

GROUP NORM DEVELOPMENT OVER A SERIES OF TASKS: SUPPELEMENTING TASK
INFORMATION WITH PERSONAL EXPERIENCE

by

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Abstract

This dissertation provides support for the expansion of traditional definitions of information, to include experiential forms of data (e.g., attitudes, opinions, and familiarity related to the task at hand) that have typically been treated as nonsubstantive and therefore were often been excluded from most of the previous research on group information sharing. This study also examines how to effectively intervene when groups develop norms that privilege or suppress then mentioning of certain types of information during decision-making discussions. In an experimental design, groups worked on a series of three fact similar not guilty by reason of insanity (NGRI) cases. Findings indicate that the timing of the introduction of an intervention influences its effect, and that patterns of normative information use over time are different for traditional versus more experiential types of data.

Chapter 1

Introduction

From Greece's use of Trojan horses to the NASA Challenger disaster in 1986, there are many instances throughout history where highly informed groups have made poor decisions. Less prevalent are the stories involving groups that made effective (i.e., high quality) decisions based on little information (and/or inaccurate information), though it certainly happens from time to time. Most groups fall in between these two extremes in that they will make satisficing decisions by using what they deem to be a sufficient amount of information available to them (Simon, 1955). It is commonly assumed by theorists and researchers interested in group information sharing, however, that as much as 80% of decision quality can be accounted for by how thoroughly groups consider information that is relevant to the task (e.g., Gouran, Brown, & Henry, 1978). More specifically, the process of information sharing and its consequences for group decision-making are heavily influenced by two factors: (a) norms related to what information is perceived as requisite for making decisions, and (b) pre-existing attitudes and experiences that, if relevant to the task, influence how group members process, store, and share information during decision-making discussions.

This dissertation focuses on groups that convene to work on a series of similar or related tasks (e.g., a promotion and tenure committee, a grand jury, or an organization's board of directors), where members often establish a set of expectations and norms for working through problems and interacting with each other. To simulate a similar environment in a laboratory setting, groups in this dissertation made decisions in three fact-similar capital cases about whether to grant not guilty by reason of insanity (NGRI), based on collective assessments of the mental state of defendants at the time their crimes were committed (see Chapter 3). My

overarching goal is to gain a better understand of how groups share information across a series of decision-making tasks. In this chapter, I discuss major assumptions regarding the process of group information sharing to provide a context for the particular approach taken in this dissertation (e.g., how I define information, why I focus on attitudes and norms). I close by providing an outline of the chapters that follow.

Scope (Boundary) Conditions Regarding Information Processing in Groups

Before providing a detailed overview of this dissertation, it is necessary to address four assumptions about small group communication that inform the present approach to examining information sharing in groups. The four assumptions are that (1) the quality of decision making is directly related to groups' information use, (2) interaction is the vehicle by which groups share information and make decisions, (3) disagreement is central to group processes and outcomes, and (4) task characteristics influence information sharing and decision-making processes in groups.

Information Use During Group Decision Making

The first assumption is that *information sharing is central to the quality of group decision-making* (e.g., Orlitzky & Hirokawa, 2001). By sharing information, groups are able to compile a more complete profile of the problem and potential solutions. However, a robust finding is that decision-making groups generally fail to utilize all or even most of the task-relevant information at their disposal (Stasser & Titus, 2003). The fact that groups are not very effective at talking about and utilizing task-related information is first and foremost a communication problem. A more global concern is whether the prevailing definitions of information sufficiently characterize the evidence and arguments groups use to make decisions.

The claim that groups are not effective at discussing task-related information is tied to how researchers define and operationalize information. In most information sharing studies researchers provide enough information about the task and the various solution options that are requisite for groups to make a decision. Take for example a candidate-hiring task, where groups take on the role of a hiring committee (e.g., Larson, Foster-Fishman & Keys, 1994). Groups are typically instructed to choose a candidate based on a set of curricula vitae (CVs) that have been provided to them at the outset of the task. After groups have discussed and made a decision about whom to hire, researchers compare information mentioned during discussion with the information provided in the CVs at the outset of the task. It is often the case that groups mention far fewer pieces of information than they were given, which generally results in poor decision making (e.g., Stasser & Titus, 2003). However, these types of informational contributions represent only a small fraction of what group members say during decision-making discussions (e.g., Bonito, 2004; Bonito, DeCamp, Coffman, & Fleming, 2006). The remaining contributions, described using the catchall phrase “nonsubstantive” are not evaluated for their role in the decision-making process (e.g., Atkinson & Heritage, 1984; Sudnow, 1972). In fact, many nonsubstantive contributions are potentially relevant for the task by addressing procedural and relational concerns within the group. Other comments made during discussion draw on types of information that go beyond what was provided to participants by researchers at the outset of a task or discussion.

Members contribute to discussion in many ways that are informative but that are not adequately captured by traditional approaches for studying group information sharing. Take for example a hiring committee. Members of the committee have *common* knowledge about the task, including candidate CVs and position criteria mentioned in the announcement. These types of

data fall under what I call common forms of information, in that these items are available to and shared by all group members prior to and/or during the group discussion. However, people possess personal opinions, attitudes, and other forms of experiential knowledge that might be relevant to the task at hand (Pennington & Hastie, 1983; Shank & Abelson, 1995). For instance, one or more members of the hiring committee might be personally familiar with a particular candidate. This type of information is *emergent*, in that it is relevant to the task but falls outside of traditional definitions of information.

In this dissertation, I use “emergent information” to describe personal, experiential-based data that group members possess and that is relevant to the task. Emergent information represents knowledge stored in long-term memory that becomes active because of some stimuli, usually something said during discussion. In this sense some information “emerges” because it is relevant to the immediate group discussion and to the task in general. Once emergent information is activated, participants have access to additional data that has the potential to influence information sharing processes and decision outcomes. Emergent information can be contributed in the form of anecdotes, or more simply as attitudes and opinions that are derived from personal experience. Furthermore, emergent information that has been contributed to the group discussion has the potential to be highly persuasive because (a) people often rely on personal experience when forming attitudes or opinions, and (b) group members that contribute “new” evidence might thereafter be perceived as (relative) experts in the matter (i.e., those group members become more influential).

Conceptually, expanding traditional definitions of information to include emergent types of data provides a more specific and nuanced way to describe task-related arguments that group members use to move each other toward or away from certain decision solutions. Emergent

information, as defined here, will vary from person to person and from task to task, at least compared to common information. One of the goals of this study is to evaluate if and how emergent information is contributed to discussion in comparison to the use of common forms of information during a series of decision-making tasks.

The Role of Interaction in Group Decision Making

The second assumption listed above is that *group discussion plays an integral role in group information sharing and decision making processes*. What an individual member says and does during group discussion is in part contingent upon what other group members have said and done (Sanders, 1997); similarly, what information a group member contributes to discussion is in part contingent upon what evidence has been introduced by other members (Bonito, 2007). More broadly speaking, interaction allows for groups to contribute and consider information (Propp, 1999). Group members are assumed to be motivated and have the opportunity to contribute information to discussion that is essential for effective problem solving and decision making (Gouran, Hirokawa, Julian, & Leatham, 1993; Wittenbaum, Hollingshead, & Botero, 2004).

Groups often develop norms that suppress or privilege the mentioning of certain types of information during decision-making discussions. For example, evidence suggests that groups focus on common information because it can be substantiated by others (Stasser & Titus, 2003). Focusing on common information potentially suppresses the use of emergent information because it (emergent information) cannot be validated in the same way as common information (Wittenbaum, Hubbell, & Zuckerman, 1999). In the hiring committee example, common information based on candidates' CVs can be easily validated (group members might remember reading that same information and/or can refer back to the CVs to verify the information). It could be the case, however, that a hiring committee member knows something about a job

candidate's reputation (i.e., emergent information) that cannot possibly be validated by reference to the candidate's CV, but might have some bearing on hiring decisions if contributed to group discussion. Thus, another goal of this dissertation is to understand not only the use of emergent and common forms of information during interaction, but also the relative value placed on those types of information.

Disagreement and its Consequences for Group Processes and Outcomes

The third assumption regarding small group communication is that *disagreement is central to decision-making processes and outcomes*. Decision-making groups will typically begin discussion by assessing members' decision preferences, often in the form of a vote. Assuming no unanimity in initial preferences, groups then discuss the issue, often exchanging information that will eventually lead the group to some resolution (Boster & Mayer, 1984; McGrath, 1991; Meyers & Seibold, 1990). On the other hand, groups that reach agreement early in decision-making discussions (i.e., during an initial vote) tend to assume that their agreement implies correctness and thereafter will exchange less information and spend less time working through the task, which often reduces decision quality (e.g., Schultz-Hardt, Frey, Lughtens, & Moscovici, 2000). In fact, even the mere anticipation of agreement among group members changes whether and what information is shared during decision-making interactions (De Dreu, Nijstad, & van Knippenberg, 2008).

Although disagreement increases the *likelihood* that groups will engage in effective information sharing and decision-making processes, it does not guarantee it. Overall, groups tend to be more satisfied with and confident in decisions that were reached with little or no disagreement (Janis, 1972; Schweiger, Sandberg, & Ragan, 1986). Therefore, in this dissertation

I assess the relationship between perceived and actual agreement with confidence in and satisfaction with group decisions.

The Influence of Task Characteristics on Information Sharing

The fourth and last assumption is that *task characteristics impact group decision-making processes and outcomes*. The task characteristics relevant to the current study are *demonstrability* and *decision rule*. Demonstrability describes the extent to which a task has an objectively verifiable correct or optimal answer. Intellectual tasks, for example math-based problems, are at the high end of demonstrability, and judgmental tasks (e.g., hiring decisions) are at the low end. Correctly solving an intellectual task requires that (a) the group has sufficient information, (b) members who know the correct or best answer must be motivated and capable of persuading others on that point, and (c) members who do not know the best answer are willing and able to recognize correct solutions when presented to them (Laughlin, 1999). The objective for judgmental tasks, which are low in demonstrability, is to achieve consensus or at least agreement among a majority of group members (Laughlin, 1999). Evaluating performance for intellectual tasks is often as simple as whether the group identified the optimal decision, whereas performance on judgmental tasks requires other metrics, such as confidence in or satisfaction with the decision-making process and/or outcomes.

This dissertation uses judgmental tasks and focuses on the processes by which groups address them. Returning to the hiring committee example, the need for deliberation is reduced when it is clear that one particular candidate is superior (or inferior) to other candidates. In other cases multiple candidates seem equally qualified. In such cases deliberation, including how information is used to argue for or against particular candidates, has greater consequences for group decision-making when compared to decisions that seem like a “slam dunk.” The not guilty

by reason of insanity (NGRI) tasks used in this dissertation are judgmental (i.e., they are low in demonstrability), in that it is hard for group members to know if they are making the right decision—in addition to information about the cases, participants might use their personal opinions and judgments (i.e., emergent forms of information) in order to reach an agreement.

Decision rules describe how individual preferences, derived prior to or at the outset of discussion, are combined or aggregated into a group decision. Unanimity and majority rules are the most commonly used decision rules in both experimental and naturally occurring groups (Hare, 1976; Hastie & Kameda, 2005). Unanimity requires that all group members agree on a decision solution, meaning that a single dissenting member can prevent the adoption of a particular decision solution (e.g., trials involving a capital offense). Majority rules require that the decision solution is acceptable to more than half of the members of the group. Each decision rule has implications for group processes. Some scholars (e.g., Hastie & Kameda, 2005; Nemeth, 1977) believe that majority rules are more efficient than unanimity because majority-wins can avoid an impasse. Interestingly, relevant reviews (e.g., Kaplan & Miller, 1987) indicate that groups (other than juries) that use majority-wins will often reach similar decisions as groups employing unanimity rules. Nevertheless, unanimity increases the potential for “more” influence to take place when members initially disagree, especially for judgmental tasks that tend to be value-laden, whereas groups implementing majority rule tend to compromise less and therefore spend less time deliberating. For this reason, groups that participated in this dissertation were required to be unanimous in order for NGRI to be granted (see Chapters 4 and 5 for more).

In sum, I argue that extant definitions of information should be expanded to include both common and emergent forms of data, as the sharing and considering of both types of information have consequences for group decision making processes and outcomes. In this dissertation, I also

examine multiple indicators of “success,” in that groups that agree (i.e., they are able to come to a unanimous decision) will likely experience different levels of satisfaction with and confidence in the group decisions when compared to groups that are not able to come to unanimous decisions.

Outline of the Dissertation

The second chapter uses the structuration program of research on group decision-making and argumentation to describe how group norms develop and why certain types of interventions designed to change or alter group interaction processes are more likely to alter norms. The third chapter illustrates how attitudes and stereotypes influence group members’ use of common and emergent information during group discussion. The fourth chapter provides details about the method and measures, and the fifth chapter presents analyses and results. Chapter six includes the discussion section, as well as a brief description of limitations and possible areas of future research.

Chapter 2

The Development and Persistence of Group Norms

Groups often develop habits and routines for sharing information and making decisions fairly quickly (Gersick & Hackman, 1990). Once established, norms tend to persist across meetings and are difficult to change (e.g., Gersick & Hackman, 1990; Hackman, Rousseau, & Weiss, 1976). As mentioned in Chapter 1, it is important to understand how groups develop and implement norms for sharing information and making decisions because up to 80% of decision quality can be accounted for by how thoroughly groups consider information that is relevant to the task (Gouran, Brown, & Henry, 1978; Hirokawa & Pace, 1983; Stasser & Titus, 2003). There are a number of perspectives that shed light on the ways that groups develop and maintain norms for sharing information and making decisions. In this chapter, I use structuration theory (Poole, Seibold, & McPhee, 1985) to explain how norms emerge and influence interaction. I then review various theories of and perspectives on group development to explain the persistence of norms across tasks and meetings. Following that, I discuss how norms influence group processes and outcomes. I also identify the strategies that most effectively improve information sharing during decision-making interactions. Relevant hypotheses are presented throughout this chapter.

This dissertation examines how norms influence the types of information contributed to decision-making discussions. When groups make decisions much of the relevant task-based information considered and discussed by groups is *common* knowledge that is known by all members as part of the task (e.g., job candidate CVs are often provided to all of the members of a hiring committee prior to meeting) or that is generally known by group members (e.g., what characteristics qualify job candidates for certain positions). These types of evidence fall under traditional definitions of information; here I refer to them as common forms of data. Emergent

information refers to personal, experience-based evidence or data that is relevant to the group's task or charge. For example, a member of a faculty search committee might have met one of the candidates at a conference or has a personal relationship with a candidate's advisor. Emergent information supplements a group's common information base and has the potential to influence decision-making above and beyond available (i.e., common) information. At issue is whether and when groups contribute emergent information and the extent to which such information is valued during discussion. I address this issue by examining the development of information-sharing norms during decision-making discussions.

Structuration Theory

A structuration approach to small group communication (Poole, Seibold, & McPhee, 1985, 1996) suggests that group members use rules and resources to create and maintain systems of observable patterns of behavior. While structuration theory has been applied to many communication contexts (e.g., Kirby & Krone, 2002), I focus specifically on its application to group decision-making as presented by Poole et al. (1985). According to Poole et al. (1985), members of decision-making groups take positions regarding the task at hand and the function of group discussion is to support convergence on a group-level decision. Members bring to discussion resources and expectations about how to make decisions based on their previous knowledge and experiences. Past actions tend to be perpetuated within and across tasks and meetings and these patterns of behavior shape what group members say and do when rendering decisions. Beyond previous experiences, other structures include rules for making decisions (e.g., consensus is required), resources (e.g., information), and preferred strategies for argumentation and conflict management. Structures are a medium for interaction in that they provide decision-making guidelines that group members are able to draw upon when interacting (e.g., to make

sure that contributions are relevant to the task). As groups pool their informational resources the process of information sharing is less contingent upon individuals' possession of task related information; instead, primary focus is on groups' use of the collective knowledge that is available to them (Propp, 1999). Therefore, structures will change as a function of interaction in general and relatedly as a function of collective information processing (Propp, 1999) and preference changes (Poole et al., 1985). Arguments and information are used to move the group toward or away from certain decision solutions, which also changes the functional nature of the interaction (e.g., moving from conflict to consensus; Poole, 1981). Structures are also an outcome of interaction because group members initiate them during discussion (e.g., to call for a vote in order to move the group toward a resolution), which reinforces the use of similar behavior when making future decisions. In structuration terms, then, norms are structures that are an emergent property of groups (Wellen, Hogg, & Terry, 1998) in that rules and routines are created and sustained during interaction (Bettenhausen & Murnighan, 1985; Hackman, Brousseau, & Weiss, 1976; Poole et al., 1985), and that are primed by and prime the actions of others (Tulving & Schacter, 1990).

Norms interact with other structures structures (Poole et al., 1985). Social relationships between group members, status and power, task type, decision rules, group composition, and rules for argumentation and conflict, all interact with each other, such that various combinations of structures will differentially impact interaction. For example, group size has implications for relative sizes of majorities and minorities, which influences power structures. Structures can also exert contradictory pressures. For instance, groups might have limited time but will still want to deliberate and make the most informed decision possible (or at least discuss what they deem as necessary information for making a satisficing decision; Simons, 1955). Moreover, group

members will want to advocate for their own preferences and positions while recognizing the need to negotiate and converge on a single course of action.

The influence of different normative structures varies as a function of group discussion, as groups work through various aspects of a given task (Poole et al., 1985). For example, patterns of influence operate differently at the outset of discussion, when members are negotiating and establishing status and power, compared to behaviors later in discussion after power structures have emerged and become solidified. Norms also manifest, stabilize, and/or change not only within but also across tasks and meetings. It is important to consider, then, the role of group development with regard to the emergence and persistence of norms within and across tasks.

Group Development

There are few theories of group development, in part because it is not always clear which internal and external factors trigger change in groups (Gersick, 1988). It is generally the case that group members are better able to coordinate actions after having worked together (Moreland & Myaskovsky 2000; Levine & Moreland, 1999). However, there is no single, complete explanation for why group development varies by task, across groups, and even within and across similar groups working on identical tasks (Arrow, Poole, Henry, Wheelan, & Moreland, 2004). The few extant approaches to understanding group development typically focus on various aspects of time, or group members' acceptance of or resistance to change.

Within group contexts time is usually treated as a valuable but scarce commodity that influences how groups accomplish tasks and meet deadlines (Arrow et al., 2004; Gersick, 1988). Most studies treat the amount of time to accomplish a task or meeting time as the independent variable and groups' efficiency as the dependent variable (Arrow et al., 2004). Findings indicate that groups rarely spend time planning on how to use their time (i.e., how to effectively complete

their task) before making a decision (Hackman & Morris, 1975; Weingart, 1992). In addition, time constraints increase the likelihood that previous structures and norms will emerge and be perpetuated (Kelly & Karau, 1999), and also increases the likelihood of normative influence (i.e., that group members become preoccupied with what others think rather than focus on process; Pavitt, 2014). Conversely, groups are less likely to use heuristics (i.e., mental shortcuts) and more likely to thoroughly consider task-relevant information when given ample time to make decisions (De Dreu, 2003; Kruglanski & Freund, 1983). As a function of interaction and development, groups also experience entrainment, where the behaviors of group members become synchronized over time (Gersick & Hackman, 1990; Kelly & McGrath, 1985; McGrath, 1984). Entrainment increases the likelihood that norms will manifest and persist (Erhart & Naumann, 2004) and often results in group members adhering more closely to norms over time (Postmes, Spears, & Lea, 2000).

Regarding changes in group processes, most research focuses on alterations in group interaction or performance across a series of tasks or meetings (Arrow et al., 2004). For example, adaptive response models (Arrow, 1997) focus on stability and continuity. Stability processes maintain groups' current state or return groups to states of equilibrium after facing change or having moved to another state temporarily, which tends to reduce fluctuations in group processes and outcomes. Continuity, on the other hand, is resistance to external pressures which are imposed from entities outside of the group or internal change prompted by group members; rather than adapt, groups will continue to rely on extant norms and maintain established patterns of interaction.

The punctuated equilibrium model (Arrow, 1997; Gersick, 1988) assumes that groups tend to favor continuity, such that structures and norms tend to persist until external cues

promote *abrupt* changes to group processes immediately following some intervention. The most influential external cues are those that make the group aware of poor performance due to discrepancies between normative behavior and task demands. Take for example a hiring committee. The committee may begin a meeting by voting and selecting the most preferred candidate without fully discussing or considering the qualifications of other viable candidates. If a dean or department head asks the hiring committee about other viable candidates (i.e., the hiring committee is provided with external feedback) it should prompt the committee to more carefully consider all candidates (and their related qualifications) before making another hiring decision. The hiring committee should thereafter be more thorough in their use of information during decision-making discussions, assuming of course that they (the committee) attend to the feedback. Thus, groups will mostly engage in patterns of normative behavior that are punctuated by periods of rapid change due to external feedback. After being exposed to external feedback, groups will typically attempt to develop new norms that tend to differ from previously established norms in minor but often important ways. That said, before discussing in greater detail the ways in which interventions such as external feedback cues impact norm development, persistence, and change, it is important to first consider various properties of norms with regard to how and why norms guide and circumscribe group behavior.

Group Norms

Norms provide structure for group work. Cialdini and associates (e.g., Cialdini, Reno, & Kallgren, 1990; Cialdini & Trost, 1998) suggested that when a group member behaves consistently within and across situations, other group members will perceive those behaviors as appropriate and are thus more likely to adopt similar behaviors—a norm is formed. Similarly, Latane (1996) suggested that the more influence a group member has the more likely his or her

behavior will be used to develop new norms or will be incorporated into existing norms. For example, those who are high in interpersonal control (i.e., who desire to regulate various aspects of interaction in dyadic and/or group settings; Paulhus, 1983) are more likely to influence the development and persistence of group norms than those low in interpersonal control.

Norms can also form out of uncertainty, such that group members will rely on previous experiences when entering novel group situations (Bettenhausen & Murnighan, 1985; Erhart & Naumann, 2004; Gersick & Hackman, 1990). Evidence suggests that groups perform better when they have clear performance goals that promote a sense of collective efficacy (Bandura, 1997; Latham, Winters, & Locke, 1994). Agreement about the nature of the task and how to go about accomplishing it (i.e., shared representations of the task) also fosters a greater sense of cohesion, satisfaction, and commitment to the group (Craig & Kelly, 1999; Zaccaro, 1991). However, agreement about the task is only helpful (in terms of facilitating successful task completion) if groups have an accurate understanding of what is expected of them. One problem is groups (often incorrectly) assume that consensus (about the task or regarding decision preferences) implies correctness (Baron, Hoppe, Kao, Brunzman, Linneweh, & Rogers, 1996; Davis, 1996; Janis, 1982; Tindale & Kameda, 2000). In fact, groups that lack confidence tend to more thoroughly and critically process task-relevant information (Maheswaran & Chaiken, 1991). Furthermore, norms that promote disagreement, openness to dissent, and preference diversity typically increase the amount of information groups share and how thoroughly groups evaluate possible decision solutions, which improves group performance (Nemeth & Wachler, 1983; Postmes, Spears, & Cihangir, 2001; Teh, Baniassad, van Rooy, & Boughton, 2012).

The question is not whether group norms emerge during interaction and to what extent they persist across tasks and meetings (because they do and will), but rather under what

conditions are certain norms more or less problematic with regard to group processes and outcomes. For example, norms that suppress the contributing and consideration of emergent information can be problematic when group members possess data that could help move the group toward or away from certain decision solutions. However, norms operate implicitly in that participants have difficulty articulating exactly why certain routines are enacted, let alone how or why norms and routines were implemented in the first place (Cohen & Bacdayan, 1994; Gersick & Hackman, 1990). Without some external intervening force it is nearly impossible for groups to adapt their norms because rarely are group members able to identify and adjust behaviors that have become automatic and routinized. Interventions that target group norms must be designed with care, though, because roughly one-third of interventions tested in group contexts produce unintended, negative effects (Kluger & DeNisi, 1996).

Promoting Effective Information Sharing in Groups

There are a number of factors that researchers and practitioners need to consider when promoting information sharing processes. Choices must be made with regard to how specific (to the task) and how complex (i.e., demanding) to make the instructions provided to groups. Some argue that the most effective interventions provide specific and detailed instructions for how groups can improve decision-making processes and practices (Blickenderfer, Cannon-Bowers & Salas, 1997; Goodman, Wood, & Chen, 2011). For example, groups can follow complex instructions for engaging in highly structured interactions if given sufficient time. Because more structured interactions may seem contrived (i.e., unnatural to groups) when first implemented, it could take an entire task (or in some cases multiple tasks) before groups are able to successfully implement new procedures (Greitemeyer, Schulz-Hard, Brodbeck, & Frey, 2006; Edmonson, Bohmer, & Pisano, 2001). Other scholars (e.g., McGrath, 1991) say that groups are better able to

coordinate and complete tasks when members are able to engage in (relatively) unstructured interactions. It follows that simpler interventions will be easier for groups to adopt, especially if the instructions promote behaviors that are less invasive (i.e., that require fewer changes to be made) to information sharing and decision processes that develop naturally within groups.

Feedback used to improve information sharing can be structured along three dimensions—the type of cue used in the intervention, the valence of the feedback given to groups, and the timing of the intervention. Interventions might include internal or external cues. Internal cues are comments and/or suggestions made by members of the group. However, rarely are groups able to use internal cues to identify and correct problematic behaviors and norms. Instead, structures and norms tend to persist until *external* cues (from outside of the group) promote (often abrupt) changes to group processes (Arrow, 1997; Gersick, 1988). External cues that increase group members' awareness of (real or perceived) discrepancies between normative behavior and task demands potentially compel groups to re-adjust their norms for sharing information and making decisions.

Second, the tone of the intervention can be positively or negatively valenced. Positive feedback typically encourages groups to either maintain their current behaviors or to make slight modification to existing information sharing or decision making practices. However, groups that are given positive feedback that requires only small adjustments to existing practices rarely change the ways that they share information (Kluger & DeNisi, 1996). Negative feedback encourages groups to stop engaging in problematic behaviors. Groups tend to respond favorably (i.e., will make efforts to improve the ways that they share information) when negative feedback allows for poor performance to be attributed to procedural problems, rather than (a) factors exogenous to the group, (b) single group members, and/or (c) perceptions that the current

combination of group members is unable to work together effectively (Hackman, 1978; Tesluck & Mathieu, 1999, but see Gersick & Hackman, 1990). Negative feedback, if framed correctly, allows groups to reflect on and learn from their previous mistakes (Schippers, West, & Dawson, 2015; Vashki, Erez, Bamberger, & Weiss-Meilik, 2007), but this approach is only effective insofar as group members feel capable of enacting the changes necessary to improve performance (Bazarova & Hancock, 2012; LePine, Piccolo, Jackson, Mathieu, & Saul, 2008).

Third, an intervention may be timed so that group members receive feedback prior to any interaction or following decision-making discussions or meetings. Priming generally occurs when groups engage in preliminary activities before working on important or more primary tasks (e.g., Gersick, 1988; Postmes et al., 2001). Integration includes the cue (i.e., the feedback intervention) with the task instructions that are provided prior to any group interaction (e.g., Henry, 1995). The most common type of feedback in naturally occurring settings is given to groups after they have completed a task or meeting (Gersick & Hackman, 1990; Teh et al., 2012). However, it generally makes little sense to give post-discussion feedback to temporary groups that will not be meeting or working together in the future.

In sum, evidence suggests that interventions will be most effective when instructions are simple and are presented as external feedback that is relatively neutral with regard to valence. Thus, the intervention used in this study instructed groups to take more time to work through the task and to discuss both the details about the case (i.e., common information) as well as their personal experiences with and knowledge about not guilty by reason of insanity (NGRI) or mental illness in general (i.e., to discuss common and emergent information; see Chapter 4).

It is important for groups to consider emergent information because doing so allows members to use experiential data when working through complex problems and increases the amount of evidence groups use to make decisions. From this line of reasoning, I expect that:

H1: Groups that receive the intervention perceive that they mention more emergent information during subsequent discussions than groups that do not receive the intervention.

No study to date has considered whether the timing of an intervention might impact its influence on group processes. Groups will be most responsive to interventions, and are more capable of change, when information-sharing norms are still in the process of being formed. The intervention is less likely to be successful if groups have developed and implemented information sharing and decision making norms over multiple meetings (Gersick & Hackman, 1990). To test this claim I manipulated the timing of the intervention so that some groups received it after the first discussion, others received the intervention after the second discussion, and others were in the control condition. I expect that:

H2: Groups that receive the intervention earlier within a series of tasks perceive that they contribute more emergent information during subsequent discussion than groups that receive the intervention later within a series of tasks.

The purpose of the intervention was to increase the amount of information groups evaluate during decision making discussions; specifically, the intervention was designed to activate and promote the use of emergent information without suppressing the use of common information (e.g., Bonito, 2007). Therefore, I expect that:

H3: Groups that receive the intervention perceive that they mention more common information during subsequent discussions than groups that do not receive the intervention.

H4: Groups that receive the intervention earlier within a series of tasks perceive that they contribute more common information during subsequent discussion than groups that receive the intervention later within a series of tasks.

Members of newly formed groups tend to be uncertain about whether and how the group will function (e.g., the amount of time it will take the group to come to an agreement and make decisions, whether other group members will hold similar attitudes and/or decision preferences). As group members become familiar with one another, they develop and maintain norms that guide and to a certain extent standardize interactions that follow, which increases the likelihood that perceptions regarding the functioning of the group will converge (e.g., Bettenhausen & Murnighan, 1985; Staggs, Ervin, & Bonito, 2015). Assessments of the group will sometimes converge within a single task, but it is more often the case that group-level behavior manifests (i.e., converges) as group members work together across a series of meetings and/or tasks (once group norms have been implemented and repeated on multiple occasions). For example, expectations regarding anticipated agreement or discussion time should become similar and more accurate as a function of having worked together on previous tasks. Furthermore, group members' confidence in and satisfaction with group discussion should converge as group member become familiar with one another and uncertainty about the work to be done by the group has been reduced. In this sense, group norms increase the likelihood that expectations for and assessments of group discussion will converge. From this line of reasoning, I expect that:

H5: Group members' expectations about working together converge over time.

H6: Group members' confidence in and satisfaction with group decisions will converge over time.

Conclusion

While not every task lends itself to the use of emergent information, the next chapter applies what is known about information sharing to legal and health contexts. I argue that some people will have direct, personal experiences with mental illness and crime, which may differentially influence their attitudes and opinions about the use of the insanity defense when compared to those who lack those experiences (i.e., they might possess different types of emergent information). Therefore, it is important to understand how attitudes and personal experiences influence norms for how groups might talk about mental illness and crime during NGRI tasks.

Chapter 3

Group Decision Making and the Insanity Defense

Groups often draw on different types of information resources to solve problems and make decisions. One type of information is “common,” and is usually made available to the group prior to and/or during discussion. For example, juries involved in criminal cases are provided with evidence and testimony. The second type of information is “emergent,” which represents data regarding participants’ experiences with and attitudes about task-relevant features and attributes. For example, jurors might differ in their attitudes about serving on juries, respect for the criminal justice system, and knowledge how forensic evidence is processed.

This dissertation examines perceived use of common and emergent information during group discussions regarding whether to recommend not guilty by reason of insanity (NGRI) on three capital cases. Here, common information is characterized as evidence provided by the court about the cases. The use of personal experiences with or attitudes about mental illness and violent crime represent emergent information. Mental illness touches most people in some way (National Institute of Mental Illness, 2016) and it is reasonable to assume that the distribution of experiences and perceptions of mental illness within groups influence deliberation and decision making on NGRI cases. In this chapter, I integrate research on mental health, persuasion, social influence, and group information sharing to argue that prior experience with mental illness and attitudes about criminal insanity influence how participants contribute information to group discussion.

The Stigma of Mental Illness and the NGRI Defense

The term “mental illness” tends to trigger stereotypic beliefs about its causes and symptoms (Scheff, 1966). Stereotypes, which are generalizations about groups, are not inherently malicious or negative; stereotypes *can* become problematic when people are in agreement about negative and/or incorrect characteristics about groups (i.e., they hold prejudicial attitudes) and act on them, for example by discriminating against others (Corrigan, Edwards, Green, Diwan, & Penn, 2001; Dovidio & Gaertner, 2000). Attitudes about mental illness have become increasingly negative over time (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003; Day, Edgren, & Eshleman, 2007). The most common beliefs are that those suffering from mental illness are (a) dangerous, and therefore should be feared and kept out of communities, (b) untreatable, (c) easy to visually identify (e.g., they have poor hygiene), or in some cases (d) irresponsible, childlike, or otherwise incapable of making their own decisions (Angermeyer & Mischinger, 1996; Martin, Pescosolido, & Tuch, 2000).

Many of the responses to and beliefs about mental illness are grounded in inaccurate attributions regarding locus of control (Weiner, 1995). People are more likely to hold negative attitudes about the mentally ill when those suffering from a mental disorder are perceived to be responsible for (i.e., are in control of) their mental health issues. For example, people are much more likely to feel and express anger or disgust towards those suffering from mental illness when it (the mental disorder) was perceived to be the result of drug use, or when a person knew that he or she suffered from mental illness but avoided seeking mental health services. People respond with compassion when a person’s mental health was perceived as out of his or her control (Centers for Disease Control and Prevention et al., 2012; Crocker, Major & Steele, 2009).

In some cases, stigmas and stereotypes about mental illness are reduced when people have interpersonal encounters with a member of a stigmatized group, where contact consists of

exposure to positive, counterstereotypical information (Allport, 1954, Pettigrew & Tropp, 2006). However, evidence suggests that many of these interactions are anxiety-ridden, in that people often do not know what to say or how to act around those suffering from mental illness (Day et al., 2007). Of the many factors that contribute to stereotypical beliefs about mental illness, I argue that two forms of familiarity with mental illness will influence how group members talk about and make decisions whether to grant NGRI. Some will have personal experiences with mental illness, in that they are close to someone that has been diagnosed with the same or a similar mental disorder as the defendant(s) in the NGRI cases. I call this personal familiarity with mental illness. Others might rely more on stereotypes and/or media portrayals of those suffering from the same or similar mental illnesses as the defendant(s) in the NGRI cases; I refer to this as general familiarity with mental illness. Considering that emergent information represents personal experiences that are relevant to NGRI deliberations, then those personally or generally familiar with mental illness will possess greater amounts of emergent information than group members that are not very familiar with mental illness.

However, just because group members *have* emergent information does not mean that they will contribute it to discussion (e.g., Bonito, 2007). Need for cognition (NFC) represents preferences to consider different types of problems, tasks, and information (Cacioppo & Petty, 1982), and therefore might be one factor that influences whether those who possess emergent information will contribute it to discussion. For example, participants that are low in NFC tend to rely on heuristics (i.e., mental short cuts) and prefer simple over complex solutions to problems. Therefore, group members are more likely to focus primarily on identifying requisite information in the NGRI case details (i.e., they will focus on common forms of information) in order to make a decision as quickly as possible. Those high in NFC tend to prefer complex problems and often

rely on all available information when making decisions or at the very least will use greater amounts of available information than those low in NFC. Consequently, those that are high in NFC are more likely to use both common and emergent forms of information when deciding whether to grant NGRI. From this line of reasoning, individuals that are personally or generally familiar with mental illness and high in NFC (a) likely possess more emergent information than those less familiar with mental illness, (b) will use emergent *and* common forms of evidence to shape their decision preferences, and (c) are more likely to contribute both types of information to discussion as a way to substantiate particular positions, when compared to those less familiar with mental illness. On the other hand, those low in NFC that are familiar with mental illness will likely suppress the use of emergent information and instead rely on more common types of evidence when deciding whether to grant NGRI. From this line of reasoning I generated the following research questions:

RQ1: Does familiarity with mental illness influence the contributing of emergent information to group discussion?

RQ2: Is the association between familiarity with mental illness and contributing emergent information to discussion moderated by need for cognition?

Attitudes toward mental illness might influence whether participants use emergent information during discussion. In general, if one views mental illness negatively, emergent information, based on personal familiarity, might go unmentioned during discussion (Day et al., 2007). One with more sympathetic views regarding mental illness, on the other hand, might be more favorably predisposed to sharing their personal experiences regarding mental health issues during discussion. However, although experience or familiarity with mental illness might provide one with additional perspective on the problem, sharing such experiences during

discussion, regardless of attitudinal valence, might involve identity threats that participants are unwilling to risk. I therefore pose the following research question:

RQ3: Is the association between familiarity with mental illness and contributing emergent information to discussion moderated by attitudes toward mental illness?

People often have very negative, and often incorrect, beliefs about the insanity defense (Ogloff, 1991; Skeem & Golding, 2001). In fact, increasing suspicion toward and negative attitudes about the use of mental illness as a reason to avoid culpability (and relatedly that it allows dangerous people to be reenter society) can be traced back to John Hinkley, Jr.'s successful use of NGRI to be acquitted for the attempted murder of President Reagan (Bloechl, Vitacco, Neumann, & Erickson, 2007; Daftary-Kapur, O'Connor, Coffaro, & Galietta, 2011). One concern is that misconceptions about the insanity defense impact how jurors process case-related information, which in turn influences decisions about granting NGRI (English & Sales, 1997; Loudon & Skeem, 2007; V. Smith, 1993; but see Peters & Lecci, 2012).

Interestingly, myths about the insanity defense are easily debunked by empirical research (e.g., Daftary-Kapur et al., 2011; Perlin, 1990), yet many people continue to hold inaccurate beliefs about NGRI. For example, people believe that criminal defense attorneys use NGRI to get their clients acquitted and that those who enter a plea of NGRI are faking it as a way to avoid punishment. The reality is as most of the people who are granted NGRI have a history of hospitalization due to mental illness and 86% of cases that use the insanity plea go uncontested by the prosecution (Perlin, 1990). People also think that defendants are not risking anything by entering a plea of NGRI. However, a plea of NGRI (a) requires that the defendant admits guilt, and (b) if granted typically results in the appellant having to stay in a mental health facility 22% longer than those who did not use that plea and instead went to prison (Perlin, 1990). Even

though attitudes about the insanity defense are predominantly based on incorrect information, it is important to keep in mind that these beliefs are pervasive (Perlin, 1990).

Attitudes about the insanity defense are strong and consistent predictors of whether individuals and groups are willing to recommend NGRI (Peters & Lecci, 2012). That said, those attitudes are a just one form of emergent information that group members might bring with them to group discussion. It is unclear if and how attitudes about the insanity defense will influence the contributing of (other) forms of emergent evidence as groups discuss the NGRI tasks. For example, if a person holds negative attitudes toward the insanity defense, he or she is less likely to consider and/or contribute any case details that support the granting of NGRI. In comparison, those with relatively neutral and/or positive attitudes toward the insanity defense might be more objective in the ways that they process, store, and use different types of information during group discussion. Therefore, a question of interest is:

RQ4: Do attitudes about the insanity defense influence the contributing of emergent information to group discussion?

Concluding Remarks

One might wonder that if group member attitudes about mental illness are the strongest predictor of whether groups recommend NGRI (e.g., English & Sales, 1997; Finkel, 1991) then why have groups discuss or deliberate? While it is true that attitudes may hinder objectivity when making decisions, groups tend to make good faith efforts to deliberate. For example, jurors will use instructions and legal definitions as arguments to not just support their personal preferences but also to uphold the interests of the court (Bonito & Sanders, 2010; Meyers, Seibold, & Kang, 2010). Thus, common information represents not just facts about the case or task at hand, but also group members' understanding of various instructions, including legal

terms and responsibilities. I argue that participants in this study, like members of real and mock juries, will also use emergent information about the consequences of granting NGRI (Richards, 2012; SunWolf, 2010). For example, people that believe that mental illness cannot be treated also tend to hold negative attitudes toward the insanity defense, and will likely rely on and mention those beliefs when trying to persuade other group members not to grant NGRI. But consider that some group members might have witnessed their own close family members or friends being treated for mental illness. Those personal experiences will at the very least influence how they (i.e., the group members who are personally familiar with mental illness) process task-related information and relatedly their preferences about whether to grant NGRI; if contributed to discussion, those personal experiences have the capacity to influence how groups make decisions about whether to grant NGRI. The next chapter provides the methods and procedures used for this dissertation.

Chapter 4

Methods and Procedures

Method

Overview

This dissertation used an experiment to examine patterns of information sharing across a series of similar but distinct decision-making tasks. Participants assumed the role of an advisory committee that was hired by a jury consultant who was interested in how juries would respond to cases in which the defendant pled not guilty by reason of insanity (NGRI). I examined whether an intervention in the form of feedback that encourages groups to spend more time discussing diverse types of information influenced the way that groups talked about NGRI. In the control condition, groups did not receive any feedback about how to structure their discussions. Groups in the two experimental conditions did receive feedback about structuring discussion, although the timing of the feedback intervention varied. In one experimental condition groups received feedback after the completion of the first task (i.e., prior to their second group discussion), and in the other experimental condition groups received feedback after completing the second task (i.e., prior to their third and final group discussion). I also examined the extent to which several individual difference variables influenced group discussion, including personal perceptions about and experiences with mental illness. In addition, I examined

Participants

Participants were recruited from undergraduate communication classes at a large Southwestern university. Prior to the experiment, 141 men and 256 women filled out an online

survey ($N = 401$). Of those, 349 participants (123 men and 226 women) completed the lab portion of this study, which resulted in 5 3-person groups, 19 4-person groups, 26 5-person groups, and 21 6-person groups—a total of 71 groups. With regard to religion, 40% identified as Christian, 32% as Catholic, 27% as “Other,” and less than 1% as Protestant, Mormon, or Orthodox. On a 4-point Likert-type scale, participants reported that they were somewhat religious ($M = 2.38$, $SD = 0.89$). In terms of participants’ political affiliation, 25% were Democrats, 39% were Republicans, 30% selected “None,” 4% were Libertarians, 4% selected “Other,” and a single participant was a member of the Green Party. On a 5-point Likert-type scale, participants’ political ideologies were generally moderate ($M = 3.02$, $SD = 0.92$).

Procedure

Participants were recruited during their regularly scheduled classes and instructed to access the online survey. The online survey began with a consent form and then measured participants’ demographic information, attitudes about NGRI, attitudes about mental illness, and whether they have personal experiences (i.e., are familiar) with mental illness and violent crime. At the end of this online survey participants signed up for a lab session based on their availability. Upon arrival to the lab, participants were greeted and explained that during the lab session they were to imagine that they were hired by a jury consultant that was interested in how they would render verdicts as potential jurors for three capital cases. Participants were then seated at different computer stations so that they could privately read about the cases and respond to the survey instruments. Participants read the informed consent document—all gave their consent. Participants were given an explanation of NGRI (i.e., that it can only be granted if they decide that there was sufficient evidence to suggest that a defendant was in a diminished

mental state at the time the crime was committed). Following that, participants were presented with the first of three NGRI cases (see more below).

After reading the first NGRI case, participants (privately) responded to items regarding their preference to grant NGRI and their expectations about discussing the case as a group. The participants were then escorted to a different portion of the lab, were seated at a table and were instructed to take to 10 minutes to come to an agreement about whether to grant NGRI. Groups were provided hard copies of the case details (identical to those they viewed privately on the computer prior to discussion) and the definition of NGRI (also identical to that provided prior to the first case) to use for reference during the group discussion. Groups were told that they must be unanimous in the recommendation to grant NGRI and that granting NGRI would result in the remanding of the defendant to a mental institution where he would receive treatment for his condition. Furthermore, participants were informed that the defendant would be released back into society if his mental health were to improve. Anything less than unanimity would result in the original conviction and sentence being upheld (i.e., the defendant would remain in prison). Discussions were audio and video-recorded.

Following group discussion, groups were asked to report what they had decided and then were led back to the computers to privately respond to the questions about their group experience. Each participant was then presented with the second case and followed the same set of procedures for the first case as described above. After groups discussed the second case and responded to the questions about it, participants went through the same procedure for the third case. Finally, after completing the procedure for the third case, participants responded to questions regarding their overall experience working in the group. Once participants finished the

survey items they were debriefed and given the opportunity to ask questions about the study before they were dismissed.

During the laboratory portion of the study, participants (and groups) were randomly assigned to one of three conditions—the control and two experimental conditions. The two experimental conditions altered the procedure described above in the following way. In the first treatment condition groups were read the feedback intervention prior to discussing the second case, and in the second treatment condition groups were read the intervention before discussing the third task. The control group was not given the intervention at any point during the study. As noted, the feedback intervention prompted groups to take a greater amount of time discussing more diverse types information (see Appendix A and below for more). Due to no shows and other issues, the design was slightly unbalanced with 27 groups in the control condition, 21 groups received the first treatment, and 23 groups received the second treatment.

The NGRI Tasks/Cases

Groups rendered decisions on whether to accept a plea of NGRI on three capital cases (see Appendix C). The cases used in the current study were inspired by real-life cases where the defense pleas were for NGRI (see Peters & Lecci, 2012; Stagg, Ervin, & Bonito, 2015). In all three cases, the defendants (all of whom confessed to murder during the initial investigation) were men with no prior criminal records, and no formal mental health diagnoses were made prior to the murder (though there was some evidence that the defendants were exhibiting symptoms associated with mental illness). In each of the three cases, the victims were men whose ages range from mid 20's to early 30's. The first case involved "Michael Fisher," who suffered from post-traumatic stress disorder (PTSD). Fisher was a home appraiser who confessed to killing a client; the victim supposedly bore a striking resemblance to a childhood bully who had

traumatized Fisher throughout his adolescence. The second case concerned “Jacob Schneider,” who suffers from schizophrenia. Schneider believed that he was Lex Luthor and was put on Earth to kill his archenemy Superman. Schneider was convicted for having killed a man dressed up as Superman at a comic book convention. The third case involved “Chip Perkins,” who suffered from severe bipolar disorder. He claimed that his neighbor was possessed by the devil, which prompted Perkins to kill him out of protection of self and others.

The three capital cases were designed so that they would be similar in the presentation, quality, and amount of information. Similarity reduces the potential effect of case-specific characteristics on group discussion and outcomes and makes more salient the effect of the experimental manipulation (i.e., the introduction of an intervention) and/or group normative development (especially in the control condition). Following Peters and Lecci (2012), case details were presented in four sections and each case followed the same structure. The first section provided a description of the crime and noted that a confession was made by the accused in order to avoid the death penalty. The final part of the first section explained that sometime later the defendant decided to change his plea to NGRI and that as a result the court ordered a psychological assessment for him. The second section contained expert testimony by the court-ordered clinical psychologist that stated that the defendant is exhibiting symptoms that indicate that he is currently suffering from a mental disorder and that he might have been afflicted with mental illness long before the crime in question was committed. The expert testimony also provided information about symptoms associated with mental illness (i.e., about symptoms of PTSD in the Michael Fisher case, schizophrenia in the Jacob Schneider case, and severe bipolar disorder in the Chip Perkins case), and suggested how the symptoms of each might explain the actions of the defendants when the crimes were committed. The third section presented the

defense's arguments for recommending NGRI. Finally, the fourth section contained the prosecution's arguments against granting NGRI.

Case order was randomized so as to minimize ordering effects. Evidence from the current study indicates that participants perceived the cases to be relatively similar (prior to any group interaction), at least with regard to their private preferences for granting NGRI. Participants were asked whether NGRI should be granted in the case that they just read on a Likert-type item anchored by 1 (*Strongly Disagree*) and 5 (*Strongly Agree*). A one-way ANOVA indicated that there were no significant differences in likelihood of (privately) granting NGRI when comparing those that read the Chip Perkins case first ($M = 2.41, SD = 1.09$), to those that read the Jacob Schneider ($M = 2.67, SD = 1.06$) or Michael Fisher case first ($M = 2.67, SD = 1.09$), $F(2,346)=2.48, p > .05$. That said, once participants had worked through at least one of the cases in a group, they were more than twice as likely to grant NGRI in the Jacob Schneider case (involving schizophrenia, $n = 24$) than they were in the Michael Fisher or Chip Perkins cases, which involved PTSD and bipolar disorder ($n_s = 11$ and 10 respectively). Overall, though, most groups did not grant NGRI (see Table 1).

Variables

General familiarity with mental illness. In the online portion of the study participants were asked if they were familiar with schizophrenia, bipolar disorder, or PTSD, with response options of "Yes" or "No" for each. This variable was dummy coded so that a person received a "1" if they answered yes to any one of the three items ($n = 279$), and a "0" if they answered "No" to all three items ($n = 46$).

Personal familiarity with mental illness. In the online survey, participants were asked if they (or their close family members or friends) have been diagnosed with a mental disorder, or

if they anticipate that a close family member or friend will be diagnosed with a mental disorder in the future, with response options of “Yes,” “No,” or “Decline to Answer” for each. This variable was dummy coded so that a person received a “1” if they answered yes to any one of the three items ($n = 216$), and a “0” if they answered “No” to all three items ($n = 109$).

Need for cognition. Need for cognition (NFC) was measured in the online survey using an abbreviated 14-item version of Cacioppo, Petty, Feinstein, & Jarvis’ (1996) measure (see Appendix D). Example items include the following: “I prefer complex to simple problems” and “The idea of relying on thought to make my way to the top appeals to me.” Items that were reverse-coded included “I would rather do something that requires little thought than something that is sure to challenge my thinking abilities” and “I like tasks that require little thought once I’ve learned them.” Anchors on Likert-type scales were 1 (*Strongly Disagree*) and 5 (*Strongly Agree*). The scale was reliable ($\alpha = .80$), and participants generally rated themselves slightly above the scale midpoint ($M = 3.19$, $SD = 0.48$).

General attitudes toward mental illness. This variable was captured during the online survey. Ten of the original 28 items contained in Day et al. (2007; see Appendix E) were used. Some items stated, for example, that mental illness could be treated, and that they (participants) feel comfortable being around people suffering from a mental disorder. All items were captured on Likert type items that ranged from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). The scale passed conventionally acceptable thresholds for reliability ($\alpha = .80$). Higher scores indicate positive attitudes about mental illness; therefore, based on the scale midpoint, people held relatively positive attitudes about mental health ($M = 3.64$, $SD = 0.54$).

Attitudes toward the insanity defense. This variable was captured during the online survey. Thirteen items of Skeem, Loudon, & Evans’ (2004) Insanity Defense Attitudes-Revised

(IDA-R) scale (see Appendix F) measured opinions such as “With slick attorneys and a sad story, any criminal can use the insanity defense to finagle his way to freedom”; “the insanity plea is a loophole in the law that allows too many guilty people to escape punishment,” and “we should punish people who commit criminal acts, regardless of their degree of mental disturbance.” All items were measured on Likert-type items, with anchors that ranged from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). The scale was reliable ($\alpha=.78$), and on average participants were close than the scale midpoint, ($M = 2.74$, $SD = 0.46$).

Anticipated agreement. During the lab session, after reading the cases but prior to group discussion participants responded to the following item: “I think other group members will come to the same conclusion that I did.” Likert-type scales ranged from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Means and standard deviations by condition and across time can be found in Table 2.

Anticipated discussion time. During the lab session and prior to each group discussion, a single item asked how much time a participant expects his or her group to take to render a decision on whether to recommend NGRI. The Likert-type items were anchored by 1 (*Very Little Time*) and 5 (*A Lot of Time*). Means and standard deviations by condition and across time can be found in Table 3.

Perceived decision difficulty. During the lab session and prior to each group discussion, participants responded to the following item: “This case was an easy decision for me to make.” Likert-type scales ranged from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Means and standard deviations by condition and across time can be found in Table 4.

Perceived decision difficulty for others. Prior to each group discussion, participants responded to the following item: “Other members of the committee will find it easy to make a

decision about this case.” Likert-type scales ranged from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Means and standard deviations by condition and across time can be found in Table 5.

Perceived use of emergent information. During the lab session and after each group discussion, participants rated themselves and their colleagues on a single item in terms of whether they contributed personal stories and opinions to group discussion. This was captured on a Likert scale that was anchored by 1 (*Strongly Disagree*) and 7 (*Strongly Agree*). Means and standard deviations across times and conditions are presented in Table 6.

Perceived use of common information. During the lab session and after each group discussion, participants responded to a single item that stated that a given participant focused on the case details during group discussion. Response options range from 1 (*Strongly Agree*) to 7 (*Strongly Disagree*). Means and standard deviations across times and conditions are presented in Table 7.

Confidence in the group decision. A single item, captured after each group discussion during the lab portion of the study, asked how confident participants were in the decision made by the group. The Likert-type items ranged from 1 (*Not Very Confident*) to 5 (*Very Confident*). Means and standard deviations across time and by condition are reported in Table 8.

Satisfaction with the group decision. A single item captured during the lab session and after each group discussion, asked how satisfied participants were with the group discussion. Likert-type items ranged from 1 (*Not Very Satisfied*) to 5 (*Very Satisfied*). Means and standard deviations across time and by condition are reported in Table 9.

Time. The three tasks (the order of which was randomized within and across conditions) represent T1, T2, and T3.

The group feedback intervention. As mentioned, during the laboratory portion of the study, participants (and groups) were randomly assigned to one of three conditions. The control condition required that groups work on the three NGRI tasks without specific instruction on how to structure discussion. In the first experimental condition groups were introduced the feedback intervention prior to the second group discussion (T2), and the second experimental condition groups were introduced the feedback intervention prior to the third group discussion (T3).

Supplemental Variables

Perceived influence. This variable was captured after each group discussion in a round robin design. The item stated that a group member was perceived as influential; the Likert scale used for this item was anchored by 1 (*Strongly Disagree*) and 7 (*Strongly Agree*). Means and standard deviations across time and condition are included in Table 10.

Perceived argument quality. This variable was captured after each group discussion in a round robin design. The item stated that a group member had made good arguments; the Likert scale used for this item was anchored by 1 (*Strongly Disagree*) and 7 (*Strongly Agree*). Means and standard deviations across time and condition are included in Table 11.

Perceived participation frequency. This variable was captured after each group discussion in a round robin design. The item stated that a group member had participated frequently; the Likert scale used for this item was anchored by 1 (*Strongly Disagree*) and 7 (*Strongly Agree*). Means and standard deviations across time and condition are included in Table 12.

Discussion time. Groups' discussion times were obtained using the time stamps on the recordings of group discussion. Means and standard deviations across time and condition are included in Table 13.

Chapter 5

Analyses and Results

All analyses presented herein were performed using several packages in R 3.2.3 (R Core Team, 2013) and all statistical tests were evaluated against $\alpha = .05$, two-tailed, except where noted.

Hypotheses 1-4: The Effect of Feedback on Perceived Information Use

The four hypotheses evaluated in the study use data from round robin designs gathered after each discussion. Therefore, Kenny's (1994) social relations model (SRM) was used to analyze these items. The SRM partitions data from round-robin designs into three related levels of analysis: the group, the dyad, and the individual. Although all ratings within a group are made at the individual-level of analysis (i.e., Person A is rated by Persons B, C, and D), the mean and variance of ratings within the group, as well as the covariance (often called "reciprocity") of ratings for each pair of dyads within a group, affect how members perceive and/or rate each other. Of primary concern are individual-level partner effects for emergent and common information, which indicate the extent to which a participant was perceived by other group members as providing each type of information to discussion. For example, Person A receives ratings from the other three members of the group on a scale of 1 to 7. One might average the three ratings received but the ratings are non-independent and the resulting mean would conflate several individual-level features of social perception with those particular to the dyad and the group. Thus, the partner effects derived from round-robin data control for or partial out the non-

independence of the ratings. Details for the computation of SRM effects are found in Kenny (1994, Appendix B). The R package TripleR (Schönbrodt, Back, & Schmukle, 2012) was used to estimate the SRM effects.

H1 and H2: The effect of the intervention on perceived use of emergent information.

I used a longitudinal multilevel, mixed modeling approach (Hox, 2010) to evaluate hypotheses 1 and 2. Hypothesis 1 states that participants who receive the intervention perceive that they use more emergent information than participants who did not receive the intervention; hypothesis 2 states that participants who receive the intervention earlier in a series of tasks perceive that they use more emergent information than participants who receive the intervention later in a series of tasks. Multilevel modeling is optimal for addressing these hypotheses for two reasons. First, individuals were nested within groups; multilevel modeling takes into account the potential non-independence of the behaviors and perceptions of people within groups. Second, multilevel modeling allows examination of within-person associations of behavior and perceptions across the measurement times/tasks. Thus, variance in the dependent variable (DV) can be partitioned into variance attributable to the group and to the individual. Finally, a model building approach was used, meaning that simple or baseline models are calculated, which were then compared to more complicated models.

The model building process for multilevel analyses typically begins with either the empty model or the unconditional model (Hayes, 2006; Hox, 2010). The empty model, sometimes referred to as the intercept-only model, does not include predictors; it provides an estimate for the average of the DV across participants, and an estimate of the residual variance (i.e., the total variance in the DV). The unconditional model will often include the nesting variable (here, groups), which is estimated with a random effect around the intercept, to examine whether

variability in the DV is attributable to groups (and the residual represents variance attributable to individuals). An intraclass correlation (ICC) can be computed by dividing the group level variance by the total variance in the DV; this is the correlation of individual scores within groups (i.e., the percentage of variance in the DV that is attributable to groups). Deviance estimates (i.e., the amount of variance accounted for by a given model) are represented as -2 log likelihood scores. Differences in deviance estimates are evaluated with a Chi-square test; a significant Chi-square indicates significant differences in the amount of variance accounted for by two models, and the model with the lowest deviance score represents the model that best characterizes (i.e., fits) the data. When data is nested (e.g., when variance can be partitioned and attributable to individuals *and* groups), the unconditional model is typically the better fitting model (when compared to the empty model). Once an unconditional model is estimated, one can “build” more complicated models; for example, one might add in a predictor, such as need for cognition (NFC), to evaluate whether NFC helps predict people’s score on the DV.

Using the R package lme4 (Bates, Maechler, Bolker, & Walker, 2015), I followed the model building process, but rather than starting with the empty or unconditional models I began by evaluating the linear effect of time on perceived use of emergent information (Model 1; see Table 14), as time is a primary concern (and the effect of groups could still be modeled). Time was recoded so that T1 was equal to zero in order for the intercept to be meaningfully interpreted (Hoffman, 2014). The average perceived use of emergent information at T1 was 3.14 (on a 1-7 scale), $t(924) = 48.79$, and the slope for time was .50, $t(924) = 10.01$, both $ps < .01$. Model 2 included the non-linear (i.e., quadratic) effect of time (the square of the time variable). As reported in Table 14, the nonlinear effect was not significant, $t(924) = 1.91$, $p > .05$, which was also made evident by the fact that Model 2 was not a better fit than Model 1, $\chi^2(1) = 1.74$, $p >$

.05. Model 3 included the random intercept for groups. Model 3 was a better fitting model than Model 2, $\chi^2(4) = 551.35, p < .05$, and the ICC indicates that 54.44% of the variance in perceived use of emergent information was attributable to groups. The residual (0.77) represents within-person variance in perceived use of emergent information (across time). Model 4 included the random effect for the Level 1 intercept, which modeled the between-person variability in perceived emergent information at T1. Model 4 was not a better fit than Model 3, $\chi^2(1) = 0.09, p > .05$, indicating that there was very little between-person variance in perceived emergent information use (after controlling for groups) at T1. Following convention, however, subsequent models included this random effect (Hox, 2010). Model 5 contained a time by condition interaction and was a better fit than Model 4, $\chi^2(4) = 10.91, p < .05$. I used the R package `lmerTest` (Kuznetsova, Brockhoff, & Christensen, 2016) to evaluate the model parameters using the Satterthwaite approximation for degrees of freedom to estimate correct *p*-values. The main effect for condition was not significant, $F(2, 73) = 0.29, p > .05$, but as expected there was a significant interaction between time and condition, $F(2, 658) = 4.17$.

Using the R package “contrast” (Kuhn, 2013), planned comparisons were used to decompose the time by condition interaction. This particular R package uses the standard errors from the multilevel analysis and therefore allows for comparisons to be made while still accounting for the nesting structures. The intervention worked, in that the mean differences in perceived use of emergent information prior to and following the intervention (between T1 and T2 in the first experimental condition and between T2 and T3 in the second experimental condition) were statistically significant, *bs* = 0.89 and 1.20 and *ts* = 5.02 and 6.90 respectively—the intervention significantly increased perceived use of emergent information during the subsequent group discussions.

To test H1 I evaluated differences between the control and the two experimental conditions, to determine whether participants who received the intervention perceived that they used more emergent information than those who did not receive the intervention. At T2, perceived use of emergent information was significantly greater in the first experimental condition (i.e., right after groups had received the intervention) when compared to the control, $b = 0.60$, $t(660) = 3.93$, $p < .05$, and at T3 the perceived use of emergent information was significantly greater in second experimental condition (i.e., right after groups had received the intervention) than the control condition, $b = 0.65$, $t(660) = 3.58$, $p < .05$. Therefore H1 was supported, in that participants in groups that received the intervention perceived that they contributed significantly greater amounts of emergent information in the immediate discussions that followed exposure to the feedback, and those perceptions were significantly greater in the experimental conditions than those in the control condition (see Figure 1).

The second hypothesis stated that timing of the intervention affects perceived use of emergent information, such that participants in the first experimental condition, who received the intervention prior to the T2 group discussion, would perceive that they used more emergent information when compared to participants in the second experimental condition, who received the intervention prior to the T3 group discussion. To compare the effect of the intervention in these two experimental conditions, I used Soper's (2016) calculator for the difference between slopes (<http://www.danielsoper.com/statcalc/calculator.aspx?id=103>) for perceived use of emergent information. Soper's (2016) calculator provides a t -test based on the mean differences (between T1 and T2 in the first experimental condition, and between T2 and T3 in second experimental condition), sample size, and the standard errors of the two means. The change in perceived use of emergent information was statistically significant, $b = .31$, $t(658) = 3.60$, $p <$

.05, but in the opposite of the expected direction. Thus, H2 is not supported, as the timing of the intervention did not affect perceived use of emergent information as predicted—the intervention elicited greater perceived use of emergent information when administered later rather than earlier in a series of tasks.

H3 and H4: The effect of feedback on perceived use of common information. The third hypothesis stated that the feedback intervention would increase perceived use of common information in the discussions that followed, and H4 stated that the timing of the intervention would moderate the effect of the intervention, such that there would be greater increases in perceived use of common information when the intervention is administered earlier (in the first experimental condition) rather than later than later (in the second experimental condition). Following the approach described above, I started by evaluating the linear effect of time on perceived use of common information. Model 1 indicated that mean use of common information at T1 was 5.31 (see Table 15), $t(924) = 143.79$, and the slope was 0.16, $t(924) = 5.62$, both $ps < .05$. Model 2, which included term for the nonlinear effect, was not a better fit than Model 1, $\chi^2(1) = 3.05$, $p > .05$. Model 3 included the random intercept for groups, and was a better fitting model than Model 2, $\chi^2(4) = 302.57$, $p < .01$. The ICC indicates that 38.18% of the variance in perceived use of common information was attributable to groups (see Table 15). Model 4 included the term for between-person random variance (i.e., the random variance of the level 1 intercept) and was a better fit than Model 3, $\chi^2(1) = 78.43$, $p < .01$. Notice that in Model 4 (see Table 15), after accounting for variance within and between individuals, and between groups, the non-linear effect of time was significant.

Planned contrasts evaluated perceived use of common information across time and conditions. I first evaluated the effectiveness of the intervention within the two experimental

conditions. In the first experimental condition there was a significant increase in perceived use of common information from T1 to T2 (during which time groups received the intervention), $b = 0.28$, $t(658) = 2.67$, $p < .05$, but there was not a significant increase from T2 to T3 in the second experimental condition (during which time groups received the intervention), $b = 0.10$, $t(658) = 1.74$, $p > .05$. Recall that H3 states that participants who receive the intervention will perceive that they used more traditional information than participants who did not receive the intervention. When evaluating perceived use of traditional information across conditions then, the groups in the first experimental condition and the control groups did not differ in perceived use of common information at T2, $t(658)=1.10$, $p > .05$, and groups in the second experimental condition and the control groups also did not differ in perceived use of common information at T3, $t(658)=1.56$, $p > .05$. These analyses do not support H3 (but see more below). The fourth hypothesis states that participants who receive the intervention earlier in a series of tasks will perceive that they use more traditional information than those who did not receive the intervention. I focused on the control and first experimental conditions (where groups received the intervention prior to the second group discussion) because there were significant differences in perceived use of traditional information across time within these conditions but not in the second experimental condition. Using Soper's (2016) calculator for differences in slopes, results indicate that the slopes (i.e., the mean differences) between T1/T2 in the control and first experimental conditions were also not significant, $b = 0.11$, $t(658)=1.39$, $p > .05$. The feedback intervention in the first experimental condition display a pattern akin to delayed onset: there was no difference in perceived common information use between T1 and T2 but by T3 significant differences emerged between the control and first experimental conditions, $b = 0.25$, $t(658)=2.49$, $p < .05$. As can be seen in means in Table 7 and Figure 2, participants in the control

conditions were perceived as using similar amounts of common information at T2 and T3, whereas in the first experimental condition there were significant increases in perceived use of common information during that time, $b = 0.14$, $t(658)=3.83$, $p < .01$. Therefore the fourth hypothesis was partially supported in that timing of the intervention does impact its effect; with regard to perceived use of common information, the intervention worked best when given *earlier* in a series of tasks, the caveats being that (a) the intervention did not prompt greater perceived use of emergent information in the second experimental condition (when groups received the intervention prior to the T3 discussion), and (b) the effect of the intervention in the first experimental condition was delayed, such that significant differences, when compared to the control, did not emerge in the discussion immediately following the intervention (at T2), but rather manifested at T3.

Research Question 1 through 4: Moderators That Influence the Perceived Use of Emergent Information

Research Questions 1 and 2. The first research question asked about the main effect of familiarity with mental illness on perceived use of emergent information and RQ2 asked whether the association between familiarity with mental illness and the contributing of emergent information to discussion is moderated by need for cognition (NFC). This question is complicated by the fact that Model 5 from the longitudinal multilevel analyses above indicated that the intervention differentially influenced perceptions of emergent information use across time *and* conditions.

To address RQ1, Models 5 and 6 (presented in Table 14) included general and personal familiarity with mental illness as predictors of perceived emergent information use. Both general and personal familiarity with mental illness were dummy coded so that 1 indicated being

generally or personally familiar with mental illness. Neither variable was a significant predictor of perceived use of emergent information. Model 7 included the interaction between general familiarity with mental illness and NFC and Model 8 included the interaction between personal familiarity with mental illness and NFC. Following Enders and Tofighi (2007), NFC was grand mean centered. As seen in Table 14, NFC did not interact with general or personal familiarity with mental illness. Therefore, familiarity with mental illness did not have significant main effects on perceived use of emergent information and NFC did not moderate the effect of familiarity on perceived use of emergent information.

Research Question 3: Familiarity with and attitudes toward mental illness. The third research question asked whether the association between familiarity with mental illness and the contributing of emergent information to discussion is moderated by attitudes toward mental illness. Attitudes toward mental illness was grand mean centered (Enders & Tofighi, 2007) and included in Model 9 as a main effect and as interactions with personal and general familiarity with mental illness; both interactions were significant. To decompose these interactions, I evaluated the components from Model 9 (i.e., the intercept, the effect of condition, the interaction between NFC and the two types of familiarity, as well as the interaction of attitudes toward mental illness and the two types of familiarity with mental illness) at each of the three time points. Results are presented in Table 16. The only significant predictor of perceived use of emergent information at T1 was being personally familiar with mental illness, $b = 0.23$, $t(253) = 2.42$, $p < 0.5$. At T2, the main effect for general familiarity with mental illness was significant, $b = 0.26$, $t(252) = 2.13$, $p < 0.5$. The interaction between personal familiarity with and attitudes toward mental illness was also significant at T2, $F(1, 252) = 5.31$, $p < .05$. I used Preacher, Curran, & Bauer's (2003) online calculator and R code generator to interpret this interaction

(<http://www.quantpsy.org/interact/mlr2.htm>). Recall that the mean for attitudes toward mental illness (on a 1-5 scale) was 3.60 ($SD = 0.45$); following Baron & Kenny (1986) the slopes (which represent the difference between those personally familiar with mental illness and those not personally familiar with mental illness) are evaluated at the mean, one standard deviation above the mean, and one standard deviation below the mean, with regard to attitudes toward mental illness (see Figure 3). At the mean for attitudes toward mental illness, the slope for personal familiarity (1.68) was significant, $t(317) = 3.02, p < .01$. The slopes for personal familiarity at one standard deviation above (1.89) and below (1.47) the mean of attitudes toward mental illness were also significant, $t_s = 2.92$ and $1.87, p_s < .01$. Overall, those familiar with mental illness were perceived as contributing greater amounts of emergent information to group discussion than those who were not personally familiar with mental illness. Additionally, participants who were *not* personally familiar with mental illness and held negative attitudes toward mental illness were perceived as contributing greater amounts of emergent information than those with (relatively) neutral or positive attitudes toward mental illness. When participants were familiar with mental illness, those who also held positive attitudes toward mental illness were perceived as contributing greater amounts of emergent information than those with neutral or negative attitudes toward mental illness. At T3 the main effect for attitudes toward mental illness was significant, $b = -0.87, t(253) = -2.36, p < 0.5$, which indicates that those who held negative attitudes toward mental illness were significantly more likely to be perceived as contributing emergent information. The interaction between general familiarity with and attitudes toward mental illness was also significant at T3, $F(1, 258) = 7.20, p < .05$. Once again Preacher, Curran, & Bauer's (2003) online calculator and R code generator was used to interpret this interaction, where the slopes indicate differences between those generally familiar with mental illness and

those not generally familiar with mental illness at different levels of the moderator (i.e., attitudes toward mental illness). The slopes for general familiarity at the mean for attitudes toward mental illness (3.85), and one standard deviation above (4.31) and below (3.39) the mean were significant, $t_s = 2.85, 2.84, \text{ and } 2.86, p_s < .01$. As can be seen in Figure 4, participants who were not generally familiar with mental illness and held negative attitudes about mental illness were perceived as contributing greater amounts of emergent information than those with (relatively) neutral or positive attitudes toward mental illness. Those generally familiar with mental illness were perceived as contributing greater amounts of emergent information than those not generally familiar with mental illness; furthermore, those generally familiar with mental illness and that held positive attitudes toward mental illness were perceived as contributing the most emergent information to group discussion, but the differences in comparison to those with (relatively) neutral or negative attitudes was not significantly different. Supplemental analyses evaluated whether these interactions were influenced by condition; findings were not significant (and not reported here). Overall, attitudes toward mental illness moderated the relationship between perceived familiarity with mental illness and the perceived contributing of emergent information at T2, and moderated the relationship between general familiarity with mental illness and the perceived contributing of emergent information at T3.

Research question 4: Attitudes about the insanity defense. The fourth research question asked about the relationship between attitudes toward the insanity defense and perceived use of emergent information. Attitudes toward the insanity defense were grand mean centered (Enders & Tofighi, 2007) and included in Model 10. The main effect for attitudes about the insanity defense was not significant ($b = 0.08$). Attitudes about the insanity defense did not predict perceived use of emergent information.

Supplemental analyses investigated perceived use of common information following the strategies used to evaluate perceived use of emergent information described above. None of the predictors or relationships were significantly associated with the perceived use of common information (results not reported here)

H5 and H6: Convergence of Expectations for and Perceptions of Group Discussion

Hypotheses regarding convergence of members' expectations and experiences working in groups were addressed using an adapted version of the latent group model (LGM; Gonzalez and Griffin, 2002; Bonito, Ervin, & Staggs, in press). The LGM partitions group behavior (i.e., shared variance that loads on a latent group construct) from unique variability at the individual-level of analysis. It is helpful to parse individual- from group-level behavior, as (a) the former tends to manifest and remain statistically significant within and across tasks or meetings, whereas group-level behaviors often take time (e.g., multiple tasks or meetings) to manifest, and (b) different patterns often emerge at the two levels of analyses (e.g., Bonito et al., 2014). Intraclass correlations can be particularly informative because they represent the amount of variance that is attributable to groups. I used R's lme4 package (Bates et al., 2015) to estimate the LGM. R does not provide probability estimates for the random variance components on which the LGM is based. Rather, they must be evaluated with bootstrapped confidence intervals. However, when samples include fewer than 100 groups, standard errors are underestimated, which makes the confidence intervals around the ICCs less conservative than they should be by about 8% (Maas & Hox, 2005). Furthermore, because variances in principle are never negative, the lower bound CI is always zero, which makes common null hypothesis testing problematic—the CI will never include zero. Therefore, ICCs with a lower bound to the confidence interval of less than .10 were treated as not statistically significant.

H5: Convergence of pre-discussion expectations for group interaction. The fifth hypothesis stated that expectations about working together in groups would converge across the three tasks. Specifically, H5 concerns convergence on whether individuals (a) found it easy to decide privately whether to grant NGRI in each of the three cases, (b) thought that the decision to grant NGRI would be easy for others to make, (c) anticipated that the other group members would agree with their own preference to grant NGRI (or not), and (d) have similar expectations for how long it will take their group to come to an agreement.

I first evaluated perceptions about whether individuals found it difficult to decide whether to grant NGRI (privately). Table 17 contains the individual- and group-level correlations of decision difficulty across time (with ICCs on the diagonal) that could be estimated. For example, as seen in Table 17, the individual-level correlation between T1 and T2 was positive and significant; this indicates that individuals that felt that it was easy to decide whether to grant NGRI at T1 (for the first case) also felt that the decision to grant it was also easy at T2 (for the second case). In fact, all of the individual-level correlations were significant, meaning that participants who found it easy to decide whether to grant NGRI in one case found it easy to decide whether to grant NGRI for the other cases. The ICC at T1 was not significant. The ICC represents the amount of variance in perceived ease of deciding whether to grant NGRI that is attributable to groups. The ICCs for T2 and T3 were zero; due to the fact that there was little to no group level variance, group-level correlations could not be estimated. If the group level correlations were significant they would indicate that groups that found it easy to decide whether to grant NGRI in one case would also find it easy to decide whether to grant NGRI in another case.

I then evaluated the extent to which perceptions about how easy it was for others to decide whether to grant NGRI converged across time. Table 18 contains the individual- and group-level correlations across time. All of the individual-level correlations were statistically significant, which indicates that participants that perceived that their group members would find it easy to decide whether to grant NGRI in one case also perceived that those group members would find it easy to decide whether to grant NGRI in other cases. The ICCs were too small to be significant, which means the group-level correlations were not interpretable and that convergence did not take place.

The next step in addressing H5 was to evaluate the extent to which anticipated agreement with other group members converged across time. Table 19 contains the individual- and group-level correlations. The individual-level correlations indicated that anticipated agreement at any time was positively associated for all three tasks. Once again the ICCs were too small to be interpretable, and the confidence intervals for the group-level correlations could not to be estimated.

The last pre-discussion expectation of interest was the amount of time individuals thought it take for their group to make a decision about whether to grant NGRI. As can be seen in Table 20, the only significant correlation was at the individual-level between T2 and T3, in that individuals that anticipated that it would take more time to decide whether to grant NGRI in the second case also anticipated that it would take their group a long time to decide on the third case. As with other pre-discussion expectations, the ICCs were too small to be interpreted. When taken together, H5 was not supported. Pre-discussion expectations did not converge at any of the three time points.

Due to the design of my study (i.e., the timing of the measures and intervention), I was unable to accurately assess if condition had an impact as to whether convergence took place, or whether the intervention influenced individual- or group-level correlations among pre-discussion expectations. In the experimental conditions, I captured expectations for group discussion prior to interaction and prior to receiving the intervention at T2 in the first experimental condition, and prior to receiving the intervention at T3 in the second experimental condition. Therefore, I would only be able to assess the impact of the intervention in the first experimental condition (where groups received the intervention prior to the T2 discussion) on pre-discussion expectations prior to the T3 discussion. I could not assess the impact of the intervention in the second experimental condition because participants had already reported their expectations for the T3 discussion prior to receiving the intervention.

H6: Convergence of post-discussion assessments of group decision. The sixth hypothesis was that confidence in and satisfaction with group decisions would converge over time. Here I was able to provide comparisons across conditions because confidence in and satisfaction with group discussion were captured after interaction (and thus after receiving the intervention prior to the T2 discussion in the first experimental condition and prior to the T3 discussion in the second experimental condition), hence why the analyses below estimated the correlations across task *and* condition. However, there is not a way to provide significance tests across those (by-condition) comparisons. As with the analyses of pre-discussion expectations, significant ICCs indicate that convergence took place, and the correlations represent whether confidence in or satisfaction with the group decision for one task was associated with confidence in or satisfaction with the group decision for other tasks.

I first evaluated confidence in the group decision across time, irrespective of condition. Results are presented in Table 21. The individual correlations are all significant, which indicates that individuals that were confident in their group's decision for one task were confident in their group's decision in other tasks. The ICCs for confidence were significant for all three times/tasks, meaning that being in a particular group influenced whether participants felt confident in their group's decisions. In examining the group level correlations (above the diagonal), interestingly, confidence at T1 was negatively correlated with confidence at T2, but overall groups that felt confident at T1 also felt confident in their decisions at T3.

Confidence in the group decision varied across conditions. In the control condition (see Table 21), individual-level correlations for T1/T3 and T2/T3 were significant. Evaluations at the group-level indicate that there was convergence (i.e., the ICCs at all three times were significant), but the group-level correlations for confidence in the group decisions were not significant (likely due to low power). As noted, in the first experimental condition the intervention was introduced prior to the second group discussion (see Table 21). Here, individuals that were confident at any given time were also confident in the other decisions made by their group. In the second experimental condition, where groups received the intervention prior to the third discussion, the T1/T2, and T1/T3 correlations were significant at the individual-level, and the ICCs were all significant but as with the first experimental condition none of the group-level trends for confidence in the group decision, in any condition, were significant (see Table 21).

Next, I assessed whether satisfaction with the group discussion converged across time and condition. Evaluations of the ICCs across time (collapsed across conditions) indicate convergence at the group-level though none of the group-level correlations were significant. As

can be seen in Table 22, all individual-level correlations were significant and positive. When looking at convergence across time by and condition, ICCs were significant in all conditions, though none of the group-level correlations were significant (see Table 22). Similar to the findings regarding confidence in the group decision, individual-level correlations in the control condition between T1 and T3 and T2 and T3 were significant and positive, as were all correlations in the first experimental condition. In the second experimental condition, the T1/T2 and T2/T3 correlations were significant and positive. When taken together, H6 was supported, in that confidence in and satisfaction with the group discussion converged across time and condition, meaning that participants' assessments of their groups' decisions were nonindependent; however, knowing whether groups were confident in or satisfied with a decision in one case was not statistically significantly associated with confidence in or satisfaction with the group decision in other cases.

Supplemental Analyses of the Impact of the Intervention on Discussion Time

The intervention instructed groups to take more time to discuss both traditional and emergent forms of information (see Appendix A). Due to missing data (i.e., camera malfunctions that made it impossible to determine discussion time), only 37 of the 71 groups' discussion times could be evaluated. In order to examine the effect of the intervention on discussion time, a factorial ANOVA indicated that the main effect of time was significant, $F(8, 557) = 8.06, p < .01$, and the time by condition interaction was significant, $F(8, 557) = 6.04, p < .01$. Table 13 contains the means and standard deviations for discussion time across tasks and conditions and Figure 5 plots those means. Using planned contrasts, results reveal that there were no significant differences in discussion time across tasks in the control condition. Recall that in the first experimental condition, groups received the intervention prior to the second group discussion, so

if the intervention were to have an immediate effect, it should be observed between T1 and T2, but the differences in discussion times were not significant. However, there was a significant increase in discussion time in the first experimental condition between T2 and T3, $t(555)= 2.19$, $p < .05$, and the discussion time at T3 was significantly greater than in the control condition at T3, $t(555)= 2.58$, $p < .05$, indicating that the effect of the intervention was delayed. In the second experimental condition, groups received the intervention prior to their third task. In this condition, groups spent significantly less time discussing the case at T2 than they did at T1, $t(555)= -2.22$, $p < .05$. That said, groups spend a significantly greater amount of time discussing the case at T3 than they did at T2, $t(555)= 5.71$, $p < .01$. These analyses suggest that groups that did not receive the intervention did not significantly vary in their discussion times across tasks. The effect of the intervention on discussion time in the first experimental condition was delayed, in that significant increases were expected between T1 and T2 but were observed between T2 and T3. In the second experimental condition, as expected, there was a significant increase in discussion time between T2 and T3, during which time groups had received the intervention.

Supplemental Analyses of the Round-Robin Evaluations of Group Discussion

The round-robin items described in Chapter 4 measured not only perceived use of emergent and common information, but also included three additional items that participants used to evaluate participants after discussion. These questions, provided after each discussion, asked participants to rate each other (and self) on (a) influence, (b) argument quality, (c) and participation frequency. Similar to perceptions regarding the use of the two types of information, I used the TripleR package to estimate partner effects for the three additional items across time and condition. Here, partner effects for all five items were group-mean centered to control for the effect of group (Enders & Tofighi, 2007; Kenny, 1994).

In what follows, I used Fishers r -to- z transformationⁱ to compare a small subset of correlations among the partner effects within and across time and condition, where z 's greater than 1.96 are statistically significant, $p < .05$ (see Table 23). First, I evaluate the correlations between the two measures of perceived information use. Second, I examine the correlations between information use and perceived influence. Finally, I assess the correlations between information use and argument quality.

Perceived use of emergent and common information. The correlation between perceived use of common and emergent information was significantly and positively correlated at T1 in all conditions. In the experimental condition where groups received the intervention prior to the T2 discussion, the association between perceived use of emergent and common information was also significant at T3, but in opposite directions (i.e., it was positively associated at T1 but negatively associated at T3). The correlations between the two types of perceived information use were not significant at T2 or T3 in the control condition or the experimental condition where groups received the intervention prior to the T3 discussion.

Perceived information use and influence. Within the control condition, the association between perceived influence and use of common information and was significantly greater than its association with perceived use of emergent information at T1 and T2, $z_s = 4.05$ and 2.82 respectively. With regard to changes across time, the only significant difference was between perceived influence and perceived use of common information at T1, $r(99) = .70$, $p < .01$ and T2, $r(99) = .48$, $p < .01$, $z = 2.39$. Within the first experimental condition (where groups received the intervention prior to the T2 discussion), at T1 the relationship between perceived influence and use of emergent information, $r(80) = .45$, $p < .01$ was significantly smaller than with perceived use of common information, $r(80) = .68$, $p < .01$ $z = 2.14$. Within the second experimental

condition (where groups received the intervention prior to the T3 discussion) the relationship between perceived influence and emergent information at T2 was significantly lower than at T1 ($z = 2.13$), and when compared to the association between perceived influence and perceived use of common information at T2 ($z = 2.52$).

Differences across conditions. There were two significant differences across conditions, between the control and experimental conditions in the discussions following the administration of the intervention. At T2, the relationship between perceived use of common information and influence was significantly greater in the control than in in the first experimental condition (where groups had received the intervention prior to the T2 discussion), $z = 2.25$. At T3, the relationship between perceived influence and emergent information was significantly lower in the second experimental condition (where groups had received the intervention prior to the T3 discussion) than the control condition, $z = 2.11$.

Perceived information use and argument quality. Within the control condition, the associations between perceived argument quality and perceived use of common information were significantly larger than with perceived use of common information at T1 and T2, $z_s = 4.25$ and 3.73 . Also, the relationship between argument quality and perceived use of common information was significantly smaller at T3 than it was at T1, $z = 1.89$. Within the first experimental condition where groups received the intervention prior to the T2 discussion, the relationship between argument quality and perceived use of common information at T1 was significantly greater than relationship between (a) perceived use of emergent information and argument quality at T1, $z = 2.52$ and (b) perceived use of common information and argument quality at T2, $z = 2.35$. In addition, the difference in the relationships between argument quality and the two types of perceived information use was significant at T3, $z = 2.58$. Within the second

experimental condition where groups received the intervention prior to the T3 discussion, the relationship between perceived argument quality and common information use was greater than perceived use of emergent information at T1 and T2, $z_s = 1.73$ and 3.07 . The associations between perceived argument quality and emergent information use at T1 to T2, as well as the associations between perceived argument quality and common information use at T2 and T3 were significantly smaller, $z_s = 2.65$ and 1.76 .

Differences across condition. The relationship between perceived argument quality and common information use was greater at T2 in the control condition than in the experimental condition where groups received the intervention prior to the T2 discussion, $z = 2.62$. The relationship between perceived argument quality and emergent information was also significantly greater at T3 in the control than at in the experimental condition where groups received the intervention prior to the T2 discussion, $z = 1.83$.

Chapter 6

Discussion

In this dissertation, I advocated for the expansion of more traditional definitions of information to include both common and emergent forms types of data. I outlined the ways that group norms as well as individual-level factors influence whether and how group use and value different types of information during decision-making discussions. I also tested the effectiveness of an intervention and manipulated its timing, to examine whether groups would increase the amount of information used while making decisions. It was also expected that group norm development would affect the convergence of group members' pre-discussion expectations and post-discussion assessments of group interaction. In what follows, I describe the extent to which this dissertation provides support for these ideas, and close this chapter by discussing limitations of the current study and possibilities for future research.

Normative Information Use Across Time

Most of the studies on group information sharing examine whether the distribution of information within and across groups influences process and outcomes within a single meeting. Only two studies have examined information sharing and group decision making across a series of tasks. One study found that information sharing norms persist across a series of four intellectual tasks, where each task required groups to make decisions in a different context (Greitemeyer, Schulz-Hardt, Brodbeck, & Frey, 2006). The other study found that groups that

were primed to employ certain information-sharing norms during a judgmental task tended to employ similar norms during an intellectual task that followed (Postmes, Spears, & Cihangir, 2001). The use of intellectual tasks potentially limits information sharing in groups though, in that once information requisite for demonstrating the optimal solution has been contributed to discussion, further exploration of available data is often unnecessary. The current project extends these two studies by, among other things, evaluating normative information use across a series of similar but distinct judgmental tasks. Groups such as grand juries or promotions and tenure committees often work on judgmental tasks that lack a demonstrably correct solution, which means that these groups often have to discuss greater amounts and different types of information (than groups working intellectual tasks) in order confidently agree upon a given decision solution. In many cases each group member is exposed to or provided with the same information and the issue is how groups discuss and consider common information when making decisions. It is also often the case, however, that participants supplement common information during discussion with emergent information in the form of task-relevant attitudes, expectations, and everyday experiences. Emergent information has the potential to influence group outcomes either by amplifying or contradicting task-based, or common, data.

In this dissertation, common information was operationalized as details contained in the NGRI cases that were provided to participants prior to and during group discussion. Familiarity with mental illness, as well as attitudes about mental health, represented the possession of emergent information. The perceived use of emergent information was captured with round-robin assessments made after each discussion of whether group members were perceived as contributing personal stories and/or opinions during the discussion.

Findings from the current study suggest that group members perceive differences in the use of common and emergent forms of information across tasks. The fact that participants perceived differences in the use of information during decision-making discussions provides support for the expansion of traditional definitions of information to include emergent forms of data. Specifically, participants were perceived as supplementing their use of common information with increasing amounts of emergent information over time. Traditional definitions of information would not have been able to capture this trend, as emergent types of data have typically been treated as “nonsubstantive” in nature. Furthermore, that participants in this study were perceived to have used increasing amounts of emergent data across tasks calls into question the claim that groups do not take advantage of all or even most of their informational resources during decision making discussions (e.g., Stasser & Titus, 2003). It could be the case that groups are rather ineffective at processing information, but I provide at least preliminary evidence to suggest that traditional definitions of information have perhaps been too restrictive to fully represent all of the evidence groups consider during decision making interactions.

Regarding patterns of information sharing across time, the structuration perspective suggests that information changes the nature of discussion and its use (i.e., collective information processing) is influenced by the topic of foci at any given point during group discussion, as well as norms related to information use during previous interactions (Bonito, 2007; Poole, Seibold, & McPhee, 1985; Propp, 1999). Analysis of data from the control groups provides some evidence to support this perspective. For example Figure 2 reveals no difference in the perceived use of common information during the second and third discussions. This substantiates the position that when left to their own devices, groups develop normative expectations regarding common information use when making decisions across a series of similar tasks (Hackman &

Gersick, 1990; Simons, 1955). Patterns of perceived emergent information use, however, varied across the three tasks for the control groups, indicating perhaps that participants were still wrestling with appropriate use of that type of information. When taken together, these data suggests that patterns in perceived use of common information are different than patterns of perceived use of emergent information over time.

The view taken here is that group members have access to common and emergent data, but that the use of these informational resources is contingent upon the information sharing norms employed by particular groups. For example, groups are often faced with competing heuristics, particularly when it comes to making “informed” decisions. First, agreement at the outset of a meeting often suppresses the discussion and evaluation of information, due to the heuristic that consensus (among group members) implies correctness (e.g., Maheswaran & Chaiken, 1991). Second, even if members find that they are not in agreement at the outset of a meeting or task, groups rarely discuss all of the information available to them, but instead will use what they consider to be a satisfactory amount of information (Simons, 1955), despite the fact that that discussion of more information is often assumed to produce better quality outcomes (e.g., Hirokawa & Pace, 1983). Third, groups often fall into patterns and routines for sharing information that, irrespective to whether they are effective, will be maintained until some external force intervenes (e.g., Arrow, 1997).

Changing Normative Information Use

In this dissertation, the purpose of the intervention was to encourage participants to consider using emergent information during decision-making discussions without suppressing group members’ use of common information. The intervention was designed in such a way that the feedback was (a) neutral in valence, so that the feedback did not imply whether groups had

been “effective” in their decision making processes, (b) specific, in that it instructed participants to discuss the case details as well as their personal experiences related to the tasks, and (c) simplistic enough that it would be easy for groups to make the requested changes with only minimal alternations to naturally occurring information sharing and decision making practices. To this last point, it is particularly meaningful when effects can be observed with minimal manipulations (Prentice & Miller, 1992). And regarding the effectiveness of the intervention, as expected, participants perceived significant increases in the use of emergent information in the discussions following the intervention in both experimental conditions, and there was no evidence to suggest that increased use of emergent information was at the expense of common information.

Following the assumption that norms develop and become entrenched over time (e.g., Hackman & Gersick, 1990; Postmes et al. 2001), I hypothesized that the timing of the intervention would impact its effectiveness. In first experimental condition, groups received the intervention *after* having potentially established norms in the first group discussion but *before* having the opportunity to repeat them in the second discussion. In the second experimental condition, groups were given the opportunity to develop and maintain information sharing norms across two tasks before receiving the intervention. Therefore, I expected greater and sustained increases in perceived information use in the first experimental condition when compared to the second experimental condition.

While the intervention was effective with regard to increasing perceived use of emergent information in both experimental conditions, counter to expectations the intervention elicited greater increases in perceived use of emergent information when administered *later* in a series of tasks. It could be the case that group members felt more comfortable sharing personal

experiences and attitudes after working through multiple tasks with one another (rather than just a single task in the first experimental condition). Results for the perceived use of common information differed in important ways from that for emergent information. Participants perceived that they used more common than emergent information across tasks. Furthermore, the intervention elicited greater increases in perceived use of common information when administered *earlier* in a series of tasks, whereas the intervention was more effective at increasing perceived use of emergent information when administered *later* in a series of tasks. Also, the effect of the intervention on perceived use of common information use was delayed, in that significant increases (when compared to the control) were only observed during the third group discussion, even though the intervention was administered prior to the second group discussion. Similar to Greitemeyer et al.'s (2006) findings, it is likely that groups in first experimental condition needed practice with the new discussion procedures (during the second task) before they were able to successfully increase their use of common information during the third discussion. At the very least, evidence provided by this dissertation suggests that the development and maintenance of norms related to the use of common information seems to be different than for use of emergent information.

Groups in this study also seemed to differentially value the use of common and emergent types of information across time and condition. Following the first group discussion (when the intervention had yet to be read to groups in the experimental conditions), the relationships between perceived influence and argument quality with common information use were stronger than those relationships with perceived use of emergent information across all conditions. By the end of the third discussion, group members in the control and second conditions (where groups received the intervention prior to the T3 discussion) seemed to place equal value on emergent

and common information (i.e., there were no significant differences in the relations of perceived influence, argument quality, and the two types of information at T3 in either condition). A slightly different pattern was observed when groups received the intervention prior to the T2 discussion, in that there were no significant differences in the associations among perceived influence, argument quality, and the two information use measures in the discussion following the intervention, but by T3 the relationships between perceived influence and argument quality with common information use were once again greater than their relationships with emergent information use. These findings indicate that the intervention was successful at disrupting norms regarding the *frequency* by which group members were perceived to contribute emergent information to discussion, but that the intervention did not consistently affect norms regarding the value placed on the use of these types of contributions.

Experiences With and Attitudes About Mental Illness

In the current study, general familiarity with mental illness (i.e., having some general knowledge about mental illness), personal familiarity with mental illness (i.e., having been diagnosed or knowing someone that has been diagnosed with a mental disorder), and attitudes about mental health were treated as measures of emergent information. Results suggest that group members who were personally or generally familiar with mental illness were perceived as contributing significant amounts of emergent information in the first and second discussions respectively. However, the relationship between familiarity with mental illness and the perceived contributing of emergent information became contingent upon (i.e., moderated by) attitudes about mental illness in the second and third discussions. Specifically, those who were personally familiar with mental illness and held positive attitudes toward mental illness were perceived as contributing significant amounts of emergent information during the second discussion, and

group members who were general familiarity with mental illness and held positive attitudes toward mental illness were perceived as contributing significant amounts of emergent information during the third discussion. This evidence suggests that different types of emergent information interact and operate differently over time, but as reported in Chapter 4, neither type of familiarity predicted use of common information, nor did attitudes toward mental illness.

The findings concerning moderators of emergent information use provide additional support for the need to expand traditional definitions of information. Previous studies (using traditional definitions of information) indicate that attitudes and opinions exert significant influence over how group members contribute common information to group discussion (e.g., Stasser & Titus, 2003), especially when groups are making decisions about whether to grant NGRI (e.g., English & Sales, 1997; Loudon & Skeem, 2007), but in this sample attitudes influenced the perceived contributing of emergent information rather than common information.

In sum, this dissertation provided support for the expansion of traditional definitions of information to include both common and emergent forms of information. Evidence suggests that groups differentially develop and maintain norms for sharing common versus emergent information, which is why the intervention, and the timing of its implementation, had different effects on the perceived contributing of these types of information.

Practical Applications and Implications

These data have some important implications for both real and mock jury deliberations. For example, during the selection process of jury trials potential jurors are asked if they have any personal experiences regarding the crime (or crimes) a defendant is accused of having committed. Jurors with personal experiences related to the crime or crimes in question are considered to have an inferred bias. Jurors with inferred biases can be but are not necessarily

dismissed because of said bias, as long as the juror believes that he or she can remain impartial throughout the trial (Starr & McCormick, 2009, p. 18). In the current study those with personal or even general familiarity with mental illness possessed an inferred bias that did in fact influence their perceived use of emergent information over time. These data imply that in cases where evidence and testimony presented in the trial would favored the defendant, the prosecution should try to remove jurors that have personal experiences related to the crime or crimes in question so that the deliberations would primarily focus on common rather than emergent forms of information. Further to this point, jurors will typically create hypothetical scenarios regarding consequences for having rendered innocent versus guilty verdicts (SunWolf, 2010). If those hypothetical scenarios are supplemented with actual personal experiences, those narratives then have the potential to become highly persuasive during the deliberation process.

These data also indicate that the longer juries deliberate the greater value jurors will place on emergent information. If jurors are asked to render verdicts on multiple counts or charges, their personal experiences, attitudes, and/or opinions, if contributed during discussion, will play a greater role as deliberations go on. Although the current study operationalized familiarity very narrowly (see more below), knowing the nature of a potential juror's personal experiences would be important for the prosecution and defense to consider when selecting jurors that they believe will render desired verdicts. For example, going back to inferred bias, if a potential juror had previously been the victim of a violent crime, the defense would likely want to select that person as he or she might be prone to convict a defendant based personal experiences. On the other hand, if a potential juror had a family member or friend that was wrongfully convicted of a crime, he or she may be more sympathetic toward a defendant and therefore would be advantageous to the prosecution.

Limitations and Areas for Future Research

One potential limitation of this study is with regard to experimental demand characteristics (Orne, 1962), where participants change their behavior (during a laboratory session) to be in accordance with what they (the participants) believe is expected or desired by the researcher. The intervention that was used in this dissertation explicitly stated that I wanted participants to discuss more (common and emergent forms of) information. Considering that a majority of the analyses presented herein focused on *perceived* rather than actual use of common and emergent information, one concern is whether participants were merely reporting that they felt that they had increased their use of common and emergent information without actually doing so. One way that I was able to reduce this possibility was with the analysis of partner effects from the social relations model, so that instead of examining self-report data (which could include experimental demand biases), I evaluated the average of *others'* ratings of a group member's behavior when controlling for the non-independence of the ratings (Kenny, 1994). A related concern is that participants were merely following instructions, rather than actually changing norms related to the ways that they contribute information to group discussion. If this were the case, I would have only observed increases in perceived use of common and emergent information during the group discussions immediately following the intervention. Instead, with regard to discussion time *and* perceived use of common information, I observed a delayed effect in the first experimental condition in that significant increases were not observed in the T2 discussions that immediately followed exposure to the intervention, but significant increases were instead observed during the T3 discussion.

Additionally, for the most part participants had similar perceptions of group processes and outcomes. Participants had comparable assessments of the group discussion, at least

regarding perceived information use, influence, argument quality, and to a certain extent satisfaction with and confidence in the group decision. That said, while it is important to consider what participants *believe* to be true of their behaviors and experiences, it would be helpful to know whether differences exist in perceived versus actual information use within and across discussions which, though beyond the scope of this project, would require the analysis of the group discussion data.

Perceived use of emergent information increased over time and across conditions, but it is unclear *how* and *what types* of emergent information were being contributed to group discussion. For example, those who were personally and generally familiar with mental illness were perceived as contributing significant amounts of emergent information in the second and third discussions when they also held positive attitudes about mental illness. Analysis of the discussion data might reveal whether those familiar with mental illness are contributing accurate and/or positive information about mental illness (or not).

Analysis of the discussion data would also be helpful in determining whether discussion contributions converged within and across tasks. Convergence represents whether and to what extent expectations for and perceptions of discussion, and behaviors such as participation frequency and the contributing of different types of functional communication across tasks are primarily driven by individuals, or whether placement in certain groups has some bearing on what group members think and say (e.g., Bonito, Gastil, Ervin, & Meyers, 2014; Ervin, Bonito, & Keyton, 2015). One factor that contributes to convergence is the implementation of norms, which tend to standardize interaction. Counter to expectations, participants' pre-discussion expectations regarding group interaction did not converge in the groups examined by this dissertation. Group interaction had little effect on whether group members found it easy, or

thought that others would find it easy, to decide whether to grant NGRI. Perceptions regarding anticipated agreement and discussion time also did not converge, even though most members perceived the cases to be equal (i.e., there were no significant differences in participants' likelihood to grant NGRI in the three cases at the outset of the first discussion), and most groups consistently decided *not* to grant NGRI (see Table 1). With regard to post-discussion assessments of group discussion, group members' satisfaction with and confidence in the group decisions converged, but only when data were collapsed across conditions did significant group-level trends emerge. Specifically, groups that were confident during the first discussion were less confident during the second discussion, but more confident in the third discussion. However, knowing whether groups were satisfied with group decisions during one task was not associated with being satisfied with decisions on other tasks. Just because perceptions did not converge does not mean convergence did not take place though. Analysis of the discussion data would enable the assessment of the frequency by which participants contributed to discussion, and/or their use of common or emergent information, did in fact converge within and/or across tasks.

In addition to supplementing analyses of perceptions with actual discussion data, future projects might also consider the use of stimulated recall. For example, shortly after working in groups, participants could watch a playback of their group interaction, and be given the opportunity to stop the video (or researchers could stop the video at certain intervals) so that participants could report on their thoughts, feelings, and/or motivations throughout group discussion (Waldron & Cegala, 1992). Without something like stimulated recall, it is difficult to know whether emergent information was activated from long-term memory at various times throughout group discussion (e.g., Bonito, 2007), and it also allows for participants to report more precisely on what played into the decision to contribute it to group discussion (or not).

Future studies also need to carefully consider the ways in which tasks influence group information sharing. For example, anecdotally participants responded favorably toward (i.e., expressed interested in) the NGRI tasks at the end of their laboratory sessions; however, most groups used less than half of the time allotted to them to work through the tasks (see Table 13). Findings reported here would be bolstered (rather than currently remaining extremely tentative) if they were replicated when using different types of tasks, especially if there were greater variances in discussion times within and across groups. For instance, in a future study I would not change the decision rule, as unanimity typically requires a fair amount of deliberation, but perhaps would pick tasks that had more than two options, which would increase the likelihood that participants would develop different decision solution preferences, which in turn increases the need to discuss with and potentially influence others in order for a resolution to be made. Relatedly, more work is needed to identify whether and when tasks will promote or inhibit the use of emergent information, and under what conditions might emergent information disrupt group processes and/or reduce decision quality.

Furthermore, a primary goal of this study was to compel groups to use and consider emergent information during discussion of the NGRI tasks. This goal stands in sharp contrast to the majority of studies on group decision making in legal contexts that focus on *suppressing* the use of emergent information, in the form of stereotypes and attitudes, during group discussion (e.g., Stawiski, Dykema-Englbade, & Tindale, 2012). The utilization of NGRI tasks in this dissertation may seem counterintuitive, then, in that (a) it is rarely up to juries to decide whether to grant NGRI (e.g., Perlin, 1990), and (b) most experimental groups that render decisions about whether to grant NGRI are explicitly instructed *not* to use their personal opinions and attitudes when evaluating case-relevant information, the concern being that attitudes have the potential to

bias how group members process and discuss case-related information (e.g., Peters & Lecci, 2012). However, when it comes to the insanity defense, participants cannot seem to help it—even when instructed to put their personal opinions aside, group members' attitudes about mental illness are nevertheless the strongest predictors of whether groups are willing to grant NGRI (e.g., Ogloff, 1991; Smith, 1993). Therefore, NGRI tasks provide an ideal context to examine groups' use of common *and* emergent types of information when making decisions, as common information represents use of the NGRI case details, and emergent information represents the use of personal experiences and attitudes when making discussing NGRI cases and making decisions about whether NGRI should be granted. In the current study, the intervention that prompted groups to spend more time discussing diverse types of information actually *increased* perceptions that group members' discussed their attitudes about mental illness. The point was to increase amount of information groups talked about during decision-making interactions and to allow group members to verbalize the attitudes and opinions that they used to form opinions and make judgments, rather than to suppress the use of emergent information as other studies have done. And unlike previous studies, I found that participants' attitudes about mental illness and the insanity influenced the (perceived) contributing of emergent but *not* common forms of information.

Finally, two other methodological limitations are worth noting, regarding the familiarity variable and the wording intervention. First, familiarity was measured imprecisely. For example, I limited familiarity to the three mental disorders used in the NGRI cases, but knowing someone with PTSD for example might have little bearing on how a participant decided whether to grant NGRI in the case concerning schizophrenia. Furthermore, the way that I dichotomized the personal and general familiarity variables made it so that participants with experience with one

of the mental disorders in question were treated as equally familiar with mental illness as participants that had experience with all three mental disorders. While doing so reduced measurement precision, I made the choice out of the concern that participants in this sample (i.e., undergraduates) tend to be rather homogeneous, and would have fewer experiences with mental illness when compared to a community-based sample. The general familiarity variable could also be improved by considering the differences in how, for example, perceptions about mental illness of someone that took a Psychology 101 class differs from someone that watches a lot of psychological thrillers or crime dramas that tend to portray the mentally ill as violent criminals. Lastly, even though the discussion of increased amounts of information would likely require groups to deliberate longer, future studies might consider the use interventions that target either discussion time or the use of emergent information separately so that the two are not confounded.

Appendices

Appendix A

The Group Feedback Intervention

“Research has found that groups typically do not discuss all of the information available to them when making decisions. As a group, please consider taking a greater amount of your time to work through the task, and make sure that you’re discussing diverse types of task-related information. This means you should talk not only about the details about the case, but also feel free to express your personal experiences with or knowledge about the mental disorder in question, as well as attitudes about NGRI and mental illness.”

Appendix B

Task Instructions Read to Participants Prior to Each Group Discussion

Your task is to discuss the case you just read about, and as a group make a decision about whether to grant NGRI. NGRI, or not guilty by reason of insanity, can only be granted if you are all in agreement to do so. If you are not in agreement about whether to grant NGRI, the original conviction will stand.

<Insert Intervention If Applicable>

Please take up to ten minutes to come to an agreement. If you finish before the 10 minutes are up, please let me know. Otherwise I'll let you know when you have about one minute remaining.

Appendix C

NGRI Capital Cases Adapted from Staggs, Ervin, & Bonito (2015)

Michael Fisher

Case Facts:

- Fisher confessed to the murder of 27-year-old Dwight Harrison.
- At the time of the crime, Fisher worked as a self-employed real estate appraiser and had no previous criminal record.
- Harrison hired Fisher to appraise his house.
- On the day of Harrison's death, a neighbor witnessed Fisher physically assaulting the victim and called police out of fear for Harrison's life.
- Police arrested Fisher under the suspicion of having murdered Harrison.
- While being interrogated by the police, Fisher claimed that he has no memory of the afternoon of Dwight Harrison's death, and had never met the victim face to face.
- After examining Fisher's background and family history, police found that he had diagnosed himself as suffering from PTSD.
- Fisher claimed to have had problems maintaining interpersonal relationships, that he rarely felt positive emotions, and often acted in impulsive and aggressive ways that he felt were beyond his control. He never sought help for his disorder, choosing instead to handle it himself in various ways, such as self-medication, and being self-employed and mainly working alone.
- Fisher told police that it is not unusual for him to have gaps on his memory. Fisher also mentioned to police, while in custody, that Dwight Harrison bore a strong resemblance to a boy who had bullied Fisher throughout his adolescence.
- After lengthy interrogation by the police, Fisher confessed to the crime and waived his right to trial in order to avoid the death penalty.
- Now that time has passed and the initial shock has worn off, Fisher has requested to enter a plea of not guilty by reason of insanity due to his self-diagnosed PTSD.
- A court ordered psychological assessment has been conducted, and Fisher's case will now go to a committee who will decide whether to recommend a plea of not guilty by reason of insanity.

Expert Testimony: Assessment completed by Dr. Nunes (Court Appointed Clinical Psychologist):

- Mr. Fisher currently suffers from PTSD. Consistent with this disorder, he has unstable interpersonal relationships, he tends to be impulsive, and his mood and anger fluctuate quickly. Mr. Fisher is prone to emotional distress or physical reactions to stressful events, especially when something reminds him of the trauma he experienced from the severe bullying he endured throughout his adolescence.
- Based on psychiatric analysis, it is possible that Mr. Fisher may have suffered from PTSD at the time the crime was committed.
- PTSD can last for years following a traumatic experience. Symptoms include irritability, angry outbursts or aggressive behavior, self-destructive behavior such as drinking too much or driving too fast, trouble sleeping, and being easily startled or frightened.
- Symptoms vary in strength and intensity over time, but tend to become more pronounced after being triggered by a stressor.
- With PTSD, people often self-medicate to help manage feelings of hopelessness, emotional numbness, and general negativity towards others.
- Dwight Harrison looked like a boy who had bullied Mr. Fisher throughout his adolescence, and the trauma of this extensive bullying was likely responsible for his PTSD. It is plausible that the physical similarities between Harrison and Mr. Fisher's childhood bully triggered that trauma. Mr. Fisher most likely was not able to differentiate between Harrison and his childhood bully and thus used physical force, thinking he was protecting himself.

***Defense Claim:* The Defense seeks to have the verdict overturned and changed to a plea of not guilty by reason of insanity.**

- In an insanity defense, an appellant is deemed not guilty because a lack of *mens rea*. This means the defendant was so mentally unstable at the time of the crime that he lacked the capacity to have intended to commit a crime.
- A court appointed psychologist gave Fisher a psychological assessment, which resulted in Fisher being diagnosed with PTSD.
- From the psychological assessment it appears likely that Fisher could have been mentally unstable at the time of the crime.
- Because of the possibility that Fisher was mentally unstable at the time the crime was committed, Fisher should be granted NGRI.
- If Fisher is found not guilty by reason of insanity, he would be committed to the state mental hospital for treatment. His case would be reviewed every six months, and he could possibly be released back into society after being deemed mentally healthy.
- Granting NGRI is not a “get out of jail free” card. In roughly half of the cases in which NGRI is granted, the person will spend the same amount of time, or more, in a mental health facility than those convicted of similar charges spend in prison.

***Prosecution Claim:* The Prosecution seeks to uphold Fisher's prior conviction to a life sentence.**

- Fisher was never previously diagnosed with any mental disorder; therefore, his actions cannot be explained by insanity.
- Fisher confessed to killing Dwight Harrison, whose life was cut short.
- Fisher knew that he was taking an innocent life, and should be held responsible for his actions.

Jacob Schneider

Case Facts:

- Schneider confessed to the murder of 26-year-old Reed Wallmond.
- Schneider had no previous criminal record at the time of the crime.
- Schneider is a comic book enthusiast who is infatuated with Superman's archenemy Lex Luthor.
- For the last 20 years Schneider had submerged himself into the character to the extent that when he put on Lex Luthor's costume he believed he was in fact Lex Luthor. He dreamt about one day confronting his superhero rival, Superman.
- Reed Wallmond was attending a comic book convention and was dressed up as his favorite comic book hero, Superman.
- Schneider shot and killed Reed Wallmond after a chance encounter at the convention.
- Schneider was never professionally diagnosed with a mental disorder, though when police investigated his background and family history, they found that he had displayed symptoms of schizophrenia in the past, and had diagnosed himself with anxiety because there were times that he felt that people were watching him or were out to get him. He did not seek treatment, nor did he seek the help from his family and friends.
- After lengthy interrogation by the police, Schneider confessed to the crime and waived his right to trial in order to avoid the death penalty.
- Now that time has passed and the initial shock has worn off, Schneider has requested to enter a plea of not guilty by reason of insanity due to his schizophrenia.
- After a court appointed psychological assessment, Schneider's case will now go to a committee who will decide whether to recommend a plea of not guilty by reason of insanity.

Expert Testimony: Assessment completed by Dr. Figgins (Court Appointed Clinical Psychologist):

- Mr. Schneider is currently suffering from schizophrenia. Consistent with this disorder, he has problems distinguishing fantasy from reality.
- Based on the psychological assessment, it is possible that Mr. Schneider was suffering from schizophrenia long before the comic book convention.
- Schizophrenia is a mental illness that can affect a person's life socially, emotionally, and mentally.
- Symptoms vary in strength, and tend to become more pronounced when triggered by

stress.

- With schizophrenia, people often have hallucinations and act out on their delusions without being aware of reality.
- Mr. Schneider's schizophrenia might have caused him to confuse fantasy with reality. He believed that by dressing up as Lex Luthor, he took on the character of "The Lex Luthor."
- Mr. Schneider was so obsessed with the comic world that he embraced every trait that made up the character of Lex Luthor. During the assessment, Mr. Schneider mentioned that when he put on his Lex Luthor costume, he felt that he was the comic book villain and was put on the earth to "take down" Superman. When Mr. Schneider saw Reed Wallmond at the comic book convention, he probably did not see him as a person, but rather was under the belief that Wallmond was in fact Superman. Also believing that he was Lex Luthor, Mr. Schneider thought he was facing his archenemy and finally had the opportunity to kill Superman.

***Defense Claim:* The Defense seeks to have the verdict overturned and changed to a plea of not guilty by reason of insanity.**

- In an insanity defense, an appellant is deemed not guilty because a lack of *mens rea*. This means the defendant was so mentally unstable at the time of the crime that he lacked the capacity to have intended to commit a crime.
- A court appointed psychologist gave Schneider a psychological assessment, which resulted in Schneider being diagnosed with schizophrenia.
- The psychological assessment indicated that Schneider could have been mentally unstable at the time of the crime.
- The defense claims that Schneider is mentally ill and should be admitted to a mental hospital to receive medical attention. Schneider likely was not mentally stable at the time of the offense, and therefore, is not guilty by reason of insanity.
- If Schneider is found not guilty by reason of insanity, he would be committed to the state mental hospital for treatment. His case would be reviewed every six months, and he could possibly be released if he is ever deemed mentally healthy.
- Granting NGRI is not a "get out of jail free" card. In roughly half of the cases in which NGRI is granted, the person will spend the same amount of time, or more, in a mental health facility than those convicted of similar charges spend in prison.

***Prosecution Claim:* The Prosecution seeks to uphold Schneider's prior conviction to a life sentence.**

- Schneider was never formally diagnosed with any mental disorder prior to his conviction, and therefore likely knew that he was taking an innocent life, and should be held responsible for his actions.
- Schneider confessed to killing Mr. Wallmond.
- Prosecutors claim that Schneider was mentally stable at the time of the crime, his

actions were premeditated, and ultimately, he must pay for his actions.

Chip Perkins

Case Facts:

- Perkins confessed to the murder of 31-year-old Mark Becker.
- At the time of the crime, Perkins had no prior criminal record and worked from home as a freelance writer.
- Perkins was a lonely and sometimes angry and moody individual, but had no history of being a danger to himself or anyone around him.
- While being interrogated, Perkins told police that in the prior year, he became suspicious that his neighbor, Mark Becker, had become involved with the occult. After monitoring his neighbor in the following months, Perkins became convinced that Mark Becker had become possessed by the devil. Perkins then shot Mark Becker, claiming that he did so for protection of himself and others.
- After examining Perkins' background and family history, police found that he had diagnosed himself as suffering from severe bipolar disorder, though he never sought help for his anger, nor did he seek friends to relieve his loneliness.
- After lengthy interrogation by the police, Perkins confessed to the crime and waived his right to trial in order to avoid the death penalty.
- Now that time has passed and the initial shock has worn off, Perkins has requested to enter a plea of not guilty by reason of insanity due to his severe bipolar disorder.
- After a court ordered psychological assessment, Perkins' case will now go to a committee who will decide whether to recommend a plea of not guilty by reason of insanity.

Expert Testimony: Assessment completed by Dr. Conway (Court Appointed Clinical Psychologist):

- Mr. Perkins currently suffers from severe bipolar disorder. Consistent with severe bipolar disorder, Mr. Perkins experienced manic episodes, which included serious shifts in mood, energy, thinking, and behavior.
- Based on this psychiatric analysis, it is possible that Mr. Perkins may have suffered from severe bipolar disorder at the time the crime was committed.
- Symptoms of severe bipolar disorder include major cycles that can have high intense impulsivity and moodiness and intense low cycles with depressive symptoms, which are different from the normal ups and downs that everyone goes through from time to time.
- Symptoms vary in strength and duration, but tend to become more pronounced after being triggered by a stressor.
- Intense emotional states, often called "mood episodes," include drastic changes from usual behavior.
- It is possible to have several of these high and low cycles on a daily basis and throughout a person's life span.
- Mr. Perkins' mood episodes may have triggered a break from reality, such that he believed that Mark Becker was possessed by Satan and thus, through his actions, believed

that by killing him he was saving Mark Becker, himself, and others.

Defense Claim: The Defense seeks to have the verdict overturned and changed to a plea of not guilty by reason of insanity.

- In an insanity defense, an appellant is deemed not guilty because a lack of *mens rea*. This means the defendant was so mentally unstable at the time of the crime that he lacked the capacity to have intended to commit a crime.
- To begin the appeal process, a court appointed psychologist gave Perkins a psychological assessment, which resulted in Perkins being diagnosed with severe bipolar disorder.
- From the psychological assessment it appears that Perkins could have been mentally unstable at the time of the crime.
- The defense claims that Perkins is mentally ill and should be admitted to a mental hospital to receive medical attention. Perkins was not mentally stable at the time of the offense, and therefore, is not guilty by reason of insanity.
- If Perkins is found not guilty by reason of insanity, he would be committed to the state mental hospital for treatment. His case would be reviewed every six months, and he could possibly be released back into society after being deemed mentally healthy.
- Granting NGRI is not a “get out of jail free” card. In roughly half of the cases in which NGRI is granted, the person will spend the same amount of time, or more, in a mental health facility than those convicted of similar charges spend in prison.

Prosecution Claim: The Prosecution seeks to uphold Perkins' prior conviction to a life sentence.

- Perkins was never previously diagnosed with any mental disorder; therefore, his actions cannot be explained by insanity.
- Perkins confessed to killing a man who had done nothing wrong.
- Prosecutors claim that Perkins was mentally stable at the time of the crime and ultimately should be held responsible for his actions.

Appendix D

Need for Cognition Scale

1. I would prefer complex to simple problems.
2. I like to have the responsibility of handling a situation that requires a lot of thinking.
3. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.*
4. I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.*
5. I find satisfaction in deliberating hard and for long hours.
6. I prefer to think about small, daily projects to long-term ones.*
7. I like tasks that require little thought once I've learned them.*
8. I really enjoy a task that involves coming up with new solutions to problems.
9. I prefer my life to be filled with puzzles that I must solve.
10. The notion of thinking abstractly is appealing to me.
11. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
12. I feel relief rather than satisfaction after completing a task that required a lot of mental effort.*
13. It's enough for me that something gets the job done; I don't care how or why it works.*
14. I usually end up deliberating about issues even when they do not affect me personally.

Note. Items followed by an asterisk will be reverse coded. Anchors on Likert-type scales will range from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

Appendix E

General Attitudes about Mental Health

- 1) There are effective medications for mental illnesses that allow people to return to normal and productive lives.
- 2) There are no effective treatments for mental illnesses. *
- 3) I feel anxious and uncomfortable when I'm around someone with a mental illness.
- 4) I tend to feel anxious and nervous when I am around someone with a mental illness.
- 5) When talking with someone with a mental illness, I worry that I might say something that will upset him or her.
- 6) I don't think that I can really relax and be myself when I'm around someone with a mental illness.
- 7) When I am around someone with a mental illness I worry that he or she might harm me physically.
- 8) I feel nervous and uneasy when I'm near someone with a □ mental illness.
- 9) Once someone develops a mental illness, he or she will never be able to fully recover from it.
- 10) People with mental illnesses will remain ill for the rest of their lives. *

Note. Items followed by an asterisk will be reverse coded. Anchors on Likert-type scales will range from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

Appendix F

Insanity Defense Attitudes-Revised Scale

- 1) With slick attorneys and a sad story, any criminal can use the insanity defense to finagle his way to freedom.
- 2) Perfectly sane killers can get away with their crimes by hiring high-priced lawyers and experts who misuse the insanity defense.
- 3) As a last resort, defense attorneys will encourage their clients to act strangely and lie through their teeth to appear “insane.”
- 4) The insanity plea is a loophole in the law that allows too many guilty people to escape punishment.
- 5) The insanity defense threatens public safety by telling criminals that they can get away with a crime if they come up with a good story about why they did it.
- 6) The insanity defense returns disturbed, dangerous people to the streets
- 7) Many of the crazy criminals that psychiatrists see fit to return to the streets go on to kill again.
- 8) Most defendants who use the insanity defense are truly mentally ill, not fakers. *
- 9) We should punish people who commit criminal acts, regardless of their degree of mental disturbance.
- 10) I believe that people should be held responsible for their actions no matter what their mental condition.
- 11) I believe that we should punish a person for a criminal act *only* if he understood the act as evil and then freely chose to do it. *

12) It is wrong to punish people who commit a crime for crazy reasons while gripped by uncontrollable hallucinations or delusions. *

13) I believe that mental illness can impair people's ability to make logical choices and control themselves. *

Note. Items followed by an asterisk will be reverse coded. Anchors on Likert-type scales will range from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

Table 1

Number of Groups that Granted NGRI for Each Case

	Yes	No
Chip Perkins	10	61
Jacob Schneider	24	47
Michael Fisher	11	60

Note: N = 71 groups.

Table 2

Mean Anticipated Agreement Across Time and Conditions

	Time 1	Time 2	Time 3
Control Condition	3.30 (0.74)	3.42 (0.90)	3.15 (0.94)
Intervention Prior to T2 Discussion	3.25 (0.75)	3.35 (1.01)	3.37 (0.98)
Intervention Prior to T3 Discussion	3.24 (0.72)	3.40 (1.01)	3.30 (0.94)

Note. Standard deviations are in parentheses.

Table 3

Mean Anticipated Discussion Time Across Time and Conditions

	Time 1	Time 2	Time 3
Control Condition	3.19 (0.86)	3.04 (1.02)	3.22 (1.10)
Intervention Prior to T2 Discussion	3.04 (0.87)	3.00 (1.02)	3.14 (1.08)
Intervention Prior to T3 Discussion	3.07 (0.93)	3.04 (0.96)	3.19 (1.24)

Note. Standard deviations are in parentheses.

Table 4

Mean Perceived Decision Difficulty Across Time and Conditions

	Time 1	Time 2	Time 3
Control Condition	2.93 (1.28)	3.32 (1.28)	3.05 (1.22)
Intervention Prior to T2 Discussion	3.18 (1.25)	3.46 (1.22)	3.39 (1.22)
Intervention Prior to T3 Discussion	2.91 (1.23)	3.24 (1.26)	2.97 (1.37)

Note. Standard deviations are in parentheses.

Table 5

Mean Perceived Decision Difficulty of Others Across Time and Conditions

	Time 1	Time 2	Time 3
Control Condition	2.69 (0.99)	3.06 (1.03)	3.00 (0.97)
Intervention Prior to T2 Discussion	2.79 (1.00)	3.20 (1.11)	3.17 (1.08)
Intervention Prior to T3 Discussion	2.65 (0.81)	3.13 (1.08)	2.82 (1.15)

Note. Standard deviations are in parentheses.

Table 6

Means for Partner Effects for Perceived Use of Emergent Information Across Time and Conditions

	Time 1	Time 2	Time 3
Control Condition	3.03 (1.10)	3.45 (0.91)	3.80 (0.82)
Intervention Prior to T2 Discussion	3.16 (1.40)	4.05 (1.24)	4.40 (1.16)
Intervention Prior to T3 Discussion	3.39 (1.09)	3.25 (1.02)	4.45 (0.88)

Note. Standard deviations are in parentheses.

Table 7

Means for Partner Effects for Perceived Use of Common Information Across Time and Conditions

	Time 1	Time 2	Time 3
Control Condition	5.25 (0.51)	5.48 (0.43)	5.48 (0.60)
Intervention Prior to T2 Discussion	5.31 (0.61)	5.59 (0.46)	5.73 (0.48)
Intervention Prior to T3 Discussion	5.29 (0.57)	5.53 (0.59)	5.63 (0.56)

Note. Standard deviations are in parentheses.

Table 8

Mean Confidence in the Group Decision Across Time and Condition

	Time 1	Time 2	Time 3
Control Condition	4.08 (1.05)	3.95 (1.07)	3.91 (1.22)
Intervention Prior to T2 Discussion	4.19 (1.03)	4.11 (1.12)	3.90 (1.15)
Intervention Prior to T3 Discussion	4.20 (0.85)	4.10 (1.09)	3.99 (1.16)

Note. Standard deviations are in parentheses.

Table 9

Mean Satisfaction With Group Decision Across Time and Condition

	Time 1	Time 2	Time 3
Control Condition	4.13 (1.07)	4.02 (1.05)	3.97 (1.23)
Intervention Prior to T2 Discussion	4.26 (1.08)	4.13 (1.18)	4.03 (1.13)
Intervention Prior to T3 Discussion	4.32 (0.80)	4.09 (1.19)	4.08 (1.14)

Note. Standard deviations are in parentheses.

Table 10

Mean Perceived Influence of Group Members Across Time and Conditions

	Time 1	Time 2	Time 3
Control Condition	5.04 (1.01)	5.40 (0.78)	5.41 (0.80)
Intervention Prior to T2 Discussion	5.09 (0.96)	5.52 (0.83)	5.66 (0.95)
Intervention Prior to T3 Discussion	5.14 (0.92)	5.41 (0.84)	5.67 (0.86)

Note. Standard deviations are in parentheses.

Table 11

Mean Perceived Argument Quality Across Time and Conditions

	Time 1	Time 2	Time 3
Control Condition	5.31 (0.86)	5.47 (0.75)	5.55 (0.89)
Intervention Prior to T2 Discussion	5.20 (0.95)	5.55 (0.91)	5.70 (0.94)
Intervention Prior to T3 Discussion	5.27 (0.95)	5.52 (0.81)	5.77 (0.77)

Note. Standard deviations are in parentheses.

Table 12

Mean Perceived Participation Frequency Across Time and Conditions

	Time 1	Time 2	Time 3
Control Condition	5.39 (0.93)	5.67 (0.79)	5.71 (0.87)
Intervention Prior to T2 Discussion	5.53 (1.03)	5.74 (0.80)	5.86 (0.92)
Intervention Prior to T3 Discussion	5.52 (0.96)	5.64 (0.84)	5.90 (0.76)

Note. Standard deviations are in parentheses.

Table 13

Mean Discussion Time Across Conditions and Tasks

	Task 1	Task 2	Task 3
Control Condition	260.23 (218.19)	284.38 (213.06)	256.11 (171.59)
Intervention Prior to T2 Discussion	266.73 (158.98)	263.00 (111.23)	341.19 (154.25)
Intervention Prior to T3 Discussion	293.08 (194.34)	219.93 (185.34)	407.84 (171.87)

Note. $N = 37$. Discussion time is in seconds. Standard deviations are in parentheses.

Table 14 (Table Spans Two Pages)

Fixed and Random Estimates for Perceived Use of Emergent Information

Parameter	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Intercept	3.14** (0.06)	3.18** (0.07)	3.20** (0.13)	3.20** (0.14)	2.87** (0.21)	2.85** (0.21)	2.84** (0.22)	2.85** (0.22)
Time	0.50** (0.05)	0.27 (0.18)	0.27* (0.06)	0.27* (0.12)	0.27* (0.12)	0.27* (0.12)	0.28* (0.12)	0.28* (0.12)
Time ²		0.11 (0.09)	0.11 (0.09)	0.11 (0.06)	0.11 (0.06)	0.11 (0.06)	0.11 (0.06)	0.11 (0.06)
Intervention Prior to T2 Discussion					0.46 (0.30)	0.46 (0.30)	0.46 (0.29)	0.46 (0.30)
Intervention Prior to T3 Discussion					0.23 (0.29)	0.24 (0.29)	0.23 (0.29)	0.23 (0.29)
General Familiarity					0.12 (0.09)	0.11 (0.09)	0.13 (0.09)	0.12 (0.09)
Personal Familiarity						0.10 (0.07)	0.08 (0.07)	0.08 (0.07)
NFC							0.19 (0.16)	0.19 (0.16)
General Familiarity x NFC							0.01 (0.18)	-0.05 (0.18)

Personal Familiarity x NFC						0.17 (0.14)
	Random Parameters					
Level 2 Intercept	0.92	0.92	0.92	0.91	0.92	0.92
Level 1 Intercept	0.01	0.01	0.00	0.00	0.00	0.00
Residual	0.77	0.76	0.77	0.77	0.77	0.76
Deviance	1379.56	1379.53	1355.49	1355.37	1343.92	1345.27

Note. Standard errors are in parentheses. NFC = need for cognition.

* $p < .05$. ** $p < .01$.

Table 15

Fixed and Random Estimates for Perceived Use of Common Information

Parameter	Model 1	Model 2	Model 3	Model 4
Intercept	5.31** (0.04)	5.28** (0.04)	5.28** (0.04)	5.28** (0.04)
Time	0.16** (0.03)	0.33* (0.10)	0.33** (0.08)	0.33** (0.07)
Time ²		-0.09 (0.05)	-0.09* (0.04)	0.09** (0.03)
Random parameters				
Level 2				
Intercept			0.21	0.19
Level 1				
Intercept				0.11
Residual			0.34	0.24
Deviance			950.40	911.52

Note. Standard errors are in parentheses.

* $p < .05$. ** $p < .01$.

Table 16

The Familiarity by Attitudes About Mental Health Interaction on Perceived Use of Emergent Information Across Time

Parameter	Time 1	Time 2	Time 3
Intercept	2.92** (0.27)	3.21** (0.25)	3.73** (0.24)
Intervention Prior to T2 Discussion	0.11 (0.37)	0.62 (0.33)	0.59* (0.30)
Intervention Prior to T3 Discussion	0.28 (0.36)	-0.22 (0.33)	0.55 (0.29)
General Familiarity	0.06 (0.13)	0.26* (0.12)	0.14 (0.14)
Personal Familiarity	0.23* (0.10)	-0.01 (0.09)	-0.17 (0.11)
NFC	0.28 (0.23)	0.24 (0.22)	0.29 (0.25)
Attitudes Toward Mental Illness	-0.05 (0.33)	-0.38 (0.32)	-0.87* (0.37)
General Familiarity x NFC	-0.26 (0.26)	0.03 (0.25)	-0.17 (0.29)
Personal Familiarity x NFC	0.35 (0.20)	-0.20 (0.19)	0.20 (0.22)
General Familiarity x Attitudes Toward Mental Illness	0.08 (0.34)	0.36 (0.33)	1.03** (0.38)
Personal Familiarity x Attitudes Toward Mental Illness	0.19 (0.21)	0.47* (0.20)	0.30 (0.24)
Random Parameters			
Level 2 Intercept	1.39	1.15	0.86
Residual	0.47	0.47	0.59
Deviance	424.54	424.54	411.65
			440.64

Note. Standard errors are in parentheses. NFC = need for cognition.

* $p < .05$. ** $p < .01$.

Table 17

Multilevel Correlation Matrix for Ease of Deciding Whether to Grant NGRI

	Time 1	Time 2	Time 3
Time 1	0.02	--	--
Time 2	0.23	--	--
Time 3	0.24	0.22	--

Note. Intraclass correlations are on the diagonal in bold. Individual-level correlations are on the lower diagonal and group-level correlations are on the upper diagonal. Dashes within a cell indicate that there was insufficient variance to calculate the effect. Individual-level correlations $> .11$ are significant at $p < .05$ (two-tailed). $*p < .05$, $**p < .01$, and $***p < .001$, one-tailed for intraclass correlations, two-tailed for all other group-level correlations.

Table 18

Multilevel Correlation Matrix for Perceived Ease of Others Deciding Whether to Grant NGRI

	Time 1	Time 2	Time 3
Time 1	.02	.64	-.85
Time 2	.15	.01	-.13
Time 3	.19	.28	.03

Note. Intraclass correlations are on the diagonal in bold. Individual-level correlations are on the lower diagonal and group-level correlations are on the upper diagonal. Dashes within a cell indicate that there was insufficient variance to calculate the effect. Individual-level correlations $> .11$ are significant at $p < .05$ (two-tailed). $*p < .05$, $**p < .01$, and $***p < .001$, one-tailed for intraclass correlations, two-tailed for all other group-level correlations.

Table 19

Multilevel Correlation Matrix for Anticipated Agreement with Other Group Members

	Time 1	Time 2	Time 3
Time 1	.06	--	--
Time 2	.15	.07	--
Time 3	.14	.16	.04

Note. Intraclass correlations are on the diagonal in bold. Individual-level correlations are on the lower diagonal and group-level correlations are on the upper diagonal. Dashes within a cell indicate that there was insufficient variance to calculate the effect. Individual-level correlations $> .11$ are significant at $p < .05$ (two-tailed). $*p < .05$, $**p < .01$, and $***p < .001$, one-tailed for intraclass correlations, two-tailed for all other group-level correlations.

Table 20

Multilevel Correlation Matrix for Anticipated Discussion Time

	Time 1	Time 2	Time 3
Time 1	.06	.80	.49
Time 2	.06	.08	.92
Time 3	.06	.17	.10

Note. Intraclass correlations are on the diagonal in bold. Individual-level correlations are on the lower diagonal and group-level correlations are on the upper diagonal. Dashes within a cell indicate that there was insufficient variance to calculate the effect. Individual-level correlations $> .11$ are significant at $p < .05$ (two-tailed). $*p < .05$, $**p < .01$, and $***p < .001$, one-tailed for intraclass correlations, two-tailed for all other group-level correlations.

Table 21

Multilevel Correlation Matrices for Confidence in the Group Decision

Combined Across Conditions			
	Time 1	Time 2	Time 3
Time 1	.26*	-.42*	.42*
Time 2	.19	.36*	.07
Time 3	.25	.15	.31*
Control Condition			
	Time 1	Time 2	Time 3
Time 1	.35*	-.60	.42
Time 2	.03	.33*	.09
Time 3	.31	.21	.27*
When Groups Received the Intervention Prior to the T2 Discussion			
	Time 1	Time 2	Time 3
Time 1	.27*	-.18	.53
Time 2	.25	.33*	-.13
Time 3	.31	.18	.38*
When Groups Received the Intervention Prior to the T3 Discussion			
	Time 1	Time 2	Time 3
Time 1	.08*	-.62	.25
Time 2	.32	.49*	.19
Time 3	.12	.08	.31*

Note. Intraclass correlations are on the diagonal in bold. Individual-level correlations are on the lower diagonal and group-level correlations are on the upper diagonal. Dashes within a cell indicate that there was insufficient variance to calculate the effect. Individual-level correlations $> .11$ are significant at $p < .05$ (two-tailed). * $p < .05$, ** $p < .01$, and *** $p < .001$, one-tailed for intraclass correlations, two-tailed for all other group-level correlations.

Table 22

Multilevel Correlation Matrices for Satisfaction With the Group Decision

Combined Across Condition			
	Time 1	Time 2	Time 3
Time 1	.24*	-.25	.35
Time 2	.22	.38*	.08
Time 3	.30	.13	.29*
Control Condition			
	Time 1	Time 2	Time 3
Time 1	.33*	-.57	.34
Time 2	.10	.26*	-.01
Time 3	.49	.18	.23*
When Groups Received the Intervention Prior to the T2 Discussion			
	Time 1	Time 2	Time 3
Time 1	.24*	-.08	.48
Time 2	.41	.39*	-.12
Time 3	.31	.15	.31*
When Groups Received the Intervention Prior to the T3 Discussion			
	Time 1	Time 2	Time 3
Time 1	.01*	-.66	.57
Time 2	.16	.53*	.23
Time 3	.06	.13	.36*

Note. Intraclass correlations are on the diagonal in bold. Individual-level correlations are on the lower diagonal and group-level correlations are on the upper diagonal. Dashes within a cell indicate that there was insufficient variance to calculate the effect. Individual-level correlations $> .11$ are significant at $p < .05$ (two-tailed). $*p < .05$, $**p < .01$, and $***p < .001$, one-tailed for intraclass correlations, two-tailed for all other group-level correlations.

Table 23

Correlations Among SRM Effects in the Control Condition

Following the First Group Discussion				
	1.	2.	3.	4.
1. Emergent Information	--		.	
2. Common Information	.27**	--		
3. Perceived Influence	.35**	.74**	--	
4. Argument Quality	.45**	.80**	.88**	--
5. Participation Frequency	.50**	.73**	.78**	.88**
Following the Second Group Discussion				
	1.	2.	3.	4.
1. Emergent Information	--		.	
2. Common Information	.19	--		
3. Perceived Influence	.43*	.70**	--	
4. Argument Quality	.39**	.74**	.83**	--
5. Participation Frequency	.37**	.62**	.79**	.76**
Following the Third Group Discussion				
	1.	2.	3.	4.
1. Emergent Information	--		.	
2. Common Information	.16	--		
3. Perceived Influence	.56**	.48**	--	
4. Argument Quality	.53**	.59**	.85**	--
5. Participation Frequency	.53**	.55**	.79**	.84**

* $p < .05$, ** $p < .01$

Table 24

Correlations Among SRM Effects When Groups Received the Intervention Prior to the T2 Discussion

Following the First Group Discussion				
	1.	2.	3.	4.
1. Emergent Information	--		.	
2. Common Information	.24**	--		
3. Perceived Influence	.45**	.68**	--	
4. Argument Quality	.47**	.73**	.85**	--
5. Participation Frequency	.40**	.73**	.86**	.82**
Following the Second Group Discussion				
	1.	2.	3.	4.
1. Emergent Information	--		.	
2. Common Information	-.05	--		
3. Perceived Influence	.43**	.48**	--	
4. Argument Quality	.48**	.50**	.87**	--
5. Participation Frequency	.45**	.44**	.78**	.86**
Following the Third Group Discussion				
	1.	2.	3.	4.
1. Emergent Information	--		.	
2. Common Information	-.23*	--		
3. Perceived Influence	.30**	.49**	--	
4. Argument Quality	.30**	.62**	.79**	--
5. Participation Frequency	.32**	.49**	.81**	.76**

* $p < .05$, ** $p < .01$

Table 25

Correlations Among SRM Effects When Groups Received the Intervention Prior to the T3 Discussion

Following the First Group Discussion				
	1.	2.	3.	4.
1. Emergent Information	--		.	
2. Common Information	.38**	--		
3. Perceived Influence	.61**	.62**	--	
4. Argument Quality	.65**	.76**	.91**	--
5. Participation Frequency	.64**	.70**	.83**	.86**
Following the Second Group Discussion				
	1.	2.	3.	4.
1. Emergent Information	--		.	
2. Common Information	.10	--		
3. Perceived Influence	.41**	.64**	--	
4. Argument Quality	.41**	.68**	.91**	--
5. Participation Frequency	.38**	.67**	.86**	.86**
Following the Third Group Discussion				
	1.	2.	3.	4.
1. Emergent Information	--			
2. Common Information	-.06	--		
3. Perceived Influence	.50**	.52**	--	
4. Argument Quality	.43**	.54**	.86**	--
5. Participation Frequency	.40**	.56**	.81**	.87**

* $p < .05$, ** $p < .01$

Figures

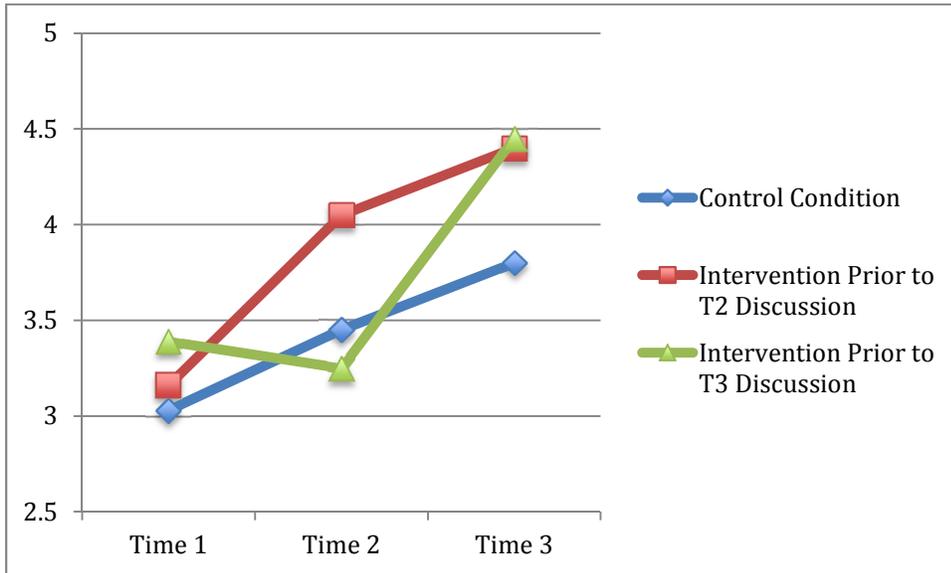


Figure 1. Mean perceived use of emergent information across time within each condition.

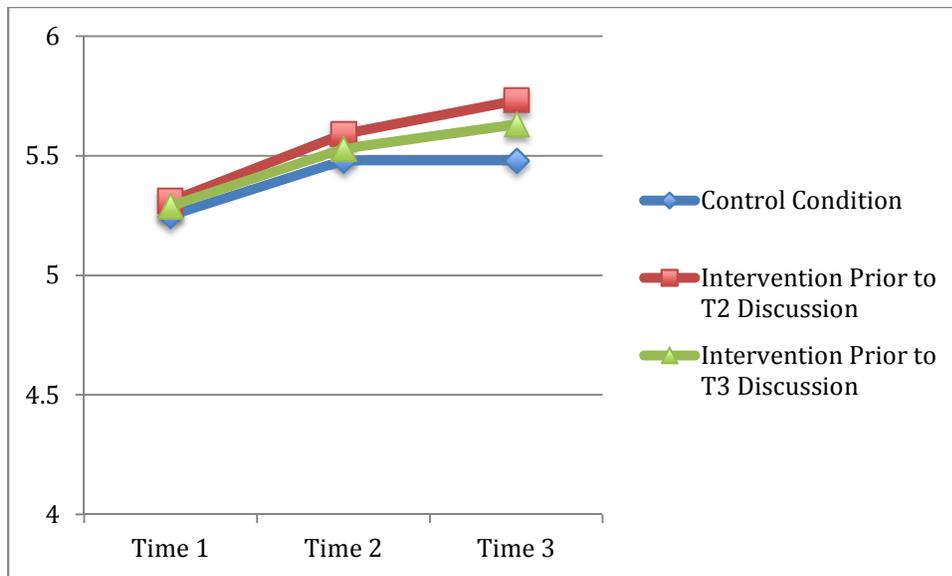


Figure 2. Mean perceived use of common information across time within each condition.

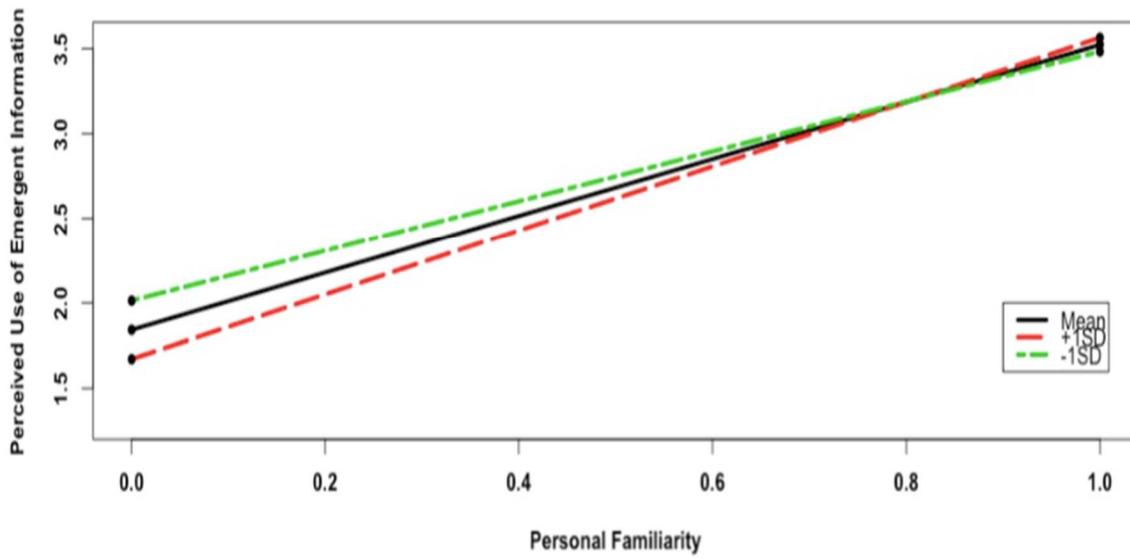


Figure 3. The interaction between personal familiarity with mental illness and attitudes toward mental illness on perceived use of emergent information at T2.

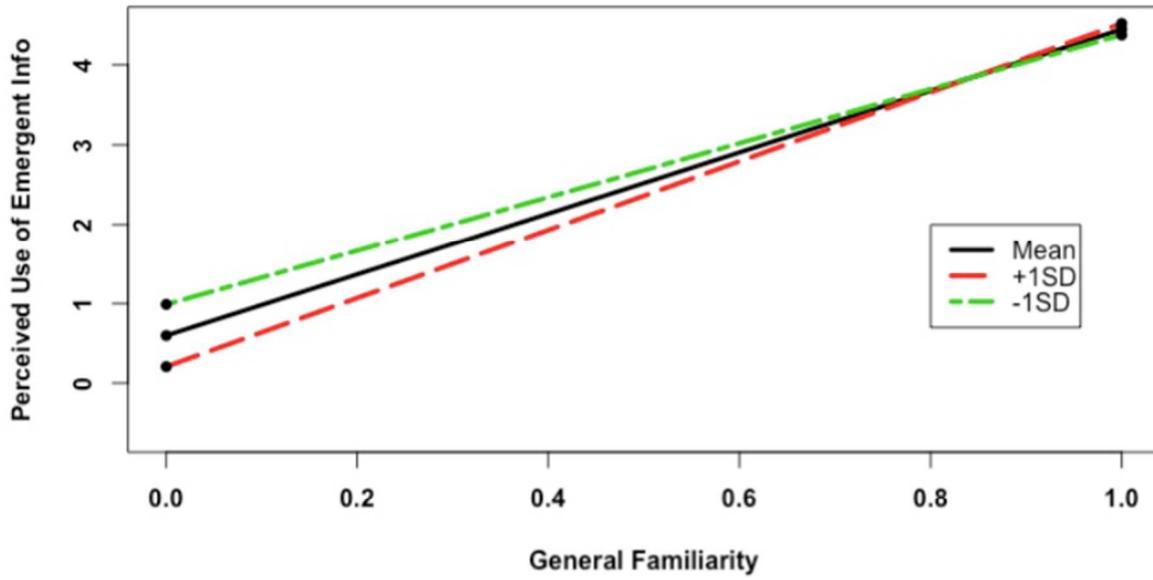


Figure 4. The interaction between general familiarity with mental illness and attitudes toward mental illness at T3.

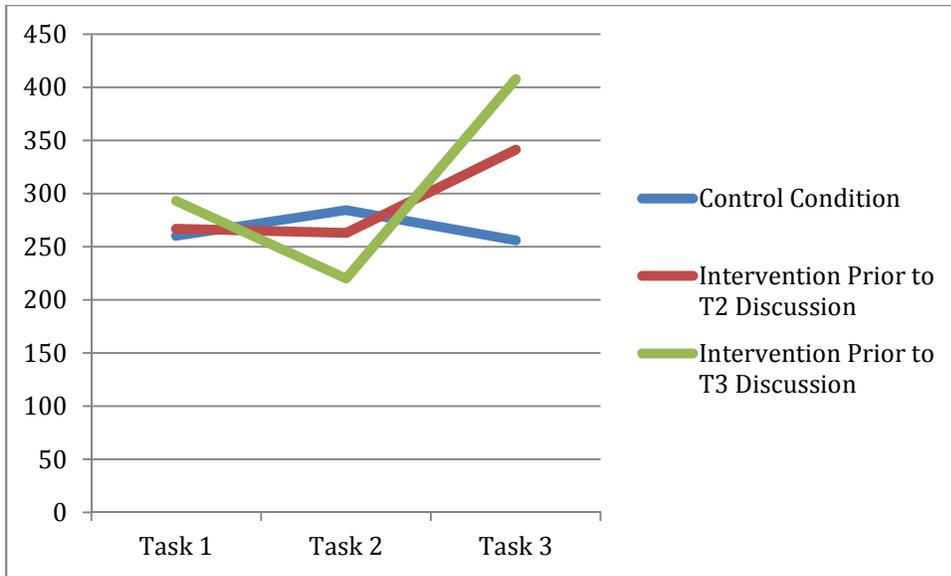


Figure 5. Discussion time (in seconds) across task and condition.

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