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CHAPTER 1

SOCIAL AND CREATIVE DECISION MAKING

Research on human decision making is at the present time undergoing rapid changes. From previously being much focused on models and approaches with an origin in economy, much of the present day research finds its inspiration from disciplinary approaches concerned with incorporating more of the context that the decision making takes place in. This context includes psychological aspects of the decision maker and social-cultural aspects of the situation he or she acts in. All human decision making occurs in dynamically changing contexts. One factor contributing to this is that human beings or groups in many situations act as entrepreneurs trying to improve the situation for themselves or their organization. Given that this is the case, it is of increasing interest for both researchers and practitioners interested in the social aspects of decision making to consider the relation between creativity and decision making.

In the present volume we have included chapters that deal with social and creative aspects of decision making. Such aspects have, to some extent, been neglected in psychological research on decision making. This is partly due to the historical domination of the SEU (Subjective Expected Utility) tradition in judgment and decision making research. The SEU tradition has its roots in economic theory. This may be one reason why this tradition appears as quite static and too limited in its nature to be able to explain such phenomena as, for instance, innovation. By improving our understanding of the creative and social aspects of decision making the present volume contributes to the integration of theories, concepts and results from different research traditions and in this way helps to better our understanding of the decision making. The volume hereby complements research achievements that have been presented under different names such as *naturalistic decision making*, *distributed decision making*, and *applied creativity*. The chapters help to provide a more realistic understanding of the conditions for creative social decision making. For this reason they also have important practical implications, for example with respect to how creativity can be promoted in organizational decision making.

Given the disciplinary specialization that, just as in other research fields, has developed in decision research in different disciplines, we have found it important to gather in one place a somewhat broader spectrum of contributions to decision making research compared with what is commonly found in a single volume. Most of the contributions are from psychology but there are also contributions from management science, health science, education, policy and planning, and informatics. Different perspectives on decision making will, just as different measurement methods, help to bring out more aspects of the phenomenon and thus improve our understanding.

Several of the authors to the chapters in this volume address basic and general issues with regard to the social and creative dimensions of decision making. For instance, Stoycheva and Lubart provide an interesting review in which they describe important general features of creative decision making. Wilke and Kaplan, in their review, especially focus on group processes, whereas Basadur reviews the literature relevant for organizational and managerial decision making while making theoretical extensions of his own. Taking their point of departure from the research literature, Pfister and Böhm's give interesting arguments for why new scientific approaches are needed in the area of environmental decision making research.

Other authors in the volume are more concerned with aspects that are especially relevant for our personal lives. Among others, Willén provides an example of how theories of decision making and creativity may be applied in the area of family studies. Salo and Svenson highlight features of the decision process that play an important role in health care students' choice of education. In addition, Takemura shows that notions of decision making, which stress the importance of descriptive variance, are highly relevant for understanding the behavior of everyday consumers.

Finally, several authors in this volume are concerned with aspects that are of importance for management and the organization of work life. For instance, Badke-Schaub and Buerschaper focus on how professional designers solve problems and make decisions in the organization. Selart and Boe give an account of how CEO's of small information technology companies view their use of different aspects of creative thinking in their daily work. Vinkenburg, Koopman and Jansen present a field experiment and describe important features of managerial efficiency. The aim of Jönsson, Edström and Ask's contribution is to draw conclusions from a micro analysis of the accounts given by the various members of the project team of an incident in an R&D car industry development project. Hedelin and Allwood present a study in which they stress the selling in of a decision alternative as a fundamental and under-researched aspect of decision making processes in organizations. Finally, Engeström shows how the development of a structure for the social framework for health care administration and decisions takes place through a struggle between the different involved parties where the parties aim to establish their own platforms in the decision process.

DIFFERENT DIMENSIONS IN THE CHAPTERS

The chapters in the book can be located on a number of different dimensions. Some of these will be discussed next.

INDIVIDUAL AND INSTITUTIONAL PERSPECTIVES

As noted, all of the chapters share a concern with decision making in social contexts. However, the chapters differ with respect to whether they treat decision making from the perspective of the individual or from that of a socially organized institution. When decision making is seen from the perspective of the individual, his or her mental processes are brought to the foreground. Research questions pursued from this perspective concern for example how a possible decision starts to develop in an individual's mind (chapter by Willén), how the individuals weigh together evidence at the final stage before the decision

is taken (Takemura), how the decision is viewed by the decision maker after the decision is made (Salo & Svenson) and which features of the individual's cognitive and motivational properties, decision making process, or of the decision itself, contribute to making it creative (Pfister & Böhm; Stoycheva & Lubart). Although these contributions concern social decision making in the sense that they concern decisions taken in a social environment, they do not to any large extent consider how different features of the social environment, institutional or other, affect the decision process.

The chapter by Wilke and Kaplan takes more of a middle position on the dimension from individual to institution. Here the authors describe processes in connection with creative decision making that occurs in small group settings. Somewhat more towards the other end of the dimension, some chapters report studies on decision making in organizations (Basadur; Selart & Boe; Vinkenburg et al) but without very much relating to the institutional features of organizations. Closer to the end of the dimension more of the institutional context that the decision maker operates in is brought into focus. For example, the chapters by Badke-Schaub and Buerschaper and by Jönsson, et al. describe and analyze creative decision making in industrial design processes, and the chapter by Hedelin and Allwood analyzes the decision making processes occurring within organizational settings of different kinds. Finally, at the very end of the continua, the chapter by Engeström analyzes the development of an institutional framework for the distribution of responsibility for decisions concerning the care of child patients with long-term diseases, between the home, the specialist physician and the open care unit.

DIFFERENTIAL EMPHASIS ON DECISION PROCESS AND ON CREATIVITY

The different chapters also differ with respect to the focus they put on creativity and on decision making. Five of the chapters focus foremost on the decision making process and draw conclusions about creativity in the decision process mostly on the basis of the findings about the decision process. Here are the chapters by Engeström on the development of social structures for decision making, by Willén on divorce decisions, by Hedelin and Allwood on organizational decision processes, and by Jönsson et al on the decision process in a design context. Likewise, the focus in Takemura's chapter on the unidimensionality of the decision criterion is foremost on the decision process. Other chapters with a focus on decision making put greater emphasis on attempts to identify the creative aspects of the decision making process. Examples here are the chapters by Salo and Svenson on individuals' choice of professional education, by Pfister and Böhm on environmentally friendly decisions, and by Selart and Boe on the role of habits in decision making.

In four of the chapters an approximately equal amount of attention is paid to creativity and decision making. In one chapter (Basadur) this is accomplished by focusing on problem solving (or thinking) and seeing creativity and decision making as integral parts of this larger process. Basadur's chapter focuses on how thinking in organizations can be organized to become more creative. In a similar manner, the chapter by Badke-Schaub and Buerschaper deals foremost with a larger collective design process and analyzes which points in this process are the more creative. The chapter by Vinkenburg et al. focuses on the question of why managers do what they do. Here, decision making and creativity are seen as integral parts of the processes leading up to managers' behavior. Finally, the

chapter by Stoycheva and Lubart also provides a fairly good balance between creativity and decision making but by use of a different approach. Here, the authors very conscientiously analyze the relation between creativity and decision making. First they analyze the role of creativity in decision processes and then the role of decision processes for creativity.

Finally, the chapter by Wilke and Kaplan, dealing foremost with creativity in group processes, focus more on creativity as such. Decisions and decision processes are here seen as part of the group problem solving or thinking process and are not focused on specifically.

DIFFERENT THEORETICAL PERSPECTIVES

The chapters in the book represent a range of theoretical perspectives. Not all of them are easy to classify. However, at least one chapter, the one by Takemura, to a large extent represents the, by now, classical behavioral decision making paradigm. Some of the other chapters represent more recent specific approaches in psychological decision making research. This is the case for the chapters by Salo and Svenson and by Willén which represents applications and developments of Svenson's Diff-Con theory and of Montgomery's dominance structuring theory, respectively. Both of these approaches concern the mental work of individual decision makers and can be seen as located within the naturalistic decision making approach, broadly taken. Other chapters (Badke-Schaub & Buerschaper; Pfister & Böhm; Selart & Boe; Stoycheva & Lubart) are clearly inspired by the parts of cognitive psychology dealing with problem solving, creativity theory, process tracing approaches to decision making and theory concerning the automatization of skills. The chapter by Wilke and Kaplan relays on theories from social psychology on group interaction. One chapter uses organizational theory (Vinkenburg et al.) and two others are at least inspired by it (Basadur; Hedelin & Allwood). Finally, two chapters use other approaches from the social sciences, more specifically ethomethodology (Jönsson et al) and activity theory (Engeström).

THEORETICAL AND EMPIRICAL FOCUS

The chapters can also be located on a dimension running from theoretical to empirical. An indication of this is that the chapters differ with respect to the extent to which they present a specific empirical study. Five of the chapters are foremost theoretical (Basadur; Pfister & Böhm; Stoycheva & Lubart; Takemura; Wilke & Kaplan). However, all of these chapters use previous empirical research to substantiate their ideas. Possibly the distance between the theoretical arguments and the empirical data is somewhat greater in the chapter by Pfister and Böhm on environmental friendly decisions and to some extent also in the chapter by Basadur presenting a program for creative decision making in organizations, compared to the other three chapters in this group. Theses chapters, i.e., the chapter by Wilke and Kaplan on different types of creativity in group processes, the chapter by Stoycheva and Lubart on the relation between creativity and decision making, and the chapter by Takemura presenting a theory about information integration in decision making all push theoretical ideas. However, there is also an emphasis on providing an

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The chapters by Selart and Boe on the role of conscious and controlled habits in human decision making and by Vinkenburg et al on the role of situational and personal factors in organizational decision making, first present literature overviews of their areas and then describe an empirical study by the authors that further expands the argumentation in the chapter.

The remaining six chapters, presented by Badke-Schaub and Buerschaper on design processes in organizations, by Engeström on the development of institutional structures for distributing responsibility and power in the care of a specific medical patient category, by Hedelin and Allwood on features of high level organizational decision making, by Jönsson et al. on a specific event in the design of a car model, by Salo and Svenson on individual's choice of professional education and finally by Willén on couples' decisions to divorce more clearly focus on a specific empirical study. The conclusions from these chapters are to a large extent drawn from, or mediated via, the empirical data in the presented study.

The empirical research methods of the more empirically focused chapters differ. Four of the chapters use questionnaire data, collected either by the use of an electronical questionnaire (Selart & Boe) or by the use of a traditional booklet (Badke-Schaub & Buerschaper; Salo & Svenson; Vinkenburg et al.). In the chapter by Salo and Svenson questionnaire data was collected for the same individuals on several occasions. The other chapters in this group relay either on interviews (Badke-Schaub & Buerschaper; Engeström; Hedelin & Allwood; Jönsson et al.; Willén), document analyses (Badke-Schaub & Buerschaper; Engeström), direct observation of the decision process studied (Badke-Schaub & Buerschaper; Jönsson et al.), or on computer simulation (Badke-Schaub & Buerschaper). Thus, some of the chapters presenting empirical studies (Badke-Schaub & Buerschaper; Engeström; Jönsson et al.) combine different types of data collection methods.

Most of the chapters mainly take a descriptive or an explanatory approach. However, at least two of the chapters (Basadur; Pfister & Böhm) take a more normative or "prescriptive" standpoint. As will be further detailed below, this relates to their definition of creativity.

CREATIVE ASPECTS OF THE DECISION PROCESS

The stance taken in the chapters towards creativity show both similarities and differences. Most of the chapters agree that creativity can pertain both to the decision process and to the decision product. Considering the decision process first, it is clear that many parts of the decision process have a potential for being creative. Starting with the early stages, identifying what is the decision problem (or *decision opportunity*, as argued by Keeney, 1992) to be solved is pointed out by many of the authors (e.g., Badke-Schaub & Buerschaper; Basadur; Salo & Svenson; Selart & Boe; Stoycheva & Lubart) as having a high potential for creativity (the highest according to Badke-Schaub and Buerschaper, Basadur, and Stoycheva and Lubart).

Next, the construction of new decision alternatives, or the restructuring of old ones, is also identified as liable for creative thinking (Pfister & Böhm; Salo & Svenson; Selart & Boe). Some of the authors point out that these aspects can be affected by a creative restructuring of one's values, or goals (Pfister & Böhm; Salo & Svenson; Selart & Boe).

Stoycheva and Lubart suggest that a creative formulation of the decision problem "is related to the construction of a holistic, relational representation of the problem" (p. 23), and that the creative generation of alternatives includes "focusing attention on the more unusual aspects of the stimulus problem when searching for alternatives." (p. 22). Vinkenburg et al. suggest that creative managers have a well-developed ability to read the situation in order to identify relevant aspects of the situation. Stoycheva and Lubart suggest that "intuitive" processes are important for the creation of decision alternatives and Engeström talks about improvisation and bricolage.

After this follows the evaluation and choice of a decision alternative. Here creativity is assumed to involve for example the generation of *many* evaluation dimensions (Stoycheva & Lubart) and to integrate attributes in a creative way (Takemura). With respect to integration of attributes, Takemura notes that this involves a creative construction, or "envisionment" of a criterion ("mental ruler") against which to evaluate the different alternatives considered in the decision situation. Such a construction involves being creative when finding out which attributes are important to integrate and in the next step to ingrate these attributes in creative way.

The idea held in much previous research that evaluations are counteractive to creativity is not accepted by most of the authors in this book. In contrast, for example Badke-Schaub and Buerschaper claim that "the essence of creative thinking is not to withhold judgment but may be to evaluate critically with respect to the problem content." (p. 192).

Although sometimes allocated foremost to specific parts of the decision process, some aspects or processes common to all or most stages of the decision process seem to be important opportunities for creativity. Creative idea generation and evaluation are both considered to be carried out in a "flexible" and "adaptive" way. Further suggestions of this kind given by Stoycheva and Lubart are "to discriminate between salient and significant attributes [...], to reason at a high level of abstraction, [... to] tolera[te] ambiguity during decision making to avoid premature closure [... and] being motivated to invest as much cognitive effort as necessary to make creative choices." (p. 29). In the latter context Selart and Boe discusses the necessity of deep *involvement*. In addition to these suggestions, Willén stresses the importance for creativity of "restructuring and perspective shift" (p. 131) and Jönsson et al. and Badke-Schaub and Buerschaper mention the application of a good solution from one area to another.

CREATIVE ASPECTS OF THE SPECIFICALLY SOCIAL PARTS OF THE DECISION PROCESS

Some authors specifically discuss creativity in parts of the decision process that are foremost social. For example, Badke-Schaub and Buerschaper note that "we often find creativity in a joint problem solving process, as an explicitly collaborative activity" (p. 177). For Basadur creativity in organizations is associated with adaptivity and innovation but also with open system organization. The opposite approach is a closed system organization, aiming at internal efficiency and optimizing day-to-day routines.

Wilke and Kaplan discuss *social creativity* which is said to refer to "methods to coordinate group members' effort and to enhance their motivation to produce ideas in groups that are unexpected and novel." (p. 35). These authors contrast creative and non-creative (group) processes. Creative processes are characterized as being influenced by properties in the stimuli ("informational influence"), i.e., information in the decision task

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per se and non-creative processes are regarded as highly influenced by pressure to conform to the group majority ("normative influence").

Hedelin and Allwood perceive creativity emerging as an interaction between the decision maker and the situation, in the sense that "when there are difficulties there may be more need for creativity." (p. 274). More specifically, they argue that "Skill in on-line handling of the unexpected can be seen as an important type of creativity in organizational decision making." (p. 278). They also stress that creativity often is important in the social communication carried out when selling in a proposed decision to other parties inside and outside of the organization. Basadur mentions a similar aspect. Jönsson et al. also relate creativity in the decision process to the wider range of *social processes* going on, pointing out that creativity "in one part of the project may generate frustration in another." (p. 253). For this reason, these authors suggest that creativity may be easier to allow in early phases of a project than in later parts.

CREATIVE ASPECTS OF THE DECISION PRODUCT

Most of the chapters explicitly argue that *creative products* (including decisions or problem solutions) involve novelty (Badke-Schaub & Buerschaper; Basadur: Engeström; Pfister & Böhm; Salo & Svenson; Stoycheva & Lubart; Willén Wilke & Kaplan). Stoycheva and Lubart argue that the creative option, being novel, is also risky. In addition, most of the chapters contend that decisions or problem solutions, in order to be creative, have to have high quality (e.g., Basadur; Pfister & Böhm; Selart & Boe; Stoycheva & Lubart; Takemura; Willén). For many of the authors this means to be socially useful and adaptive (Basadur; Selart & Boe; Stoycheva & Lubart). For instance, Stoycheva and Lubart note "that the creative approach to social issues recognizes the importance of people's values and preferences, focuses on understanding each of the interacting/conflicting parties as well as societal norms, and seeks win-win solutions." (p. 16). They also note that the creative option "is both unusual and useful." (p. 17). For Pfister and Böhm high quality is synonymous with being environmentally friendly.

It seems clear that the demand for a creative decision or problem solution to have high quality to some extent involve *a value judgment* and because of this may involve taking a normative approach. As noted above, the chapter by Pfister and Böhm openly take such a normative approach in a prescriptive variety. However, they also argue that by making environmentally friendly decisions the individual can free him- or herself "from being stuck in a social or moral dilemma." (p. 103). Likewise, Badke-Schaub and Buerschaper argue that "The dimensions of creativity seem to be categories which initiate growth and progress of mankind." (p. 177). Willén suggests that a decision in order to be creative should be anchored in reality, it should be practical and realistic. Stoycheva and Lubart concur: "thinking and acting go hand in hand." (p. 16).

One way of introducing normative claims without introducing one's own values is to let a panel judge whether the product is of high quality or not. A few of the chapters also discuss different societal processes that may determine whether a product is *seen* as of high quality in specific social arenas (Stoycheva & Lubart; Wilke & Kaplan).

It is of interest to note that the authors of one chapter (Salo & Svenson) explicitly deny that a decision has to have high quality in order to be creative, According to these authors "A creative decision is not necessarily a prescriptive or normatively good solution.

Creative solutions can be quite poor both for the decision maker her or himself as well as for others." (p. 149). For example, Salo and Svenson suggest that self-deceiving reasoning may be regarded as creative. However, these authors do not clearly argue why quality aspects should not be considered as a constitutive part of creativity.

Keeney, R. L. (1992)
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CONCLUDING REMARKS

This volume presents research that relates decision making to creativity with a focus on the social context in which these processes occur. The volume is addressed to academic readers as well as to professionals with a scientific interest in the field. The organization of the volume is primarily based on the individual/institutional continua. Thus, the first chapters are mainly written from theoretical and, mostly, individual perspectives whereas the last chapters are more written from an empirical and organizational viewpoint. The major goal for the present volume has been to give recognition to the fact that human decision making typically occurs in changing, dynamic, social contexts, and that researchers interested in decision making in a social context therefore will benefit by considering the relation between creativity and decision making.

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