failing function begin to appear, the initial principles rigidify. ...In the third stage, pursuit of failure enlarges the damages until it causes the fall of Troy, the defection from the papacy, the loss of a trans-Atlantic empire, the classic humiliation in Vietnam.

Persistence in error is the problem. Practitioners of government continue down the wrong road as if in thrall to some Merlin with magic power to direct their steps.

(From: The March of Folly: From Troy to Vietnam, Barbara W. Tuchman, NY: Alfred Knopf, 1984)

INTRODUCTION

The purpose of this paper is to review and explore differences in the content and implications of two contrasting sets of assumptions about the way performance, in particular managerial performance, is evaluated. The first of these sets of assumptions is called the "normative perspective" and refers to the views of those who argue for the legitimacy of comparing the outcomes of decision making with some objective performance standard. In this sense, behavior is "rational" if it produces outcomes which observe the norm. Performance outcomes at variance with the standard are seen to result from systematic biasing or distortion of reality (from the inappropriate use of heuristics), errors in problem representation, and/or defective information search and processing (for motivational reasons). An excellent example of this perspective is the above excerpt from The March of Folly, in which Barbara Tuchman describes persistent judgmental error as the cause of various human follies throughout history.

The second set of assumptions is here called the "non-normative perspective" and refers to the more holistic views of those who argue that without a more detailed understanding of how people make decisions, it is not possible to develop adequate normative rules. Focusing as well on the current state of our knowledge about decision making and the fact that the type of decision in question involves both uncertainty and equivocality, these scholars challenge the idea that judgment and decision making suffer from cognitive deficiencies. It is thus argued that evaluations of performance based solely on the outcome(s) of decisions can be misleading. Consequently, if we wish to go beyond description in order to suggest sensible ways of evaluating performance, such evaluations must surely account for subjective factors and also the process by which reasonable or unreasonable decisions (as opposed to correct or incorrect decisions) are made.

The central argument of this paper, therefore, is that there is a crucial distinction to be made between performance evaluation that is based on results and evaluation that is based on the far more subjective process factors that need to be translated into some measure of competence in decision making. This distinction is particularly important to systems scientists because it bears directly on questions that are concerned with whether powerful reductionist models of inquiry and evaluation, armored by traditional scientific norms, will or should continue to dominate holistic perspectives for thinking about behavior in complex systems.

The following sections of this paper contain overview discussions of the normative and non-normative perspectives. Following these is an attempt to place those discussions into the practical context of managing by comparing prescriptions that could be offered from both views. The paper concludes with a discussion of the relative importance of the perspectives as they relate to the practice of evaluating managerial performance.

...AM's (AM International, Inc.) fiscal troubles can be traced back to 1976, when Ash, well-known as the co-founder of Litton Industries, Inc. and as budget director in the Nixon Administration, brought his own big name and promises of a bold new future to the lackluster com-

pany. His strategy seemed right on target. AM was being battered in the marketplace by Japanese competitors and the increasing popularity of xerographic copiers. Ash almost immediately replaced 80% of the company's management, and he promised that his new team would establish AM alongside such giant manufacturers as Xerox, International Business Machines, and Wang as a major supplier of word processors, small computers, and other sophisticated gadgetry for the office of the future.

...It all sounded too good to be true, and the record now shows that it was. ...As a result...Black now finds his options severely constrained. ...He has been trying mightily to undo the damage that Ash's ill-conceived strategy wreaked.

(From: "AM International: When technology was not enough", Business Week, January 25, 1982, pp. 62-68)

...Robinson feels his major miscalculation was a "focus on overly rapid growth."

...Until recently, the problems (at American Express) have barely scratched Robinson's longtime reputation as among the best and brightest of CEOs. The blame often seemed to depart with the executive directly responsible.

...Hindsight has illuminated the flaws in the structure created by Robinson.

(From: "The Failed Vision: Jim Robinson's big plans for American Express aren't working", Business Week, March 25, 1990, pp. 108-113)

THE NORMATIVE PERSPECTIVE

In large part because of its practical usefulness for identifying shortcomings in judgment and decision making, the normative view of rationality is the principal framework from which performance is analyzed. Utilizing this framework analysts of managerial behavior tend to rely solely on the obvious outcomes of decision making to evaluate the effectiveness of the decisions that were made and the actions that were taken. In addition, as illustrated in the above analysis of Jim Robinson's management of the now beleaguered American Express Co., hindsight is seen as a legitimate tool for identifying, and fixing blame for, previous strategic mistakes.

An important component of the usefulness of the normative view is that it suggests relatively easy/concrete ways for evaluators to do their jobs. This is because when performance does not live up to expectations there is a logical basis for understanding those failure(s): decision makers must not have "correctly" (as compared with normative models derived from "more objective" or "expert" judgements) observed and acted upon the situations they faced. Since the error(s), costly fiascos, or other dysfunctional organizational behavior which can result from risky strategies are thus assumed to be causally

connected to poor judgements, the prevention of such "errors" has been the focus of much thought by management scholars.

As stated earlier, the use of this perspective typically dominates the ways in which we make sense of everyday failures. We often, for example, tend to berate ourselves for the *stupid* mistake made earlier (if only we knew then what we know now; cf., Jim Robinson's comment noted above), or we can read about how "blunders" such as those credited to the former chairman of AM International, Roy Ash, in the example given above, were responsible for the collapse of a company, the failure of a product, the ruination of the economy, etc.. Characteristically, analysts tend to use words such as "correct" or "incorrect" to describe strategies formulated to deal with complex problem situations before results are in. Yet later, analysts tend to react to perceived failures either as if the wrong strategy had been chosen in the first place, as if any reasonable person would have known that the strategy was excessively risky from the very beginning, or as if the problem was not necessarily with the strategy but with its (incompetent) implementation--to the exclusion of other possible explanations for the outcome.

Similarly, in the scholarly management literature the normative perspective has been dominant in research on managerial judgment and decision making (Peterson & Beach 1967; Ross & Lepper 1980; Tversky & Kahneman 1973; 1974; 1981).¹ One area in which this view is particularly evident is the literature on the so-called *escalation phenomenon*; a literature that deals with the perceived (by outside observers or experts) tendencies of individuals or groups to erroneously "throw good money after bad" (Brockner & Rubin 1985; Staw & Ross 1987). In this literature, as in Barbara Tuchman's analysis of "bureaucratic fiascos" throughout history, the primary mechanism for the behavior is some decision pathology which can result in overcommitments, or excessively risky recommitments (as compared with the prescriptions of rational decision making models), to an ongoing course of action. An example in the system dynamics literature typifying the normative framework is recent work of John Sterman (1989) in which the "misperceptions" of feedback in dynamic decision making are described as a function of cognitive failures associated with the "anchoring and adjustment heuristic" (cf., Sterman 1987 and Morecroft 1983; 1985).

More generally, the scholarly literature arguing from the normative perspective might be described as bringing two related but different approaches to discussions of rationality in judgment and decision making. For purposes of this discussion, we will label the first (described above) the "traditional normative" view and the second the "neo-normative" view. While each of these subsets suggest that decision makers suffer from cognitive deficiencies which, in turn lead to the violation of normative rationality principles, the content of the deficiencies described by these two subsets is different in one important sense. Emphasizing that the process of decision making is a far more important key to estimating the quality of a judgment, these scholars (e.g., Janis & Mann 1977; Nisbett & Ross 1980; Crocker 1981) argue that the process

¹ The normative perspective, however, is not the rule but rather the *exception* in cognitive psychology. The normative perspective is used only in the study of judgment and decision making, when the emphasis is on understanding the *quality* of behavior and not in simply describing behavior (see Jungermann, 1983 for a discussion of this).

used in decision making can and should be compared against the "correct" process. Differences between the actual process used in decision making and the process that should be used (the normative standard as defined by those scholars/experts) thus represent deficiencies in the way a judgment has been made.

THE NON-NORMATIVE PERSPECTIVE

A growing number of behavioral decision theorists, however, contend that many of the conclusions about the quality of judgment and decision making that have been derived from the normative view are misleading (e.g., Alloy & Tabachnik 1984; Beach & Mitchell 1987; Cohen 1981; Douglas & Wildavsky 1982; Edwards 1983; Einhorn & Hogarth 1981; Guba & Lincoln 1989; Humphreys & Berkeley 1983; Kruglanski & Ajzen 1983; March 1978; Simon 1987). In general, they argue that the observed violations of normative rationality axioms are not due to biases in the human cognitive system, but rather may be artifacts of the theoretical assumptions or empirical approaches used by analysts. Grounded in the argument that maximizing models of decision making do not describe how many decisions are made, these scholars question the reasonableness of comparing observed values with so-called "correct" values and then attributing systematic disparities to decision error. If alternative explanations such as cognitive overload in a highly complex or unfamiliar situation, for example, can also explain the experimental outcomes used to demonstrate irrationality, or more generally if there is simply no way of knowing the correct thing to do in a certain class of decision situations (by definition the nature of ill-structured problems), then it seems inappropriate after the fact to suggest that a decision maker was "wrong" because he or she didn't pursue the correct course of action. Implicit in analyses from this view, however, is the importance of being able to distinguish between situations that can be structured, and those that cannot be.

An excellent example of the importance of clearly distinguishing between problems that can be perfectly structured and those that cannot be lies again in the literature on escalating commitment. Implicit in the language used to define the phenomenon is the assumption that good and bad money are differentiable. In other words it is assumed that it is possible to know whether to recommit some resource to an ongoing course of action. If this were true, then escalation situations would be structurable. Yet, the concept of structurability implies that it is possible to know the inputs to a decision (e.g., the problem, the variables), the process of resolving the situation (e.g., the perfect strategy), and the outputs of the decision (e.g., the outcome) devoid of interpretation issues.

There is much theoretical work (e.g., Newell 1969; Mintzberg, Raisinghani, & Theoret 1976; Mitroff & Mason 1980; Pounds, 1969) and many practical examples, however, to suggest that this is not the case. For example, we can perfectly structure some managerial situations (temporarily at least, with a reasonable degree of confidence) such as those where the establishment of standard operating procedures can be effective. Yet, no one can know with certainty when to sell a declining stock, or what strategy to use (in 1976) to turn Addressograph-Multigraph, Inc. around. Although it is possible, with the benefit of hindsight, to develop insights for managing unique situations such as investing in stocks or running companies, we can offer something less than perfect

help at the point of decision.² Because of this, scholars from the non-normative perspective would suggest that escalation researchers and managers alike cannot have things both ways: one can either "throw good money after bad", or, make decisions under conditions of uncertainty.

Within the scholarly literature, two general classes of explanations have been raised in support of the non-normative perspective: one theoretical, the other technical. According to Jungermann (1983), the former of these consists of three separate theoretical rationales. The first, the meta-rationality argument, suggests that because the cognitive costs of being rational are not taken into account by some SEU models, violating the normative rule might be the perfectly rational thing to do. An example of this is satisficing behavior when buying a book to read on a long airplane flight. One could, obviously search out and inspect all available books in order to find the best one, but because of time and resource constraints the consumer would be more likely to look at only a few books and choose one that looks good. In such cases it would not be rational to consider *all* potential consequences of *all* options.

The second theoretical rationale discussed by Jungermann, the continuity argument, suggests that not accounting for the continuous and changing nature of the judgment process (i.e., the full decision context), therefore treating decisions as discrete events, might lead researchers to the evaluation of some decisions as deficient. The third theoretical rationale, the structure argument, suggests that claims that decision makers are cognitively deficient are based on the assumption that subjects share researchers' understanding of the problem structure. To illustrate this argument, Jungermann discusses Tversky and Kahneman's (1981) research on decision framing. In that paper, Tversky and Kahneman reported an experiment in which subjects were asked to choose between what were argued to be two "identical" public policy options; one formulated in terms of lives lost, the other in terms of lives saved. Since the results of the experiment showed that subjects tended to be more risk averse in the former case and risk prone in the latter, Tversky and Kahneman concluded that subjects' preferences were inconsistent.³ In their analysis of that research Berkeley and Humphreys (1982) argue that, because alternative structural representations of the policy question in each case could also have produced sub-

² Some of the most recent work of management consultants such as Tom Peters (1987) and Robert Waterman (1987), although prescriptive, also argues that managers must learn how to deal with ill-structured situations and chaotic environments.

³ To be technically correct, and to be fair, Tversky and Kahneman (1987) emphasize that "prospect theory" is purely descriptive and makes no normative claims about rationality. Berkeley and Humphreys' comment thus can be taken to apply only to whether the word "inconsistent" (as opposed to an even more neutral word, such as "different") accurately describes the results of Tversky and Kahneman's experiment. We should also note that normatively aligned scholars such as Kahneman and Tversky (1982) and Nisbett and Ross (1980) have on occasion attached disclaimers to their stance on these issues. For example, Kahneman and Tversky note that "we should avoid overly strict interpretations, which treat reasonable answers as errors, as well as to overly charitable interpretations, which attempt to rationalize every response" (1982, 124). As Funder (1987, 78) notes, however, those who write such disclaimers "elsewhere and frequently" violate the rules given in those disclaimers.

jects' behavior, Tversky and Kahneman's conclusion was untested and possibly misleading.

A technical rationale in support of the non-normative perspective is offered by both Funder (1987) and Kruglanski & Ajzen (1983). In those papers, careful distinction is made between what psychologists mean by the term "error" and what in common parlance is meant by the term "mistake". In psychology, proper use of the term "error" is reserved for deviations from some normative standard such as a sample or population mean. As such, the definition is technical, not evaluative, meaning that no negative connotations should be attached to deviations from artificial norms. A mistake on the other hand is usually understood as a misjudgment⁴ of some possibly ill-defined stimulus. According to Funder (1987, 75-76), the difference between errors and mistakes is subtle, yet important, because "studies of error are equated with studies of whether people 'reason well' or 'make good decisions'. . . . This is unfortunate because. . . research on error is almost completely irrelevant to the accuracy of social judgment." In terms of the example of the escalation literature, this technical rationale suggests that labeling decisions made in escalation situations as "egregious blunders", or suggesting that the behavior results from a decision pathology, are evaluative and thus inappropriate.

One additional, and notable, variation on the non-normative view is contained primarily in the work of Lola Lopes (1981; 1990).⁵ In her 1981 paper, Lopes argues that the current most commonly accepted criterion for rationality (SEU) is inadequate in short-run gambling situations because of the reasonableness of considering the "amounts we are likely to get most of the time," instead of, or at least in addition to, long run expectations. Of particular interest in that paper is her discussion of the consequences of rejecting the normative model of rational choice. There (p. 384), she quotes a paper by Anatol Rapoport and Carol Orwant (1962) that bears repeating here:

[The expert] can declare common sense to be in error and stick to his guns; or he can revise the criterion on which his prescription for rational decision has been based. If he chooses the first alternative, "rational decision theory" stands in danger of becoming an empty formalistic structure, in which decisions which are intuitively felt to be foolish are declared to be wise.

...If one chooses the second alternative, a revision of the rationality criterion, one faces the necessity of offering another criterion in its stead. Once this necessity is faced, decision theory loses its "purely

⁴ The present author would take a more extreme stance than Funder on this point which would be more in agreement with the position summarized by Karl Weick (1979). According to Weick, the "correctness" or "falsity" of a one's interpretation of reality is not relevant. Instead, if one recognizes that environments are enacted, "then there is no such thing as a representation that is true or false, there simply are versions that are more and less reasonable" (Weick 1979, 169). From this view, the word "misjudgment" is thus inappropriate because it suggests that it is possible to misjudge in this particular situation.

⁵ The 1981 paper and the reactions of such decision theorists as Amos Tversky and Maya Bar-Hillel (1983) to it were the impetus for an international conference at the University of Leiden, the Netherlands (Beach, Vlek & Wagenaar 1988).

rational" character. For obviously, if more than one criterion of rationality is admitted, the choice between them is either governed by nonrational considerations, or else based on a "superrationality" criterion [in which case] there is no guarantee against infinite regress. (pp. 1-2)

Having chosen the second of Rapoport and Orwant's alternatives, Lopes suggests two ways in which some new criterion for decision rationality will differ from current normative models. The first, she writes, is that the revised criterion will be *composite*, reflecting multiple independent criteria. These will undoubtedly include SEU and possibly others, but necessarily must exclude maximization and minimization notions as key quantitative criteria. The result of this is that the concept of rationality will rest entirely "on essentially subjective judgments about how diverse--and sometimes competing--criteria combine or trade off with one another." (p. 385)

Lopes' second criterion for a revised concept of decision rationality is that it will contain elements that are, without other criteria, not defensible as pure strategies, such as rules based on maximizing the probability of gain. Summarizing her argument, the apparent result of her efforts to balance the practical need to be able to determine decision quality, and demands for scientific rigor, in decision research with the views of other non-normative theorists, Lopes writes:

"I have little doubt that a revision of our conception of rationality along such lines may be displeasing to some because of its inelegance, its vagueness, and its essentially inductive character. But this might be the price that has to be paid if we are to have the kind of useful decision technology that captures and clarifies the concerns of real people in real environments." (1981, 385)

COMPARING PRESCRIPTIONS FOR DECISION MAKING

One way to contrast the relative differences and utility of the normative and non-normative perspectives is to place each into some practical context and compare the prescriptions that follow from each view. A convenient way to do this lies again in the escalation literature where Staw and Ross (1987, 72-75), following normative guidelines, provide a list of what they refer to as "solutions to escalation". The prescriptions offered from the non-normative perspective are developed by the present author.

From the normative framework, the prescriptions offered for avoiding the pitfalls of "erroneous" decision making are fairly deterministic; that is, they are concrete suggestions for reducing or eliminating the types of decision making behaviors that can lead to undesirable outcomes. For example, all of the solutions to escalation offered by Staw and Ross focus on ways to reduce sources of overcommitment to a course of action. These include: 1) replacing decision makers who formulated the original strategy; 2) providing excuses or rationalizations for decision makers to allow them a graceful distancing from their earlier decisions; 3) increasing organizational support for failure by reducing the costs of failure; 4) deinstitutionalizing projects; 5) creating a greater awareness of the costs of withdrawal throughout the life of a project; and, 6) providing unambiguous negative feedback about the costs of persis-

tence, so that cautionary information will more strongly affect recommitment decisions.

In contrast, the prescriptions offered by writers taking the non-normative perspective would be far less deterministic. For example, the prescriptions offered in escalation situations would be based on the assumption that escalating commitment does not represent *overcommitments*, but rather on the simple argument that decision makers will always work to maximize what they perceive to be the benefits versus costs of continuing on a course of action. From this view, a number of issues become salient to proposing responses to escalation dilemmas. First, the personal agenda of a decision maker becomes relevant to the organization for which he or she is either owner or agent. Second, a focus on the short and long term intangible costs and benefits associated with any course of action becomes critical to decisions about recommitments (cf., Northcraft and Wolf 1984). Third, quitting a course of action requires confidence in a sense of certainty about the "failure" of a current course of action before it again seems more sensible to continue than to withdraw. Finally, because there are no objective solutions to escalation dilemmas, decision making should focus on making "reasonable" rather than "correct" decisions.

In light of these observations, two related general classes of responses to ill-structured dilemmas can be identified. The first has to do with planning processes, the second deals with mechanisms of organizational control.

Responses to Process Issues. Given the natural limits on abilities to know the present and to predict the future, of primary concern to decision makers should be the need for sound strategic planning/thinking processes which result in "reasonable" decisions. This is a straightforward evaluation issue; that is, it necessitates the evaluation of a proposed strategy against the comparative reasonableness of alternative strategies (if any) before implementation. There have been many attempts in the scholarly literature to help decision makers through this process (e.g., Dalkey, 1969; Day, 1986; Likert & Likert, 1978; Rumelt, 1979; Janis & Mann 1977 and Nisbett & Ross 1980 might also be included here). Each of these approaches are useful because they focus on strengthening decision making processes by broadening the scope of inquiry, and/or by challenging the information, the sources of information, and the assumptions that are used in pre-decision analyses. In doing so, the thinking done while considering options can focus at the important assumption level of analysis as well as at the policy level (cf., Starbuck, Greve, and Hedberg, 1978; Mitroff and Emshoff, 1979). This list should also include the use of holistic modeling techniques, such as system dynamics, because the major purpose of these techniques is to force an explicit consideration of the variables, interrelationships, and assumptions which underlie items such as the short and long-term intangible costs and benefits of a course of action (cf., De Geus, 1988).

The primary suggestion for action is thus not so much a specific recommendation as it is an emphasis on the need to establish ongoing processes to foster the clearest possible thinking when confronting ill-structured issues. With sound decision making procedures in place, decision makers can make as thorough an evaluation of the situation as limited perceptions of the current and future states of affairs, time, and other resource constraints will allow. The focus on such activity might also help to mitigate the emphasis on outcomes as

sole criteria for assessing the quality of the decision, remove the basis for unrealistic expectations we hold for managers about their abilities to produce results, underscore the value of hindsight as an instrument of learning as opposed to a tool for evaluation, and provide a potential mechanism for building the organizational capability to respond to perturbations.

Responses to Control Issues. In the category of control issues, there are a number of responses to ill-structured dilemmas. Because there is the potential for the decision maker to pursue some personal agenda that can be at odds with that of the "organization" (or vice versa), administrative control mechanisms need to be established in an organization that ensure that the desired agenda (e.g., organizationally sanctioned goals or criteria for success) guide decisionmaking. This aspect of managerial accountability has been much discussed in the literatures of management, economics, and finance, among other disciplines, and is relevant here. Also, operationally, the solutions offered by Staw and Ross are relevant in this context to the extent that they bear on decision makers' accountability for the reasonableness--not the outcomes--of their choices. The criteria for evaluating performance from the non-normative framework, somewhat counterintuitively, thus may be more stringent than basing evaluations on whether decision makers' strategies seem to work or not.⁶ For example, there may be substantial reason(s) to dismiss a manager even if desired outcomes occur. This is because outcomes can turn out to be excellent, of course, despite what might be called the "best efforts of the individuals involved."

...he has hurt his cause with what some people view as impractical approaches that make it harder for Next to win a broad following. People close to Next cite as an example Mr. Jobs's insistence on excluding a floppy-disk drive from his computer. They say Mr. Jobs, 34 years old, believes that by sheer persistence he can pry the industry away from what he considers an outmoded technique.

"Except for Steve, everyone else at Next thinks it's a dumb move," says one person familiar with the situation.

(From: "Slow Start for Next Doesn't Worry Jobs," G. Pascal Zachary, Wall Street Journal, January 18, 1990)

DISCUSSION AND CONCLUSION

It is important to note that scholars aligned with either perspective believe that they can effectively respond to the concerns and criticisms of those in the other camp. In response to critics, for example, Tversky and Kahneman (1987) argue that deviations of actual behavior from the normative model are (1) too widespread to be ignored; (2) too systematic to be dismissed as random error; and, (3) too fundamental to be accommodated by relaxing the normative

⁶ These situations are not to be confused with cases where managers who fail to bring about desired results are fired for "motivational" reasons, even though the reasons that sacrificial firings in organizations are motivational is directly related to this discussion of evaluating managerial performance.

theoretical view. In light of these, Tversky and Kahneman argue later in that same paper that normative (idealized) and purely descriptive (non-normative) analyses of decision making cannot be fully reconciled. The needs and demands of one (e.g., the normative need for behavioral invariance across contexts) clearly can violate the needs and demands of the other (e.g., the value of varied behavior across contexts in practice). This is of interest here because it is equivalent to the conclusion drawn by Lopes, inherent in her (above) comments, about the high price of the tradeoffs that would be necessary to develop a more useful decision technology.

What this limited sense of agreement on this point certainly suggests is that there is useful merit in both perspectives. Clearly, neither perspective is "wrong". Just as clearly, following the prescriptions of either view can be associated with successful outcomes. Such agreement also means that, despite the wish to find some comfortable middle ground where one could agree with desirable aspects of both views, one has to choose sides. Faced with this, such a choice is more a matter of personal preference/values than a matter of purely analytical science (Briggs & Peat 1989; Simon 1987). In this regard, the present author remembers attending a faculty development workshop, as part of a national management conference, where participants were asked to define the *perfect*⁷ management of an organization. After an extended discussion which yielded no consensus, the group was then asked to imagine that it was many years into the future; perhaps, for the sake of argument, an "infinitely distant" time in the future. The prior question, slightly amended, was then asked: Will it be possible to know, with certainty, at some point in the distant future, how to define the *perfect* (in the absolute sense) management of an organization? The consensus of the group was that it *would be possible* to know this. Those among the consensus reasoned that such current secrets were indeed discoverable, and besides, without the promise of unlocking such truths "what is the purpose of conducting research?".

In the context of evaluating the "dumbness" of Steven Jobs's decision not to include a floppy disk drive in the design of the Next computer, or whether there is some purpose to conducting research on social systems, an analyst must believe or assume that there is either such a thing as perfect management or that there is not. If one believes, for example, that Mr. Jobs is acting *correctly* or *incorrectly*, then this implies a belief in perfect management. The same must be true of anyone who believes that pathological decision behavior is the reason that a leader would escalate commitment to a declining course of action (in the pursuit of "folly"); or that Roy Ash's strategy for Addressograph-Multigraph, which was initially believed to hold great promise, was actually ill-conceived; or that the "flaws in the structure" created by Jim Robinson at American Express would have been avoided by a better manager. If, on the other hand, one believes that managerial performance in ill-structured situations should be evaluated by some more subjective measure of the quality of thought behind the strategy, regardless of the outcome, then one would manage with a heightened sensitivity to the dilemma(s) confronting a

⁷ The word "perfect" can be defined in this context in an absolute sense (i.e., faultless), or in the more relative sense of "optimality under assumed conditions of uncertainty". This discussion is predicated upon the idea that the difference between perfection and optimality is nonexistent, however, if the optimal solution/behavior becomes the normative standard against which strategy is judged to be correct or incorrect.

strategist at the point of decision. This implies an acknowledgment of the inherent limitations on a manager's ability to manage in uncertain and equivocal conditions.

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