Part I

Introduction

1 Introduction and overview

Zur Shapira

Organizational decision making can be looked at from various perspectives. This book attempts to increase our understanding of organizational decision making by bringing together researchers from two great traditions that share some common roots: behavioral decision theory and organizational decision making.

The roots of behavioral decision theory (Kahneman, 1991) include Edwards's (1954) studies of probability revision, Meehl's (1954) analysis of clinical judgment, Luce and Raiffa's (1957) description of game theory, and Simon's (1947, 1955) treatise on decision making in organizations. Over the last 40 years, research on the psychology of probability estimation and choice behavior led to the development of the heuristics and biases paradigm in the study of judgment under uncertainty (Kahneman, Slovic, & Tversky, 1982), as well as to the pursuit of prospect theory and framing in individual choice behavior (Kahneman & Tversky, 1984). Research in the behavioral decision theory tradition was carried on mainly in lab experiments and focused on the cognitive aspects of individual choice behavior. In the tradition of psychological science, the research was aimed at refuting the implications of the normative statistical decision theory's model. Over the years, behavioral decision theory produced a remarkable set of findings on individual choice behavior, albeit by neglecting the effects of social and emotional factors as well as the conflict inherent in decision making (Kahneman, 1991).

The pioneering work by Simon led to a paradigmatic development in organization theory. The Carnegie approach culminated in numerous studies that emphasized the role of information processing and decision making as the basic elements in analyzing both the process and the structural aspects of organizations. Two books from the golden period of the Carnegie school, March and Simon's *Organizations* (1958) and Cyert and March's *A Behavioral Theory of the Firm* (1963), are landmarks in the field of organization theory. In the period that followed the studies of the Carnegie school, scholars of formal theories of organizations, with the exception of March, did not treat decision making as the central focus of their framework. For example, Thompson's (1967) influential book on organization theory had many propositions related to decision making by organizations but without a focus on information processing as a unifying concept. Other research trends were pursued by various scholars on topics related to organizational decision making, such as the analysis of power (Pfeffer, 1981), escalation processes (Staw, 1981), commitment (Salancik, 1977), information processing (Connolly, 1977), and sense making (Weick, 1994), to name a few. The research agenda of March focused on alternative aspects of organizational decision making. He extended his earlier analyses in several directions. His writings suggested alternative notions of rationality (March, 1978), analysis of decisions as random processes, the most well known of which was labeled "A garbage can model of organizational choice" (Cohen, March, & Olsen, 1972). He also studied the effects of attention allocation and search on organizational decisions (March, 1988) and analyzed the role that rules, obligations, and myths play in organizational decision making (March, 1994).

The relations between the two traditions are intriguing. Simon's initial work served as an impetus for further studies in the fields of both behavioral decision theory and organizational decision making. Even though organizational processes are not the mere aggregation of individual activities, Simon treated them similarly and his approach appeared to be relevant for both levels of analysis. As March (1978) noted, "He [Simon] obscured a distinction one might make between individual and organizational decision making proposing for the most part the general ideas for both" (p. 859).

Indeed, individual and organizational decision making overlap greatly because many decisions in organizations are made by individual managers. In that sense, the reference is to decisions made in organizational contexts. Behavioral decision theory, by contrast, deals primarily with judgmental and decisional processes of individuals, but not in an organizational or any other particular context. Although the two traditions share common roots, the research agendas of behavioral decision theory and organizational decision making in the last 40 years or so reflect similarities as well as differences. These are due, in part, to some complexities and special characteristics of decision making in organizational settings.

Some characteristics of organizational decision making

There are a few characteristics that differentiate organizational decision making from individual decision making as studied in lab experiments.

First, unlike most lab studies of individual decision making, *ambiguity* is pervasive in organizations. There is often only ambiguous information, and there is ambiguity about preferences as well as about interpreting the history of decisions. In contrast, most experimental studies of individual decision making present the subject with clear information, though in the form of a probability distribution and often with monetary payoffs that direct the subject's preferences.

Second, decision making in and by organizations is embedded in a *longitudinal* context. That is, participants in organizational decision making are a part of ongoing processes. Even if they don't take on active roles in all phases of decision making, they are a part of the decision process and its consequences. Decisions in organizations are made in a sequential manner, and commitment may be more important in such processes than judgmental accuracy. These characteristics call for a history-dependent analysis of organizational decision making and highlight the role of sense making in organizational life. In contrast, most lab studies of individual decision making are conducted in artificial settings (i.e., the laboratory) that are not connected to the subjects' ongoing activities.

Third, *incentives* play an important role in organizational decision making. Incentives, penalties, and their ramifications are real and may have long-lasting effects (Shapira, 1995). These effects are intensified due to the longitudinal nature of decision making in organizational settings. Furthermore, survival is a basic aspect of life in organizations – a characteristic almost impossible to reproduce in an experimental setting. In contrast, incentives used in experimental studies of individual choice behavior are meager and do not have the potential to produce lingering effects. The argument is not that incentives eliminate judgmental biases; in fact, they may even aggravate them. The point is that incentives and penalties are very salient in organizations, and often they command managerial attention.

Fourth, many executives, especially in middle management, may make *repeated* decisions on similar issues. Consider, for example, a loan officer who reviews requests for consumer house loans. Such a manager may develop a sense of using his or her skills (which may be faulty) and a sense of having control of the situation (which may also be faulty). The beliefs of having control and using one's skills are pervasive in managerial thinking about risk taking (Shapira, 1995). In addition, several repeated decisions, such as decisions on new loans, are made by following rules rather than by using pure information processing modes (March, 1994). The idea of a "decision" in this context may take on a different meaning.

Fifth, *conflict* is pervasive in organizational decision making. Many times, power considerations and agenda setting determine decisions rather than calculations based on the decisions' parameters. Further, organizations are hierarchical systems in which people report to a superior. The nature of authority relations may have a large impact on the way decisions are made in organizations, which are basically political systems.

The goal of this book is to examine current issues in organizational decision making and bring into the arena potential contributions from behavioral decision theory to enrich the framework of analysis of organizational decision making. Another purpose is to enrich the research framework of behavioral decision theory by bringing in ideas and findings from organizational decision making. There are researchers in organization theory who question the external validity and relevance of findings from behavioral decision theory to real-life situations. However, these concerns may be exaggerated, as it is clear that managers are not immune to judgmental biases (Bazerman, 1994). It also appears that the cognitive implications of behavioral decision theory research may be highly relevant to strategic decision making (Schwenk, 1984; Zajac & Bazerman, 1991). By contrast, there are researchers in behavioral decision theory who feel that increasing the external validity of decision research will inevitably come at the expense of accuracy. However, this doesn't have to be the case. Research by Kunreuther, Hogarth, and Meszaros (1993) showed how one can employ experimental designs in studying how decisions are affected by ambiguity, a concept of major importance in organizational decision making (March, 1988; Shapira, 1993). Research that can potentially create cross-pollination between the two traditions is illustrated in Kahneman and Lovallo's (1993) study of forecasting and choice, March's (1994) analysis of decision making, Shapira's (1995) study of managerial risk taking, Staw's (1981) studies of escalation of commitment, and Starbuck and Milliken's (1988) analysis of the Challenger disaster.

Structure of the book

This book analyzes organizational decision making by taking into account the previously discussed characteristics of organizational contexts, as well as findings from behavioral decision theory that are relevant for analyzing decisions made in and by organizations.

The book comprises five different sections. In the next chapter, March lays the foundations for alternative approaches to organizational decision making. He presents four ways in which decision are made in organizations, noting the differences among rational choice, rule following, sense-making processes, and evolutionary approaches.

The second part of the book deals with information processing and attention allocation. Starbuck and Pant analyze the informational and organizational aspects that underlie the savings and loan debacle. Kunreuther and Meszaros look at the situation in the chemical industry following the Bhopal disaster, and Dutton analyzes the importance of agendas on organizational decisions.

The third part of the book is devoted to aspects of preference processing. Salancik and Brindle analyze the importance of power and politics in organizational decision making and advance some social construction arguments. Zajac and Westphal discuss different approaches to managerial compensation, and Camerer and Knez deal with the problem of conflict in organizational decision making by proposing a game theoretical framework.

The fourth part of the book deals with decision processes in organizational settings. Staw provides a comprehensive presentation and analysis of the escalation paradigm. Fischhoff and Johnson raise the question of whether decisions in organizational settings can really be described as distributed decision processes. Garud and Shapira take a look at the alignment of risk and control in organizational decision making, devoting attention to the assumption of responsibility for failure. Zhou elaborates on the notion of rule following as a major factor in describing how decisions are made in organizational settings.

The last part of the book presents some alternative and critical approaches to the standard analysis. Connolly and Koput focus on naturalistic approaches, and O'Connor presents a narrative approach to organizational decision making. Radner provides an economist's perspective, and Payne presents a cognitive psychologist's appraisal of organizational decision making.

The different perspectives presented in this book should introduce the reader to some of the major issues of organizational decision making. By examining the similarities and differences among various conceptual, theoretical, and empirical approaches, these chapters provide multiple perspectives on the major issues underlying organizational decision making.

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2 Understanding how decisions happen in organizations

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A large part of contemporary research on organizational decision making is concerned with how decisions should be made. Such research seeks techniques for improving the intelligence of actions by organizational decision makers. This chapter is, on the other hand, only incidentally concerned with how decisions should be made. It focuses on how decisions actually happen in organizations and how we might think about decision processes. It is an introduction, a sketch of ideas that might be relevant to understanding decision making in organizations. The chapter is neither a substitute for nor an adequate prologue to the other contributions in this volume. At best, it sets a partial frame for considering the more elaborated versions of other chapters.

Introduction

In one of those extraordinary epigrams that become part of the folklore of a field, James Duesenberry (1960, p. 233) said that "economics [and by analogy psychology] is all about how people make choices; sociology [and by analogy anthropology and political science] is all about how they don't have any choices to make." Students of organizational decisions locate themselves happily in the midst of the distinction, trying to understand decisions as instruments of conflict and consciousness and trying to understand conflict and consciousness as embedded in social relations, rules, norms, and constraints (Allison, 1971; Hickson, 1995; March, 1981, 1988, 1994a; Pennings, 1986; Witte & Zimmerman, 1986; Zey, 1992). They focus on decision-making processes, trying simultaneously to identify the ways

This essay is based substantially on March (1994a). The research has been supported financially by the Spencer Foundations and the Stanford Graduate School of Business, and in many other ways by the Scandinavian Consortium for Organizational Research.

in which decisions unfold within them and to understand the processes as forms of social drama and locales for creating stories.

The study of how decisions happen provides a setting for a cluster of contested issues about human action (March, 1994a:viii–ix):

> The first issue is whether decisions are to be viewed as *choice-based* or *rule-based*. Do decision makers pursue a logic of consequence, making choices among alternatives by evaluating their consequences in terms of prior preferences? Or do they pursue a logic of appropriateness, fulfilling identities or roles by recognizing situations and following rules that match appropriate behavior to the situations they encounter?
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> The second issue is whether decision making is typified more by *clarity* and *consistency* or by *ambiguity* and *inconsistency*. Are decisions occasions in which individuals and institutions achieve coherence and reduce equivocality? Or are they occasions in which inconsistency and ambiguity are exhibited, exploited, and expanded?
>
> The third issue is whether decision making is an *instrumental* activity or an *interpretive* activity. Are decisions to be understood primarily in terms of the way they fit into a problem solving, adaptive calculus? Or are they to be understood primarily in terms of the way they fit into efforts to establish individual and social meaning?
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> The fourth issue is whether outcomes of decision processes are seen as primarily attributable to the actions of *autonomous actors* or to the systemic properties of an *interacting ecology*. Is it possible to describe decisions as resulting from the intentions, identities, and interests of independent actors? Or is it necessary to emphasize the ways in which individual actors, organizations, and societies fit together?

The easy (and correct) resolution of these issues is to say that decisions, decision making, and decision processes in organizations are all of these things; the largest problem is not to choose among the alternatives but to weave them together in a way that allows each to illuminate the others. This volume can be seen as an effort to contribute to that weaving and the present chapter as a modest introduction to fabric design.

Decisions as rational choices

Virtually all of modern economics and large parts of the rest of social science, as well as the applied fields that build upon them, embrace the idea that human action is the result of human choice and that human choice is intendedly rational. Rational theories picture decision making as based on four things:

A knowledge of alternatives. Decision makers have a set of alternatives for action.

A knowledge of consequences. Decision makers know the consequences of alternative actions, at least up to a probability distribution.

A consistent preference ordering. Decision makers have consistent values by which alternative consequences of action can be compared in terms of their subjective value.

A decision rule. Decision makers have rules by which they select a single alternative of action on the basis of its consequences for the preferences.

In the most elaborated form of the model, it is assumed that all alternatives, the probability distribution of consequences conditional on each alternative, and the subjective value of each possible consequence are known. A choice is assumed to be made by selecting the alternative with the highest expected value (Schoemaker, 1982). This emphasis on expected value may be moderated by attention to other features of the outcome distribution – for example, the variability (or riskiness) of the distribution (Shapira, 1995).

The durability of this structure is impressive. It is also understandable. Simple rational choice models capture some important elements of truth. Demand curves for consumer products generally have negative slopes, and employees usually are more resistant to wage cuts than to wage increases. Moreover, the core ideas are flexible. When the model seems not to fit, it is often possible to reinterpret preferences or knowledge and preserve the axioms. Finally, choice is a faith as well as a theory. It is linked to the ideologies of the Enlightenment. It is encased in habits of speech to such an extent that ideas of willful, rational choice are the standard terms of discourse for answering the generic questions: Why did it happen? Why did you do it?

Uncertainty

Students of organizational decision making share these basic ideas of anticipatory, consequential choice, but they have modified them considerably over the past 30 years, primarily through consideration of numerous limits to rationality (Cyert & March, 1992; March & Simon, 1993). Insofar as decision making can be understood as stemming from prior preferences and expectations about consequences, it is bounded by significant individual and organizational constraints on finding and implementing an optimal solution.

The earliest empirical challenges to the simple story of rational choice questioned the information assumptions of the theory. Rational actors make two guesses about the future: a guess about the future consequences of current actions and a guess about future sentiments with respect to those consequences. Classical versions of theories of rational choice assume that both guesses are improbably precise. Actual situations in which decisions are made often seem to make each of them problematic.

The first guess – about the uncertain future consequences of current action – has long attracted attention from both students of decision making and choice theorists. Even if estimates of the consequences of alternative actions are formed and action is *intendedly* rational, there are informational and computational limits on human choice. These limits on rationality stem