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Individual Cognition in Group Decision Making: What Were They Thinking?

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Research Framework

Individuals seldom have access to all relevant information, so when truly important decisions have to be made, a group usually is formed to make the decision or to advise the individual who must make it (Hackman and Kaplan, 1974). However, group decision making is often flawed. Even when groups do exchange key information, participants often ignore it and rely instead on their pre-discussion preferences (Dennis, 1996; Dennis, Hilmer, and Taylor, 1997-98; Gigone and Hastie, 1993). Simply put, individual cognition often fails in decision making groups. By focusing on the fundamental factors affecting individual cognition, we can develop new processes to increase cognition, leading to better decisions.

The goal of this study is to probe more deeply into reasons for the failure of individual cognition in decision making groups using groupware and to develop a set of techniques to overcome them. There are many potential causes for the lack of cognition. One possibility is that individuals do not attend to information they receive. Other possibilities include that information integration may be impaired by a lack of cognitive resources, a lack of credibility in the information received from other group members, or a failure to apply the proper criteria. Therefore, the research questions are:

- *Does more attention to information improve decision quality in group decision making?*
- *Does more integration of information improve decision quality in group decision making?*

Research Methodology

The use of groupware opens a new possibility: group simulators. A group simulator is a software tool that looks and acts like regular groupware. Participants type comments into the system, but instead of exchanging those comments with other participants, the simulator presents participants with comments that are drawn from a script written by the experimenter. Simulators enable researchers to study the effects of different experimental manipulations on individual group members. Simulators also increase experimental control by enabling the researcher to design a very specific and precise experimental environment in which to test hypotheses.

Subjects and Treatments. Subjects will be business students drawn from large core courses who will receive course credit for participating. Subjects will be randomly assigned into one of three treatments to uncover which theoretical factor (attention or integration) has the most significant impact on information processing.

The first treatment (baseline) will correspond to the manner in which groupware has been used in prior research. Participants will interact with other “group members” via a group simulator. No specific process designed to improve information processing will be imposed on the interaction.

The second treatment (high-attention) will be designed to increase participants’ attention to the information, without assisting them to integrate the information. Participants will interact as in the baseline condition, but will be informed that they will be required to perform a recall test at the end of the experimental session (Hamilton, Katz, and Leirer, 1980; Hastie, 1984).

The third treatment (high-integration) will be designed to increase both attention to and integration of the information. This treatment will require participants to sort each comment they receive as “Important” or “Not Important.” Sorting the information will require participants to attend to all incoming information (increasing attention) and to make explicit judgments about the importance of the information to the task (increasing integration). I anticipate that the ability to review a short list of “Important” information may help in the integration of information by filtering out unimportant information and enabling the participants to focus on the information they believe to be important (Streufert and Swezey, 1986).

Task. The task will be the student admission task that has been extensively pilot tested and used in several prior studies (e.g., Dennis, 1996; Dennis et al., 1997-98). This task asks subjects to select one student from a set of four fictitious students for admission to the university.

This task will be designed so that subjects believe themselves to be members of a seven-person group in which four other members favor one (sub-optimal) alternative and two other members favor another (optimal) alternative. Subjects will receive pre-discussion information causing them to prefer the same sub-optimal alternative as the majority in the simulated group.

Limitations

As with many laboratory experiments, there is the limitation of using students instead of the actual decision makers for the task. The subjects might be unfamiliar with the task, although the task has been explicitly chosen (and used in previous studies) because it is believed that subjects will be familiar with the items.

References

References available upon request from author (khilmer@arches.uga.edu) or at www.cba.uga.edu/~khilmer/ais98.htm.