

: *How does planning differ from decision-making?*

This frequently asked question seems straight forward and easy to answer, but it is one that I have grappled with for many years. Discriminating decision-making from planning can potentially assist in the design and implementation of Decision Support Systems. It seems useful to ask “Are the two concepts synonyms, or highly interrelated concepts or superordinate/subordinate concepts? Does planning involve decision-making? Does decision-making involve planning? Are both concepts part of a broader conceptual process called problem solving?”

This Ask Dan! summarizes some conclusions that I have reached over the past 30 years, some thoughts of others and more importantly it provides a departure point for designers of computerized DSS who need to grapple with the intended purpose of the systems they want to build.

At DSSResources.COM Decision Support Systems are defined as a class of computerized information systems that support decision-making activities. So decision-making is a central concept in building and studying DSS. The first book about decision-making that I recall reading was by Frank Harrison shortly after it was published in 1975. Harrison's book “The Managerial Decision-Making Process” still resides in my library. At the time, the book cost me USD \$11.95 for a course that I was taking from Prof. Gerald Rose at the University of Iowa. Jerry was my first mentor in the intersecting realm of computers and decision-making. Harrison reviews various definitions of the term decision-making. Reviewing the book today, I am impressed with the broad multi-disciplinary perspective that Harrison used to try to frame the complex process of decision-making. In subsequent years I've quickly scanned later editions, but his perspective seems to have remained fixed.

In his overview chapter, Harrison quotes from a book co-authored by two of my professors at the University of Wisconsin-Madison, Andre Delbecq and Larry Cummings. That book “Organizational Decision Making” by Shull, Delbecq and Cummings (1970) has also had a major impact on my thinking. A quick scan of the indexes of both Harrison and Shull et al. shows however a major disconnect in resolving this Ask Dan! question. Neither book includes planning as a topic or key term in the index. Planning seems to have been excluded from the scope of decision making in the 1970s. The logic and structure of Shull et al. is credited in the preface as owing much to both Herbert Simon and Victor Thompson. Reading both Simon and Thompson is important in gaining a behavioral and a more macro organizational perspective on decision making, but again neither author resolves the current question.

My first exposure to an academic perspective on planning came from George Strother at UW-Madison. George was a retired Navy officer and he approached business planning and strategy from a military perspective and he conceptualized planning as “anticipatory decision-making”. At Wisconsin in the late 1970's, George Huber introduced me to another variant perspective. For a year, I worked as Huber's graduate assistant helping with his book (1980) “Managerial Decision Making”. Huber took much more of a decision analytical and group process perspective on decision making. That research experience only emphasized for me the conceptual limitations imposed on decision-making and planning research. In retrospect, the compartments identified by Harrison stemming from psychological, sociological and quantitative decision making research have not been integrated, resolved or completely understood. From my vantage point and review of the literature, a conceptual “black hole” remains. Decision making attracts our attention, but we can not seem to escape with a sense of understanding or even satiation.

Intellectually, the late Herbert Simon has probably had more direct and indirect impact upon my

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thinking about decision making and decision support than has any one person, but his 1960 definition of decision making is too narrow a conceptualization for building Decision Support Systems. Simon wrote "Decision making comprises three principal phases: finding occasions for making a decision; finding possible courses of actions; and choosing among courses of action (p. 1)." Some authors expand or reinterpret Simon's concept to include implementation as part of decision making, but that is an inadequate reconceptualization. Decision making or decision-making is a much more complex concept and it subsumes planning. Planning is "anticipatory decision-making". Plans are preliminary decisions that may be adjusted and changed by circumstances before an action is actually executed. A need for action termed a contingency is anticipated and various courses of action are then evaluated prior to the time when a final commitment to act must be made.

What differs in action-oriented decision making and in planning situations? One factor that seems salient is the time pressure to act. In a planning situation decision making proceeds without extreme time pressure and then on a continuum time pressure increases as crisis decision making is triggered. Planning assumes a decision maker has anticipated a relevant contingency. Action-oriented decision-making occurs in the context of a more pressing need for a decision. Also, the potential impact on future behavior of the relevant players differs, plans and anticipatory decision making can change emergent behavior even if the plan is not eventually enacted. Action-oriented decision-making may actually often be reactionary and because action closely follows decision, the time for reflection is limited.

Action-oriented decision-making is about action in the "here and now", the present, and planning decision making is about anticipated action in the future. Action-oriented decision making often focuses on evaluating and approving a "single" course of action that may extend during implementation over a significant period of time. Then incremental adjustments in a decision may occur during implementation.

Anticipatory decision making, a.k.a. planning, often focuses on designing and evaluating a set or sequence of actions that may be implemented over a period of time at some point in the future either in response to a specific contingency or as part of a broader intended strategy.

Both planning and decision making can be conceptualized as skills for individuals and as processes completed by a single individual, a group, an organization, or by a collection of stakeholders. Some authors use planning and decision making as synonyms; some authors emphasize procedural and quantitative approaches when defining decision making; other authors emphasize behavioral and process elements of an ambiguous "decision making process". The two concepts are highly interrelated and DSS researchers can use decision making as an umbrella term. I'll reserve a discussion of problem solving to another Ask Dan! column.

So ... a planning support system is a DSS. Planning models can be included in model-driven DSS. DSS can assist with a wide variety of planning tasks. All five categories of DSS are relevant for assisting with planning tasks and anticipatory decision making. DSS can support real-time, action-oriented decision making and DSS can assist in anticipatory contingency-oriented decision making.

According to Shull, Delbecq and Cummings (1970), "Man's life is an ongoing stream of decisions, a continuum of choice-making imperatives. ... A significant part of man's life reflects the decision process -- even some habitual behavior can be viewed as automatic responses to choices

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previously made. For this reason alone, decision making merits study and evaluation (pps. 3-4).”
Thanks Andre and Larry.

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