



A Question of Timing: The Impact of Information Acquisition on Group Decision Making

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ABSTRACT

Information acquisition and its use frequently are considered critical to the decision-making process, yet related research, especially about the timing of information acquisition, is limited. Our research explores the impact of information acquisition on perceived decision quality and on the time required to reach a decision on a fuzzy task. We found that more information was accessed from a Web-based system in the first part of the group decision-making process, when the decision environment was searched and possible courses of action were analyzed. We also found that the proportion of information accessed in the first part of the meeting was related significantly to the time required to make the decision. More specifically, when most information was accessed in the first part of the decision-making session, the relationship between decision time and amount of information accessed in the early part of the meeting was positive and linear. However, a curvilinear relationship was found between decision time and amount of information accessed in the latter part of the decision-making session. Unlike the findings of a previous study, this earlier access of information is not associated with improved perceived decision quality.

Keywords: decision quality; decision time; group support systems; information acquisition in decision making; laboratory experiment

INTRODUCTION

As organizations rely increasingly on groups, it is not surprising that managers are more concerned than ever with improving the quality of group decisions and the time required to make them. To this end, they would

like to improve the decision-making process. A possible area for improvement in the decision-making process is information acquisition, since better decisions can be made when based on higher quality information.

While information acquisition and use seem critical to the decision-making pro-

cess (Janis, 1989), related research, especially about the timing of information acquisition, is limited. In the popular linear (rational) model of decision making, information acquisition is greatest in the early stages of the process in order to define the problem correctly, focus on relevant issues, search for a good solution, and develop or explore alternatives that otherwise might not be considered. Acquisition of critical information early in the decision-making process streamlines the process by reducing or eliminating unnecessary time spent in analyzing inappropriate solutions. However, in actuality, it may be difficult to acquire information in a prescribed sequence or to process it when it is acquired. Decision makers may be plagued by information overload.

Saunders and Jones (1990) proposed a model that synthesizes the decision-making literature and explains the timing of information access during the decision-making process. Their model has three major components: decisional, information acquisition, and contextual. The decisional component focuses on decision processes. The information acquisition component focuses on source and medium and their links to decision-making phases and routines. The contextual component considers how contextual elements, such as task type, decision arrival time, and time pressures, affect source and media selection.

In this research, the Saunders and Jones (1990) model serves as the theoretical basis for exploring how the timing of information acquisition influences group decision-making performance in complex tasks. In particular, we seek to answer two questions: (1) How do group decision makers engaged in fuzzy tasks acquire information over time? and (2) How does infor-

mation acquired early in the decision-making process impact decision effectiveness (quality) and efficiency (time to make the decision)?

EXPLORING INFORMATION ACQUISITION

Decisional Component

A popular and frequently cited model of the decision-making process is Simon's (1965) three-stage model of intelligence, design, and choice. In Simon's linear model, information is accessed primarily at the first stage, when the problem is studied and identified. Both Simon (1965) and Janis (1989) imply that decision makers begin the decision-making process with a search for information related to the problem at hand. Janis further concludes from anecdotal evidence that decision-making groups have a tendency to accept only information that supports their preferred positions. Information that fails to support the solution preferred by the majority of group members is discarded or refuted. This indicates that decision-making groups examine and assimilate relevant information early in the decision-making process before forming a strong preference for a solution.

At the other end of the spectrum from Simon is a decision-making model that is based on organized anarchy — the garbage can model (Cohen, March, & Olsen, 1972; Cyert & March, 1963; Olsen, 1976). The garbage can model focuses on decision making as a social-interaction process rather than as a sequential series of decision-making activities. Decision making is characterized by an element of chance. In this model, information may be acquired at any time throughout the decision-making process.

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