Knowledge, Dissent, and Influence Within a Heterogeneous Jury

Heterogeneity in groups has been shown to have significant benefits for group deliberation and problem-solving. Hoffman and Maier (1961) found that groups that were heterogeneous in personality were significantly more likely to develop strong solutions in role-playing tasks. In their meta-analysis of group problem-solving experiments, comparing homogeneity and heterogeneity of gender, attitude, ability, and personality, Bowers et al. (2000) found that heterogeneous groups perform significantly better on difficult tasks, like business scenarios, than homogeneous groups. According to Sommers (2006), racial diversity also plays a role in improving group decision making; it may lead to increased thoroughness, accuracy, and openness among juries. Pelled et al. (1999) also found that team diversity leads to task conflict (i.e., disagreements about task issues), which improves task performance, including creativity and problem-solving.

Another form of conflict in a group task setting is dissent, which is intrinsic to thorough group decision-making. Anderson (2006) argues that coercing dissenters to abandon their opinions is a danger to knowledge and innovation. According to De Dreu and West (2001), high minority dissent within a team is associated with innovation, but only when team members' participation is also high.

Given that the empirical literature on diversity and dissent in juries and other decision-making groups suggests that diversity between members leads to better decision-making, this year's Science Court intends to select a demographically heterogenous jury, encourage the jurors to challenge each other's opinions civilly, and foster high levels of participation from all jurors.

Science Court is an honors seminar at the University of Minnesota, wherein the students choose a societally relevant issue, research the scientific facts, and present legal arguments for

implementing two solutions to the issue in a trial format before a judge.[1] The goal of the course is educating the public and indirectly affecting future policy decisions. In this year's case, the chosen social issue is political and racial polarization in the United States. The *diversity trumps ability theorem* posits that a diverse group of lay persons can more effectively develop solutions to difficult problems than a group of experts, and this theorem has been empirically supported (Anderson, 2006). Therefore, a jury, selected from the broader community, will decide which presented solution is most viable. Building upon prior literature on the roles of heterogeneity and dissent in problem solving, this proposal's correlational study will examine the deliberation process of the jury with the goal of determining whether dissent from the group affects jurors' perceived level of influence on the final decision or perceived satisfaction with the final decision.

The results of this correlational study will be added to the Science Court instructors' forthcoming peer-reviewed article about the process of Science Court, which will help lead to the improvement of the curriculum and the dissemination of the framework of the course to institutions across the country. This research may also provoke future research on dissent, deliberation satisfaction, and perceived influence using larger samples.

Participants: In this study, "juror" will be synonymous with "participant." Jurors will be selected from a body of individuals who express their interest in participating by filling out a pre-trial (Time 1) survey, which has already been distributed to members of the public. Prospective participants will not be selected if they demonstrate a potential conflict of interest (e.g. they are a member of a lobbying group). The jurors (n = 10-14) will be selected in an attempt to form a heterogeneous group on the basis of gender, age, race, socioeconomic status and other relevant demographics.

[1] https://scicourt.umn.edu/

Materials: The pre-trial (Time 1) survey asks respondents to identify complete demographic information as well as knowledge about the present topic. The post-trial (Time 2) survey will contain knowledge questions identical to those in the Time 1 survey, with additional questions about perceived level of dissent within the jury, perceived level of consensus within the jury (De Dreu & West, 2001), personal dissent from the group, level of participation, perceived level of personal influence on the decision, perceived deliberation process's value, and satisfaction with the jury decision (Hoffman, 1959) and deliberation process.

Procedure: After the Science Court trial, the jury will carry out the deliberation of the issue, which will be supervised by an experienced jury facilitator. The facilitator will only interject if discussion is not constructive or if jurors have questions about the process. Once the jury has made their decision, they will present it to the Science Court teams and the public. Immediately following the trial, participants will be asked to fill out the Time 2 questionnaire.

Hypotheses: First, it is predicted that jurors' knowledge of the topic will increase by participating in the Science Court trial. Second, due to the findings of De Dreu and West (2001), it is predicted that jurors who perceive higher levels of group and personal dissent will be more satisfied with the final decision. Third, it is predicted that jurors who participate regularly will be more satisfied with the deliberation process.

My role: I will have a functional role from now until the jury selection in refining the Time 1 and Time 2 questionnaires, as well as helping design a fair method for selecting a diverse jury. After the post-trial questionnaires are submitted, I will analyze the quantitative data by running three Pearson correlations to test the three hypotheses. This will allow me to identify trends pertaining to my research question, as well as others explored by the Science Court team.

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