Delineating Strategic Decisions from Strategy Making

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When conducting research on decision modeling in organizations, three levels are generally recognized: operational, tactical/managerial, and strategic. A significant portion of the literature on strategic level decisions focuses on strategy making. The purpose of this paper is to emphasize the importance of distinguishing strategic decisions from strategy making. By strategy making, I mean the process of identifying strategic goals and providing a high-level, albeit fuzzy, description of the approaches to achieve the overall 'big picture' of the organization. As for strategic decisions, I am referring to 'big decisions' that carry high stakes, involve substantial resource implications, lead to long-term consequences, and have the potential to establish precedents or result in irreparable mistakes. Although these decisions address issues with strategic implications, they do not directly alter the 'big picture' of the organization. Gaining a better understanding of the differences can be useful in choosing an appropriate decision support.

In general, decision making is about choosing between alternative courses of action. However, the framing of a decision situation influences how the choice problem is presented, the actions taken, and consequently, the outcome. Organizations often face complex and ambiguous decision situations that require deep thought. Today's business environment, which is characterized as ill-structured, turbulent, and information-laden (Szendrey, 2021) further enhances the complexity of the decision problems (Keeney, 1982). The apparent contradiction between the shrinking time available for complex decisions and the need for time investment and deep thinking cannot be completely resolved since the former characterizes the business environment while the latter is inherent in the decision-making process. Therefore, the goal of decision support is twofold: making the thinking faster and more transparent while simultaneously reducing the time gap between choice and implementation. All of these considerations indicate the value of establishing a formal approach to analyze particular complex decision situations.

Huber (1990) points out that advanced information technologies, such as decision-support technologies, can help reduce the time required to make decisions while also improving quality. However, the selection or design of an appropriate technology is of crucial importance.

In a problem space defined by two dimensions, i.e. content complexity and process management complexity (Szendrey, 2022), business decision problems can be classified as operational, managerial, strategic, and strategy making. Prior to exploring the distinctions between strategic decision making and strategy making, it is important to introduce the key concepts regarding individual decision making, group decision making, and organizational decision making.

Approximate Methods of Individual Decision Makers

Individuals have a mental toolbox of approximate methods (Goodwin and Wright, 2015) to help them in dealing with complex situations relatively quickly. Payne et al. (1993) identified the key factors influencing the selection of an appropriate approximate method for a particular decision situation, including:

- Characteristics of the decision problem

  These include task effects (e. g. number of decision alternatives, number of attributes, available time, importance of accuracy) and context effects (e. g. similarity and overall attractiveness of decision alternatives, effort required by a particular strategy).
- Characteristics of the decision maker

  These encompass cognitive abilities, prior knowledge of the problem domain, and prior experience with different decision-making strategies.
- Characteristics of the social context

  These entail accountability to others, whether decision makers need to justify their choice, group membership, and the desire to minimize conflict.

One of the main factors influencing how individuals make decisions is that they suffer from cognitive limitations. Prietula and Simon (1989) identify three limits on the power of reasoning:

- Limit on attention – Humans can only focus on one thing at a time.
- Limit on working memory[1] – The information processing capacity of working memory is limited. (Miller, 1956; Baddeley, 1994, 2001; Baddeley et al., 2020).
- Limit on long-term memory access – Knowledge stored in long-term memory can be lost if it is not accessed regularly.

Therefore, approximate methods have been developed to facilitate quick decision making requiring relatively little cognitive effort, while still arriving at appropriate choices. This also means that they seek satisfactory rather than optimal solutions. The following are typical examples, illustrating how unaided decision makers may choose between alternatives:

- Fast and frugal heuristics (Gigerenzer et al., 1999; Gigerenzer, 2008, 2014)
  These are simple heuristics for making acceptable decisions using minimal amount of information and time, including the 'recognition heuristic', 'minimalist heuristic', 'take the last heuristic', and 'take the best heuristic'. In the *recognition heuristic*, decision makers chose the alternative they recognize. For example, if we recognize the name of a university, we assume it is more prestigious than one whose name is unfamiliar. However, if none of the alternatives are recognized, the *minimalist heuristic* is applied, and decision makers simply guess which alternative is the best. Conversely, when all alternatives are recognized, in the spirit of minimalist heuristic, an attribute is randomly selected. For example, if a university has a football team, it is assumed to be more prestigious than the one without. If the choice cannot be made based on that attribute, another attribute is selected, and so on. Similarly to the minimalist heuristic, in the *take the last heuristic*, decision makers recall a similar situation where an attribute helped them make a

[1] Baddeley (2020) introduced the term 'working memory' instead of 'short-term memory' to emphasize that in addition to temporary storage, the manipulation of information happens here as well.

decision, while in the *take the best heuristic*, attributes are ranked rather than chosen randomly.

- Lexicographic model (Coombs, 1976)

  The basic idea of this model is that attributes can be ranked according to their importance. Decision makers first identify the most important attribute and then select the alternative that performs the 'best' on that attribute. If there is a 'tie' on the most important attribute, they then try to make the choice based on the second most important attribute, and so on. The alternatives are ordered in a similar manner to words in a dictionary. An important characteristic of this method is that the ordering of the attributes is specified *a priori*.

- Elimination-by-aspect model (Tversky, 1972, 2018)

  This model presents choice as a sequential elimination process. Decision makers begin by selecting an attribute with a predetermined cut-off value. The probability of selecting this attribute is proportional to its weight. Alternatives that perform worse than this attribute are then eliminated. The process continues with the selection of the second attribute, and so on, until only one alternative remains. A good example illustrating this choice model is the selection of a car to purchase. For example, if the first attribute is 'used', all new cars are eliminated. If the second attribute is a 'GBP 10,000 price limit', all cars exceeding this limit are eliminated. If the third attribute is 'less than 4 years old', all cars older than this limit are eliminated. By continuing these steps, a final choice is reached, resulting in one car.

- Satisficing (Simon, 1955, 1956)

  In the satisficing model, the search for an alternative begins after defining explicit aspiration levels and continues until the first alternative that meets the decision makers' aspiration levels is identified. For example, if someone's aspiration level is to find a research project of a specific type in a particular organization with specific participants, once the first project that meets these criteria is found, it will be selected. It is important to note that this satisfactory alternative may not be the best available choice. The decision makers' aspiration levels may change as new information is incorporated during the decision-making process. Notably, key characteristics of satisficing include

the ability to make choice with incomplete information within a reasonable timeframe and the sequential availability of alternatives.

Comparing these approximate methods of choice in general terms is difficult because they operate under different assumptions, utilize different sets of inputs, and follow different logical processes. Therefore, the effectiveness of each method varies depending on the decision maker, decision situation, and timing. However, certain broad characteristics associated with these methods are discussed in the decision-making literature. Firstly, all the aforementioned methods employ qualitative reasoning; although, the attributes can have both qualitative values (e.g. yes/no, color, research theme) and fixed quantitative values (e.g. price, age, salary). Additionally, these methods exhibit selectivity in processing, allowing for the elimination of alternatives or attributes based on partial information, without considering how it might impact the overall choice. Moreover, these methods are non-compensatory, meaning that a poor performance on one attribute cannot be compensated with good performance on another attribute. With the exception of satisficing, these methods involve choosing among simultaneously available alternatives while focusing on a single attribute at a time. Conversely, the satisficing approach entails choosing among sequentially available alternatives while considering a constellation of attributes. Lastly, except for satisficing, the aforementioned methods adopt alternative-focused thinking[2], where the identification of alternatives precedes the identification of the values (attributes, objectives) in the decision-making process. In contrast, satisficing adopts value-focused thinking, where the two stages are reversed.

There are other factors that influence how individuals make decisions. These factors include considering unique attributes, imitating others, justifying previous choices, and conforming to perceived social expectations. Additionally, instinct, emotions, intuition, and interpersonal interactions play roles in the decision-making process. (Simon, 1987, 1989; Szendrey, 2006; Dörfler and Szendrey, 2008; Dörfler and Ackermann, 2012; Simon, 2013) Furthermore, Hammond et al. (1998, 2015), Russo and Schoemaker

[2] Keeney (1993, 1996, 2009) identified two approaches to problem solving, i.e. alternative- and value-focused thinking.

(1990), and Schoemaker and Russo (2004) have identified the main barriers to decision making, which are summarized in Table 1.1.

Table 1.1 List of the main barriers to flawless decision making

Decision traps	
Hammond et al. (1998, 2015)	Russo and Schoemaker (1990) Schoemaker and Russo (2004)

• The Anchoring Trap
• The Status-Quo Trap
• The Sunk-Cost Trap
• The Confirming-Evidence Trap
• The Framing Trap
• Estimating and Forecasting Traps
  ○ The Overconfidence Trap
  ○ The Prudence Trap
  ○ The Recallability Trap
	• Plunging in
	• Frame blindness
	• Lack of Frame control
	• Overconfidence in our judgment
	• Shortsighted shortcuts
	• Shooting from the hip
	• Group failure
	• Fooling ourselves about feedback
	• Not keeping track
	• Failure to audit our decision process

It is important to note that while the aforementioned approximate methods can aid in quick decision-making, they can also hinder the ability to make 'good' decisions. If the search for an appropriate approximate approach proves unsuccessful, it may be necessary to transition to a more deliberate and effortful mode of thinking. This line of thinking leads to Kahneman (2012)'s two-system approach to judgement and choice, which involves fast (automatic, intuitive) thinking and slow (controlled, deliberate) thinking. However, Kahneman highlights that intuitive fast thinking holds greater influence and is often the hidden author behind the choices and judgements individuals make.

Facilitated Modeling for Group Decision Making

The involvement of a group of people in decision making can significantly increase the complexity of the decision situation. This is due to the fact that individuals within the group have different knowledge, skills, and experiences. Even if they share common

goals, they may have different priorities when it comes to the choice problem at hand. As discussed earlier, individual decision makers employ their unique mental frameworks to make sense of the problems they encounter. The implication of these considerations for decision making within groups is that problem definition involves negotiation among individuals with different realities. In such negotiations, different interests are represented, and various power bases become apparent (Eden and Sims, 1979). Consequently, decision making within groups is inherently a social process that can disturb the established social order. Eden (1992a, 1992b) distinguishes between two forms of negotiated order:

- Socially negotiated order – Working on problems involves negotiation among the interested parties.
- Negotiated social order – The emphasis is placed on negotiating social relationships rather than negotiating order.

According to Eden (ibid), when the negotiation of social order dominates the process, it can lead to groupthink (Janis, 1971) and the Abilene Paradox (Harvey, 1988). Groupthink occurs in highly cohesive groups when participants suspend critical thinking and conform to the most dominant opinion. While, the Abilene Paradox (Harvey, 1988) highlights that organizations often engage in actions that contradict their true intentions, thus undermining the very purposes they seek to achieve. The focus of the Abilene Paradox is on the challenge of managing agreement rather than the inability to manage conflict. Additionally, Kahneman et al. (2021) highlight that groups can make two kinds of errors when making judgements, i.e. bias and noise. Bias refers to a systematic deviation from the target, while noise occurs when individuals who are expected to agree end up at different random points around the target. Overall, the inability to effectively manage agreement can be a serious source of dysfunction. Improving communication among participants can have a positive effect on the management of the agreement.

Following this line of thought, facilitation often plays a crucial role in the decision-making process within groups. (Williams, 2009). Doyle (in the foreword to the first edition of Kaner et al., 2022) considers group facilitation as a comprehensive constellation of elements, including: (a) a deep belief in the wisdom and creativity of individuals, (b) a pursuit of synergy and shared goals, (c) the ability to listen openly and attentively, (d) a sound understanding of group dynamics, (e) a profound trust in the inherent power of

groups and teams, (f) a respect for individuals and their perspectives, (g) patience and a high tolerance for ambiguity to allow decisions to evolve and solidify, (h) strong interpersonal and collaborative problem-solving skills, (i) an understanding of thinking processes, (j) and a flexible rather than lock-step approach to resolving issues and making decisions.

The facilitator' role is to support the group in 'thinking together' (Pyrko et al., 2015). Specifically, as outlined by Kaner et al. (2022), the facilitator's responsibilities include encouraging full participation, promoting mutual understanding, fostering inclusive solutions, and cultivating a sense of shared responsibility. Additionally, they should help the group overcome dysfunctional dynamics, such as free-riding, production blocking, evaluation apprehension, information overload, and cognitive inertia. Moreover, understanding the group's emotional dynamics (Phillips and Phillips, 1993) and maintaining social harmony (Goleman, 2009) are essential for effective group performance. According to Kilgour and Eden (2021), a systematic approach or the use of a group support system can enhance the process of reaching a collective decision. Furthermore, Eden (1992b, 1992a) suggests that effective group decision support can provide assistance to the decision making group regarding both socially negotiated order and negotiated social order.

Complex decision situations often encompass unique problems, subjective and social aspects, and the necessity to engage widely disparate interest groups. Facilitated decision modeling is widely recognized as particularly suitable for supporting the analysis of complex problem situations or the evaluation of strategic decisions. (Franco and Montibeller, 2010). It is an intervention process carried out by a researcher in collaboration with the client, where the researcher assumes the roles of both analyst and facilitator. Throughout this process, the researcher performs several tasks, including: (a) assisting in structuring and defining the nature of the problem situation, (b) supporting the creation and analysis of models, and (c) aiding in the development of plans for subsequent implementation. The main purpose of facilitated modeling is to enable the group to effectively develop a model of the decision problem at hand, which would be more challenging to accomplish without facilitation. This highly interactive and iterative process continues until the problem situation is adequately structured and analyzed, leading the group to feel sufficiently confident to implement the developed plans. The

key assumptions underlying facilitated modeling, as described by Franco and Montibeller (2010), are as follows:

- Assumption 1: Problems are socially constructed entities
  Facilitated modeling recognizes that the formulation of the problem depends on how the individual decision maker perceives and makes sense of the decision situation.
- Assumption 2: Subjectivity is unavoidable
  Facilitated modeling acknowledges that decision-making processes involve subjective elements and aims to capture them in the model.
- Assumption 3: Clients want 'satisficing' solutions

  Facilitated modeling assumes that decision makers are willing to sacrifice rigorous optimality in exchange for a sound approach.

- Assumption 4: Participation in the modeling increases commitment for implementation

  Facilitated modeling posits that active involvement of key stakeholders in the decision-modeling process enhances their sense of confidence and ownership towards the developed decision model. Consequently, this emotional commitment increases the likelihood of implementing the recommended solutions.

The skills of the researcher as a facilitator play an important role in the success of facilitated decision modeling. (Ackermann, 1996) These skills include:

- Supporting model development using a chosen technique.
- Managing group dynamics and power shifts, which involves supporting divergent thinking, actively listening (paraphrasing, mirroring, linking, and refining the participants' ideas), and helping the group to reach closure.
- Creating a safe environment that encourages empathy, tolerance, suspended judgement, and the expression of emotions.
- Handling process issues, such as monitoring timing, tracking various discussion themes, ensuring balanced participation from all group members, and adapting quickly to changing circumstances.

- Flexibly transitioning between different stages of model development to meet the group's needs.

Moreover, regarding the use of group decision-support technologies, McGoff and Ambrose (1991) underline that although the technology has advanced to the point of being user-friendly for almost everyone, the quality of the group session is primarily determined by the facilitator.

Typically, within an organization, decision makers share a significant level of cultural, organizational, and social commonality among them (Eden et al., 1981). Therefore, the communication and negotiation of shared and idiosyncratic understandings reflects intersubjectivity. Consequently, decision making is dominated by the intricate social relationships among the members of the decision making group.

Decision Modeling in Organizations

When conducting research on decision modeling in organizations, a good starting point is the framework developed by Anthony (1965) that distinguishes between planning and control processes, i.e. strategic planning, management control, and operational control. Strategic planning involves determining the objectives of the organization, identifying changes in these objectives, identifying the resources required to achieve these objectives, and establishing policies to guide the nature, acquisition, and utilization of the necessary resources. Management control ensures the acquisition of resources and the effective and efficient utilization of these resources to achieve the organizational objectives. Operational control focuses on the effective and efficient execution of the tasks specified by the management. The significant distinctions between strategic planning and management control are summarized in Table 1.2, while the significant distinctions between management control and operational control are summarized in Tale 1.3.

Table 1.2 Summary of the significant distinctions between strategic planning and management control (source: Anthony, 1965: 67)

Characteristic	Strategic planning	Management control
Focus of plans	On one aspect at the time	On whole organization
Complexities	Many variables	Less complex
Degree of structure	Unstructured and irregular; each problem different	Rhythmic; prescribed procedures
Nature of information	Tailor maid for the problem; more external and predictive; less accurate	Integrated; more internal and historical; more accurate
Communication of information	Relatively simple	Relatively difficult
Purpose of estimates	Show expected results	Lead to desired results
Persons primary involved	Staff and top management	Line and top management
Number of persons involved	Small	Large
Mental activity	Creative; analytical	Administrative; persuasive
Source discipline	Economics	Social psychology
Planning and control	Planning dominant, but some control	Emphasis on both planning and control
Time horizon	Tends to be long	Tends to be short
End result	Policies and precedents	Action within policies and precedents
Appraisal of the job done	Extremely difficult	Much less difficult

Table 1.3 Summary of the significant distinctions between management control and operational control (source: Anthony, 1965: 93)

Characteristic	Management control	Operational control
Focus of activity	Whole operation	Single task or transaction
Judgement	Relatively much; subjective decisions	Relatively little; reliance on rules
Nature of structure	Psychological	Rational
Nature of information	Integrated; financial data throughout; approximations acceptable; future and historical	Tailor-made to the operation; often non-financial; precise; often in real time
Persons primarily involved	Management	Supervisors (or none)
Mental activity	Administrative; persuasive	Follow directions (or none)
Source discipline	Social psychology	Economics; physical sciences
Time horizon	Weeks, months, years	Day-to-day
Type of costs	Managed	Engineered

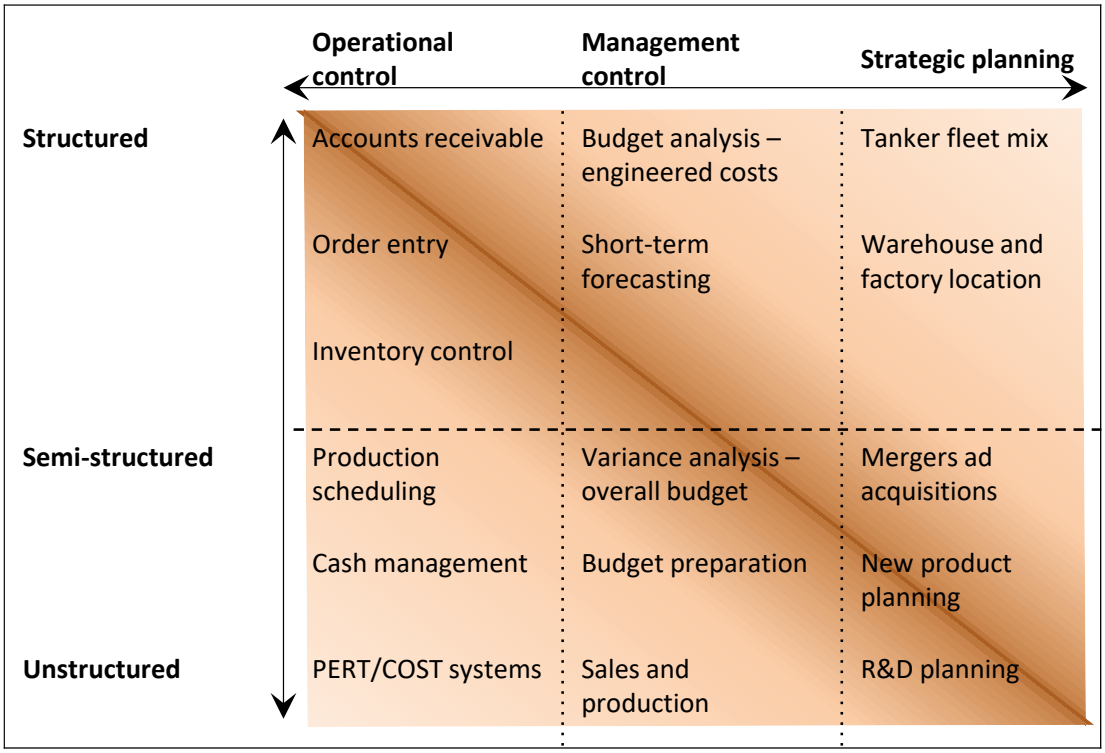
Although the boundaries between these aforementioned categories may not always be clear, decision making within each category involves different activities. The information requirements of these categories vary due to the distinct nature of their activities. The difference in information requirements goes beyond simple aggregation and is rooted in the fundamental disparities in the type of information needed for each category. The characteristics of information for each decision category are summarized in Table 1.4.

Table 1.4 Summary of the characteristics of information for each decision category (source: Gorry and Morton, 1971: 51)

Characteristics of information	Operational control	Management control	Strategic planning
Source	Largely internal	→	External
Scope	Well defined, narrow	→	Very wide
Level of aggregation	Detailed	→	Aggregated
Time horizon	Historical	→	Future
Currency	Highly current	→	Quite old
Required accuracy	High	→	Low
Frequency of use	Very frequent	→	Infrequent

Focusing more specifically on the complexity of the decision-making process, Mintzberg et al. (1976) differentiate between structured and unstructured decision processes. Structured decision processes are those that the organization has encountered before, and for which predetermined responses have been established. Conversely, unstructured decision processes are those that have not been encountered in the same form, and for which the organization does not have a predetermined and explicit set of ordered responses. Taking into account the complexity of the decision-making process and the aforementioned decision categories, Gorry and Morton (1971) provide several examples for decision making activities, as shown in Table 1.5.

Table 1.5 Examples for decision making activities (source: Gorry and Morton, 1971: 53)



Although decision making activities can be found in all six cells of the model, they tend to cluster along the diagonal (e.g. Silver, 1991). Most operational control decisions are structured, whereas most strategic planning decisions are unstructured. Moreover, Simon (1977) distinguishes between programmed and non-programmed decisions. Programmed decisions are structured, repetitive, and routine to the extent that procedures can be developed for them. Conversely, non-programmed decisions are unstructured, novel, and often have long term consequences. There is no one-size-fits-all method for handling non-programmed decisions because they have not arisen before, their precise nature and structure are elusive or complex, or they are so significant that they require customized treatment. These differences emphasize the importance of developing diverse decision-support technologies.

Delineating Strategic Decisions from Strategy Making

In a problem space defined by two dimensions, i.e. content complexity and process management complexity (Szendrey, 2022), business decision problems can be classified as depicted in Figure 1.1.

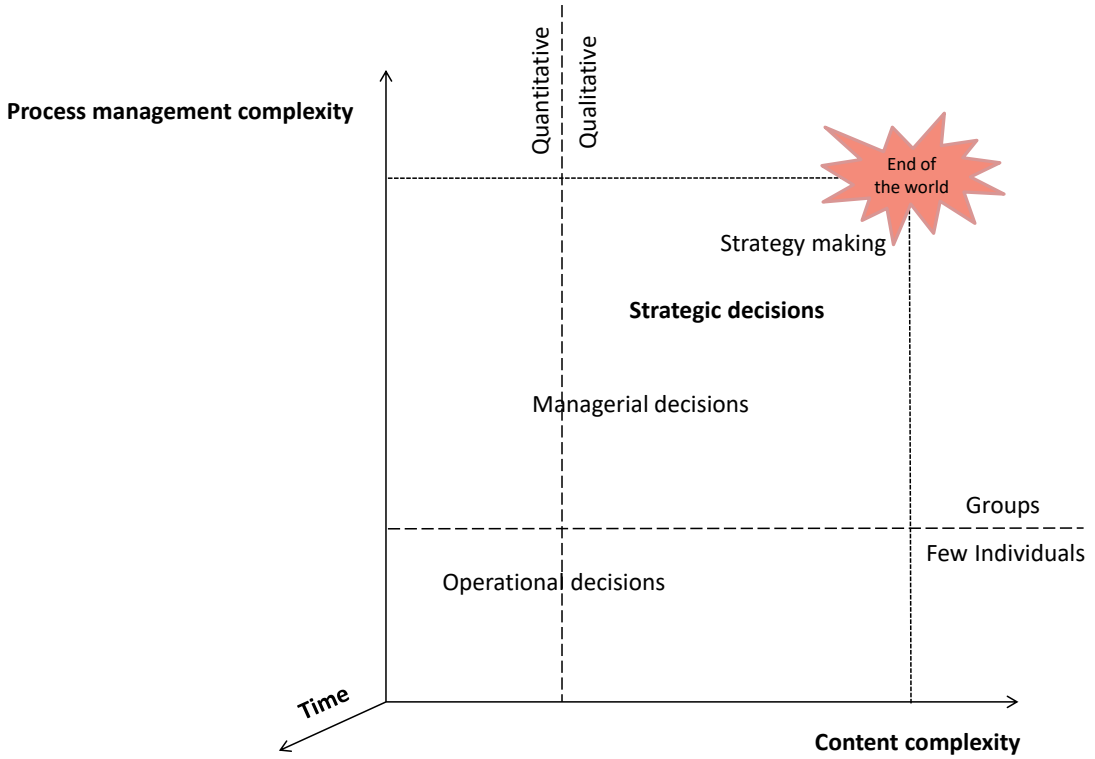


Figure 1.1 Types of decision problems in organizations

The managerial and operational decision levels align with the management and operational control discussed earlier. Managerial decisions encompass decisions regarding the acquisition of resources and the effective and efficient utilization of these resources to fulfil the overall organizational strategy. While, operational decisions involve decisions concerning the effective and efficient execution of tasks specified by management. Managerial decisions exhibit higher levels of content and process management complexity compared to operational decisions. Furthermore, a notable distinction is that managerial decisions primarily focus on people, whereas operational decisions typically revolve around tasks.

Strategic level decisions, in general, focus on achieving desired outcomes by utilizing the organization‘s available resources, considering the conditions of the business environment, and aiming to attain and sustain a competitive advantage over competitors. However, rather than considering strategic level decisions as a single category, I propose dividing them into two distinct levels, i.e. strategy making and strategic decisions.

By strategy making, I mean the process of identifying strategic goals and providing a high-level, albeit fuzzy, description of the approaches to achieve these goals. It does not

deal with specific problems but rather focuses on the 'big picture' of what the organization is all about, its role in the business context, its future direction, and how it ensures its survival. The outcome of the process is the formulation of the overall organizational strategy. Consequently, strategy making exhibits the highest levels of content complexity and process management complexity compared to the other organizational decision levels.

By strategic decisions, I am referring to 'big decisions' that carry high stakes, involve significant resource implications, lead to long-term consequences, and have the potential to establish precedents or result in irreparable mistakes. While these decisions address issues with strategic implications, they do not directly alter the 'big picture' of the organization. Nevertheless, they should be aligned with the overall organizational strategy. Consequently, the content complexity of strategic decisions is somewhat lower compared to the level of decisions involved in strategy making. Additionally, reaching an agreement among the decision makers is expected to be slightly easier.

It is also important to delineate strategic decisions from managerial decisions. Strategic decisions exhibit higher levels of content complexity compared to managerial decisions. For instance, this implies that decision makers encounter difficulties in quantifying weights and probabilities, as well as establishing preferences for decision criteria. Strategic decisions also entail higher levels of process management complexity compared to managerial decisions. For instance, while managerial decisions primarily focus on managing people (and other resources), the manager remains the dominant figure in the decision-making process. Conversely, strategic decisions involve a group of decision makers who are typically pulled from different hierarchical levels within the organization and/or from different functional areas. As a result, negotiation plays a dominant role in the decision-making process for strategic decisions.

IN CONCLUSION, strategic decision making typically involves dealing with ill-structured, knowledge-rich, non-quantitative, and ambiguous problems that require the simultaneous handling of a large amount of knowledge from diverse areas of expertise. These decisions, given their complexity, demand significant time and deep consideration. Furthermore, strategic decisions usually involve widely disparate interest groups with

multiple and potentially conflicting goals and priorities. Therefore, participants who are committed to thoroughly analyzing a difficult decision situation must invest time and effort in developing a shared understanding of the situation. However, since strategic decisions are aligned with the overall organizational strategy, some of the ambiguity is clarified. Consequently, decision support technology that is best suited for strategic decisions requires more content structure and less facilitation, in comparison to the technology needed for strategy making. Therefore, strategic decisions and strategy making require different decision-support technologies.

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