

**ONE STEP BEYOND BEING “FAMILIAR”: COMPARING THE
ENGAGEMENT OF FRIENDS AND STRANGERS
IN A HIDDEN PROFILE STUDY**

by

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ABSTRACT

Groups tend to discuss and repeat pieces of information (shared) more than they do information known by one member (unshared) (Stasser, Taylor, & Hanna, 1989). The extant research that supports this claim has only involved individuals that are considered strangers to one another. Due to the conditions of friendship it is hypothesized that friends may behave differently during a hidden profile experiment.

This study tested that claim amongst three-member groups of friends and strangers. A total of 138 participants from a Community college and a University read and discussed a murder mystery. Friend groups were constructed by having participants self-select the friends with whom they wanted to participate, and the stranger groups were formed by asking participants to pair with individuals in the room that they did not know. The scenario was constructed so that each participant within a group had a different set of information. Thus, between the groups some information was shared while other information was unshared. Results found comparisons between friends and strangers significant on only one dependent variable, while comparisons on two additional variables approached significance. In general, both groups fell victim to the hidden profile. The friend groups choose the incorrect suspect more often than the strangers, but also choose the correct suspect twice; the strangers only selected him once.

Chapter 1

INTRODUCTION

How do we share information with others? How does the relationship that we have with another individual influence the sharing process? Social influence, the process of causing a change (or conformity) in the behavior or thought of individuals, occurs in all types of interpersonal relations. Extant research on social influence and research on information sharing focuses mainly on strangers while ignoring the alternative route of social influence between friends, a route that is heavily exercised. Therefore, within this thesis I will examine the possibility for the presence of friendship to influence the information sharing process.

The possibility for influence among friends results from the fact that those that we have chosen as friends are individuals that we trust, and whom we look to for social cues. Social influence, explicit or implicit, becomes an important part of one's decision-making process. As a result, friends influence our thoughts, values, and behaviors. The definition of friendship that I will put forward is one that is characterized by a sufficiently deep level of comfort and openness for disagreement among the individuals. Specifically, the individuals must feel comfortable enough to disagree with each other. By its nature, friendship is something that individuals engage in voluntarily. I argue that it is the voluntary aspect that cultivates this level of comfort and candidness. Moreover, we are influenced by our friends because they are individuals with whom we share a sense of equality; there is no presence of a hierarchy, or imposed power (Rawlins, 1992).

It is a common assumption that groups are more productive than separate individuals. However, in the 1980's researchers began to notice that group members were influencing each other in a way that was actually counterproductive, and at times detrimental to the group's efforts. There are two types of influence that can potentially occur within a group, normative and informational. Normative influence refers to belief or attitude change due to a desire to elicit positive responses from other members. Informational influence, on the other hand, is a belief or attitude change based solely on the content of the arguments that are brought up during discussion. In 1985, Stasser and Titus designed a study that would distinguish between both types of influence (Bonito, 2007). This laboratory tool, which would later become known as a *hidden profile*, exists when, "each member of a group is individually aware of more items of information on one side of an issue but the group as a whole knows more items on the other side" (Pavitt, N.D.). For example, imagine a two person group, Joe and Sue, who are deciding between two candidates for a job, Phil and Bob. Joe is aware of information items A, B, and C, all of which are in favor of candidate Phil. He also knows items W and X which support candidate Bob. Sue is aware of items A, B, and C in favor of candidate Phil, and items Y and Z in favor of Bob. Items A, B, and C are referred to as shared items of information because both Joe and Sue are aware of them. However, items W, X, Y, and Z are unshared items of information because only one or the other group member is aware of them. Because both group members start off aware of more items of information in favor of Phil, they will both support Phil's candidacy. When group members begin in agreement, they only discuss items of information on the side they originally favor (Pavitt, 1994). As this happens there is no opportunity for informational influence; any

social influence that occurs will be normative. However, if the group members were to exchange all known items of information, they would discover that jointly they are aware of more items favoring Bob (W, X, Y, and Z) than favoring Phil (A, B, and C). This should lead to a preference change as a consequence of informational influence.

Researchers have found that groups tend to fall victim to normative influence; mainly shared information is all that is discussed. Later on in this document I will describe in much more detail the background of the hidden profile scenario, its implementation, and effects.

The first purpose of my study is to examine whether the distinction between friendship and strangers would affect engagement in a hidden profile study. A second purpose is to establish the contrast between self-defined groups of “friends” from groups of “familiar” individuals. In 1996 Gruenfeld, Mannix, Williams, and Neale examined the role of group composition (specifically member familiarity) and information distribution on the members’ perception of group process and decision making. While their study was similar to previous hidden profile experiments in that information was either fully or partially shared, Gruenfeld et al. (1996) constructed the groups in a new way-forming them with three individuals that were “familiar” with each other, mixing other groups with “familiar” individuals and strangers, and creating a third set of groups consisting entirely of strangers. Membership to a group was determined from a questionnaire completed one week prior to the task asking students to list classmates that they were “close to” and with whom they socialize outside of class or work. Familiar individuals were defined as individuals, “who...indicated that they knew each other “very well” on the class list. Strangers were defined as individuals who did not list each other...and who

indicated that they did not know each other at all on the class list” (Gruenfeld et al., 1996, p. 6).

In the Gruenfeld et al. study students only option was to identify classmates off of a roster, they were forced to make a choice from a limited number of options. In my study students were able to freely identify who their “friends” are; there will be no list or roster. The only stipulation on their selection will be that the person identified as their “friend” will meet the criteria that I have presented. I believe that the distinction between Gruenfeld’s “familiar” and my “friends” matters because by my definition the type of relationship that friends have is more intimate than that between familiar who would not consider themselves friends. These individuals have voluntarily chosen to initiate a relationship with someone that they view as their equal; they want to be friends with the other person. Further, the relationship between “friends” as I have defined it cultivates an environment in which, because the parties feel comfortable enough to disagree with each other, the sharing of unshared information could be more likely (and even done so without hesitation). This point alone is critical for my study, and while such a condition may exist between “familiar”, it most likely would not be the case for the majority of “familiar”. Thus, my definition of “friendship” is one that takes the relationship to a more intimate level than being merely “familiar”. The definitions of “friends” and “friendship” that I will utilize are very specific and intentional. It is to a more in-depth examination of the foundation of friendship, and the implication for that foundation on social influence, that I will now turn.

Friendship and social influence

When the term “friend” is uttered, what comes to mind? Rawlins (1992) dictates that, “friendship cannot be imposed on people; it is an ongoing human association voluntarily developed and privately negotiated” (p. 9). It is the voluntary component to this classification of relationship that makes friendship both intentional and unique. As Rawlins continues, “this autonomous quality makes friendship potentially more ‘pure’ than are relationships governed by wider social structures like labor and power.” When I develop a friendship with someone, I do so because I want to, not because I need to, or need to gain something from him or her (if so, then by definition it would not be a friendship). Concerning the process of choosing with whom we will be friends, the dictionary defines a friend as, “a person whom one knows, likes, and trusts” (American Heritage Dictionary, 1969, p. 527). Again, an individual is selective in their choice of friends-but therein lies one of the main tenets of friendship-that an individual voluntarily yet intentionally chooses someone to be friends with. Rawlins (1992) points out an additional aspect, the second tenet of friendship in stating, “a spirit of equality pervades friendship. Although friendship may develop between individuals of different status, ability, attractiveness, or age, some facet of the relationship functions as a leveler” (p. 11). By emphasizing the equality among individuals that are friends, the relationship exists at a level that avoids being exploited or overworked.

Since we were children, the concept and practices of friendship have undergone refinement; our selection of friends has developed and matured along with our own individual growth. We have moved from choosing friends based on overt features and possessions, to selection based on personal qualities. Nevertheless, throughout the life stages individuals tend to choose friends based on similarities that they share, such that

there is some type of common ground. Festinger (1950) provides examples such as, “on the basis of common occupation, common sex, residence in the same expensive suburb, or the fact that two people went to the same college or came from the same part of the country” (p. 4). What changes over time is the depth of similarity that we find in others. Friendships are unique and authentic due to the fact that they cannot be forced; they are ongoing associations, developed and maintained voluntarily.

The process of communication plays a prominent role in these relationships, allowing individuals to seek information and gain knowledge about others, as well as about social reality. More specifically, verbal or nonverbal communication facilitates the formation, growth, and continuation of friendships. Rawlins (1992) concurs stating, “analyzed as a totality, communicating in friendships involves the constant interconnection and reciprocal influence of multiple individual, interpersonal, and social factors” (p. 7). Certainly, the presence of a friendship implies an active channel of communication. Thus, it is through this channel that the process of social influence can occur. However, due to the unique nature of friendship, the process and product of persuasion and social influence is dissimilar to the process between strangers. It is to this issue that I will now turn.

As previously mentioned, one potential implication of friendship is social influence. Generally speaking, “social influence brings about a change of opinion, judgment, or behavior” (Moscovici & Neve, 1973). Three motives for why individuals would succumb to social influence follow: to develop an accurate perception of reality, to ensure satisfactory relationships, or to ensure a favorable evaluation of the self (Denrell & LeMens, 2007). Because most social influence attempts occur between individuals in

intimate relationships, the desire on behalf of the parties to preserve and promote the relationship is the most dominant factor when an individual is faced with an influence attempt from a friend (Malis & Roloff, 2007).

This desire to preserve relationships has an impact on the social influence process when friends are in conflict or in the midst of a negotiation. Existing research shows that the desire for relationship maintenance affects the process by which a task is completed. When compared to participants that are strangers, because participants want to continue their friendships with others, they behave differently, attempting to maximize outcomes. An anticipation of future interaction means that individuals are concerned with what will take place in the present. Peterson and Thompson (1997) defined the term “relationship concerns” as, “concerns held by persons who are in long-term relationships about the well being of the other parts and their relationship” (p. 380). For example, because I have been in a long-term relationship with my friend “x”, and I want to continue that relationship, I am conscious of how my behavior effects friend x, x’s impression of me, and the state of our relationship. Greenhalgh and Gilkey (1993) found individuals that are relationship-oriented to be “associated with a tendency...to be empathetic and to engage in negotiating behaviors that foster rather than risk the continuity of the relationship with the other party” (p. 171).

We know that friendship affects group processes, and specifically the process of social influence, but is it a help or hindrance? Researchers have found contradictory results. First, let us review studies which suggest that friendship cultivates open lines of dialogue and the potential for friendly and honest disagreement.

In the study of communication of a spontaneous rumor in a community, Festinger (1950) found that intimacy of friendship tended to increase ease of communication. The results of a study by Hogg and Hains (1998) pointed to a similar conclusion that, “friendship and personal attraction are more likely to allow people to differentiate themselves from others, act as individuals, disagree with one another and so forth” (p. 327). Results from their study pointed to the hypothesis that “friendship...was associated with improved subjective and objective group decision-making procedures: less deference to the leader, less desire to reach consensus, less desire for a quick decision...” (p. 337). This most likely stemmed from the fact that groups of friends introduced more facts and made more requests for information than strangers (Hogg & Hains, 1998).

Shah and Jehn (1993), examining the influence of friendships among members in intra-group conflict and task on group performance, claimed, “communication is more open and frequent among friends than strangers due to trust and proximity” (p. 154). Shah and Jehn hypothesized that, “preexisting friendships may have provided a supportive environment for critical evaluation without negative repercussions” (p. 160). Valley et al.(1995) would agree as they found, “negotiators who anticipate a future relationship are more likely to trust one another, to feel more dependent on each other, and are more motivated to develop a working relationship than negotiators who do not anticipate a future interaction” (p. 85). Finally, Malis and Roloff (2007) discovered that people that were close to one another felt they had the right to confront a peer about their excessive alcohol abuse. Here, the level of intimacy of the relationship corresponded with the level of legitimacy that individuals felt in confronting the individual. Friends not only

felt comfortable confronting their peer, in fact they felt it was appropriate (Malis & Roloff, 2007).

In contrast, when faced with the pressure to conform, the presence of a friendship between two people can also close lines of communication. Some individuals are so worried about “rocking the boat” in the relationship that they will concede, adhering to their friend’s influence. Thompson, Peterson, and Brodt (1996) found that the concern among friends to maintain cohesion and agreement resulted in more of a focus on consensus, as opposed to a focus on understanding the issues. While groups of friends were more cohesive, it was towards the end of a focus on the relationship, and not a focus on information. Halpern (1994) examined the effects of friendship on expectations of pricing in personal business transactions. She found that friends tended to settle for suboptimal agreements to avoid contentious interaction. In fact, “friends agreed on the price for commodities even without speaking to one another” (p. 660). Peterson and Thompson (1997) noted how the distribution of information affected the quality of negotiated settlements in a two-party, multi-issue negotiation about a real estate development project. After discovering that teams of friends did not perform better than teams of strangers despite the fact that they were more cohesive, the authors concluded that their “relationship concerns” hindered their ability to think creatively, explore alternative solutions, and ultimately solve the problem. Greenhalgh and Gilkey (1993) investigated if, and how, relationship orientations affected dyads dealing with two conflict tasks. In comparison to transaction-oriented participants, those high in relationship-orientation settled in the negotiation task more quickly, were more empathetic, and were more likely to refrain from interruptions.

The above research acts as relevant evidence supporting both sides of the argument regarding social influence among friends. More specifically, in situations in which social influence occurs, evidence exists implying both that friends are comfortable because of their level of familiarity and trust in the other individual, but also uncomfortable because they are concerned over the possibility for an open-discussion to potentially damage their relationship.

We can examine the extent to which social influence among friends differs from that among strangers or non-friend familiars through the application of the hidden profile experimental paradigm; at this time, I turn to a detailed discussion of that paradigm.

The hidden profile scenario

Often, important decisions in everyday life are left to groups rather than individuals. For example, the hiring of a new employee is done by a search committee, or the planning of an event by a planning committee. This process occurs because of the assumption that, “groups can bring more intellectual resources to bear on a problem, thereby increasing the probability that a high quality decision will result” (Winqvist & Larson, 1998, p. 371). Hollingshead (1996) makes a similar claim, stating, “the possibility that individuals have unique perspectives, expertise, and information is often the reason for having groups make decisions, rather than individuals” (p. 181). Groups convene for a variety of tasks, and for various lengths of time. Regardless, they form under the justification that the ability of groups to consider more information, and information from diverse sources, will result in a better decision than from individuals acting alone (Gigone & Hastie, 1993).

In contrast with this assumption, groups often do not produce or select the superior choice. While in principle, the dynamics of discussion should be such that it is informed, corrective, and unbiased, Stasser and Titus (1985) found that discussion was not corrective and unbiased due in part to problems with the exchange of information. Individual members have the opportunity to share information with the group that the remaining members may not have, or may not have thought of. This opportunity should allow for the collective decision to be of better quality than individual decisions. Unfortunately, research has shown that within a group this process usually does not occur.

The extant research that focuses on the ineffectiveness of groups at exchanging information has been building over the last 20 years. It was in 1985 that Stasser and Titus began to lay the groundwork for this new research paradigm. To account for group information utilization, or how groups would manage information, they proposed the collective information sampling (CIS) model. During a discussion, two primary types of information are utilized. Uniquely held knowledge is referred to as *unshared information*, contrasted with *shared information*, which every member holds (Winquist & Larson, 1998). The CIS model addresses, “how commonly shared versus unshared information enters group discussions” (Stasser et al., 1989, p. 68). The central idea is that the likelihood of discussing an item of information grows as the number of members who can recall and mention the item increase (Stasser & Stewart, 1992). Thus, shared information has a greater chance of entering the discussion, or what is known as a sampling advantage (Stasser et al., 1989).

During a discussion, and the stages prior, several biases may occur (Stasser & Titus, 1985). Informational bias results when individual members are aware of only partial sets of information, and preferential bias is a product of an actual preference of alternatives at the onset of discussion. Together, they bias the *content* of subsequent discussion because group members are partial for either the specific pieces information that they hold, or their personal preference for a correct answer. It is the explicit exchange and discussion of the aforementioned types of information, shared and unshared, that construct the group's collective knowledge. Because the majority of group members have shared information in common (the definition of shared information) a distributional advantage is created and, "groups tend to discuss much more of the information that they initially shared in common than the information that initially was unshared" (Larson, Foster-Fishman, & Keys, 1994, p. 446). By not exchanging their unshared or diverse pieces of information, the group is not taking advantage of all the relevant knowledge at its disposal. Therefore, group work is no more productive than individuals acting alone.

It became clear that some type, or types of influence, were occurring within a group. Subsequently, the decision-making process was affected. Normative influence refers to the making of decisions due to a desire to elicit positive responses from other members. Informational influence, on the other hand, is based solely on the content of the arguments that are brought up during discussion.

Stasser and Titus (1985) designed a study that would distinguish between both types of influence (Bonito, 2007). This laboratory tool, which would later become known as a *hidden profile*, exists when, "each member of a group is individually aware of more

items of information on one side of an issue but the group as a whole knows more items on the other side” (Pavitt, N.D.). In a historical note, Stasser and Titus (2003) described their original design of the hidden profile research as a direct response to a potential confound in research on group polarization; a situation in which the direction of both the prediscussion preferences and balance of arguments are usually in the same direction (i.e. both support risk or both support caution). As a consequence, the relative impacts of normative and informational influence are not obviously made clear, and the claims of the persuasive arguments theorists not sufficiently substantiated (Pavitt, N.D.). The hidden profile sets up a situation in which prediscussion preferences and the balance of arguments are on opposite sides, thus the source of influence, or type, can be recognized (Stasser & Titus, 2003). According to Stasser and Titus (2005), because data shows that groups usually stick with their prediscussion preferences, one could argue in favor of normative over informational influence. If informational influence was taking place, the superior choice would be selected.

According to Stewart and Stasser (1998), when shared and unshared information favor different alternatives and the unshared information favors the superior alternative, the group’s chances of selecting the better alternative are diminished for two related reasons. First, because individual members only have part of the information favoring the superior option, each member is unlikely to discover its superiority. Second, in order for the group to discover the better option, group members need to exchange unshared information. Essentially, the information supporting the best alternative is divided among group members and all group members possess the information supporting the inferior alternative (Fraidin, 2004). The design of a hidden profile is successful in, “producing

initial preferences that would lead members to make a poor choice if there were no subsequent discussion” (Bonito, 2007, p. 254). Discussion can, “serve potentially an educational function when unshared information exists; as each member can inform others of new information of which they were previously unaware” (Stasser & Titus, 1987, p. 81).

However, with the creation of a hidden profile task researchers began to see how group members were handling their information, or lack thereof, and subsequently how the decision process and product was influenced. Additionally, a hidden profile scenario distinguishes between the two types of information: informational and normative. The paradigm sets up a situation in which prediscussion preferences and the balance of arguments are on opposite sides, thus the source of influence, or type, can be recognized (Stasser & Titus, 2003). According to Stasser and Titus (2005), because data shows that groups usually stick with their prediscussion preferences, one could argue in favor of normative over informational influence. If informational influence was taking place, the superior choice would be selected. To recall the execution and effect of a hidden profile scenario, I remind you of the detailed example within my introduction.

In 1989, Stasser, Taylor, and Hanna completed a study related to information sampling. A unique twist came as a result of the addition of the variables of group size and discussion structure. By decreasing the group size they reasoned that the sampling advantage of shared information would be reduced because fewer group members possessed shared information. Thus, with fewer pieces of shared information held by a fewer number of group members, the less likely that shared information would dominate the conversation. Additionally, they wanted to impose a structure to the discussion to see

if it would affect the amount, and types of information discussed. Results showed that for the larger groups with six members, the addition of a structure to the discussion did increase the proportion of shared and unshared information that was discussed. For the smaller group (three members), structuring discussion increased the proportion of information shared, but not by much.

Stasser, Taylor, and Hanna (1989) were still puzzled by the fact that groups were more likely to repeat shared information. “It was almost as likely for a shared item to be mentioned twice as it was for an unshared item to be mentioned at all” (p. 78). They authors proposed a few reasons in an attempt to explain why groups were more likely to return to shared information. First, they realized the possibility that members, “may have recognized the fallibility in their memories, and because no other member could validate the correctness of unshared information when it was mentioned, they may have given it less credence and tended to ignore it” (Stasser et al., 1989, p. 77). Another explanation stems from the possibility that group members kept unshared information at bay because they already had enough shared information to process and this would have kept processing demands manageable. Finally, unshared information was probably less memorable in comparison to shared information; with each exposure to shared information, that information was more salient, more easily retrievable.

Gigone and Hastie (1993) examined this new paradigm further with their hypothesis of the “common knowledge effect”. It states, “the influence of a particular item of information is directly and positively related to the number of group members who have knowledge of that item before the group discussion and judgment” (p. 960). The common knowledge effect predicts that shared information will have more of an

influence for two reasons. First, shared information influences members' individual judgments which, in turn, influence group judgment. Secondly, because shared information serves as a common reference point, it is more likely to be discussed. Indeed, their hypothesis was supported; groups weighed the information more heavily, and discussed those pieces more often, when they were shared as opposed to unshared.

Building on the work of Gigone and Hastie (1993), Winkler and Larson (1998) offered a more complex view of the sampling of both shared and unshared information and group decision-making efficacy. They suggested that, "both common knowledge (prior to discussion) and biased information pooling (during discussion) contributes to the greater decisional influence of shared information" (p. 376). This view suggests a dual-process model in which members' prediscussion choice preferences and the pooling of both shared and unshared information during group discussion have different mediational roles.

With support for the predominant focus and utilization of shared information in groups beginning to build, researchers began thinking about what variables could change the status quo. By altering and adding variables, researchers hoped to better understand those factors that effected the information pooling of both shared and unshared information, as well as what factors might lead to an increase of pooling unshared information. Examples of factors that were introduced in an attempt to increase the pooling of unshared information include: the knowledge that a correct answer exists, task familiarity, task demonstrability, informed minorities, experts, and number of advocates (Stasser & Stewart, 1992; Parks & Cowlin, 1996; Stasser & Stewart, 1998; Stasser et al., 1995; Parks & Cowlin, 1996). Additionally, the variables of task importance, group

decision training, the instruction to rank-order possible choices, and accountability to an audience were also utilized (Larson et al., 1994; Hollingshead, 1996; Stewart et al., 1998).

As previously discussed, the hidden profile task is designed such that relying on shared information and a greater likelihood of reaching the wrong decision is evidence of normative influence, while relying on unshared (unique) information and making the correct decision is evidence for the relative significance of informational influence (Stasser & Titus, 2003). As we recall, normative influence refers to the making of decisions due to a desire to elicit positive responses from other members. Informational influence, on the other hand, is based solely on the content of the arguments that are brought up during discussion. Together, the results of the performance of the types of groups in the Gruenfeld et al. (1996) study begin to imply that normative influence occurs within groups of strangers, and that it is *possible* that informational influence takes precedence in the member familiar groups. The cardinal purpose of my thesis is to explicitly test this hypothesis that is perceived by researchers; that friends may feel more comfortable pooling all relevant information.

Research questions and hypotheses

The issues considered thus far have suggested a set of issues to be addressed in the study. Extant research is about evenly split on both sides of this argument-both supporting the claim that friends will try to influence one another more than strangers, and that they will not (due to the desire to maintain friendship). Additionally, even though the Gruenfeld work opens the door for the possibility of informational influence between familiars, the study was between familiars-not friends. As a consequence, there

is sufficient rationale for very few hypotheses; therefore most issues will be addressed as research questions.

H1: A group of friends will feel more comfortable working together than a group of strangers.

H2: A group of friends will be more cohesive than a group of strangers.

H3: A group of friends will be more interested in one another's opinions in comparison to the interest level among a group of strangers.

RQ1: Will groups of friends or groups of strangers feel more comfortable disagreeing with each other?

RQ2: Will individuals among groups of friends or groups of strangers feel more pressure to conform to their group?

RQ3: Will groups of friends or groups of strangers care more about getting the right answer?

RQ4: Will groups of friends or groups of strangers care more about getting information relevant to the problem from one another?

RQ5: Will unshared information be perceived as surfacing more often among groups of friends or groups of strangers?

RQ6: Will unshared information be perceived as repeated more often among groups of friends or groups of strangers?

The following chapter will describe in detail the methods of my study which was designed to evaluate the aforementioned research questions and hypotheses.

Chapter 2

METHODS

Pre-test

I conducted a pre-test of three commonly used hidden profile scenarios with students enrolled in a 400-level Communication class (see Appendix A) to get an idea of which scenario students felt the strongest connection to and cared about the most. The paragraphs in the pre-test were merely summaries, and not the scenarios in their entirety. I believed that the more interested in the scenario the students were, the more likely that they would take the discussion seriously.

The pre-test was distributed to 21 students. Each student answered three Likert scale questions about each of the three scenarios. The Likert scale questions referred to how important the problem was to solve, whether or not it would be enjoyable to spend time on the topic, and if the task was interesting enough to discuss with a group. Additionally, students compared the overall scenarios and rank ordered all three according to how interesting they found them and how much they would be interested in discussing each issue with a group.

The first scenario, adapted from Cruz (1997) by the authors Henningsen and Henningsen (2003), involved the selection of a faculty member from three candidates. As part of this scenario readers are informed that the academic department is under a few operating constraints. The department is being pressured to hire women or minorities, is dealing with a low retention rate among faculty, and is unable to offer a large salary.

Readers of this scenario were asked to take into consideration the constraints on the department and select the candidate that would accept the job and remain in the position for a substantial period of time.

Adapting again from Henningsen who took from Stasser and Stewart (1992), the second commonly used scenario was a murder mystery. A billionaire was found dead and as a part of the investigative team readers were instructed to review the evidence connected to the case and select the individual that they thought was the guilty suspect. Finally, the third hidden profile scenario was used by Reimer, Kuendig, Hoffrage, Park, & Hinsz (2007) and involved the hiring of a manager for a retail store. Once again, the store was operating under some constraints. The work environment was fast-paced, retention of employees was low, and a large portion of the customers did not speak English. Readers of this scenario were also asked to take into consideration the constraints on the retail store before choosing the candidate that they thought was best suited for the managerial position.

Based on having the highest means for the Likert items and the best ranking among the three scenarios, I judged the murder mystery as that which was most preferred by the students. To view all relevant descriptive statistics see Table 1.

Table 1: *Scenario Pre-test: Descriptive Statistics*

<i>Scenario</i>	<i>Likert question</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Murder Mystery	enjoyspendingtime	21	6.05	1.53
	importanttosolve	21	5.81	1.91
	interestingtodiscuss	21	6.00	1.73
Sales Manager	enjoyspendingtime	21	4.29	1.76
	importanttosolve	21	4.57	1.91
	interestingtodiscuss	21	4.19	1.83
Faculty Member	enjoyspendingtime	21	4.81	1.75
	importanttosolve	21	5.48	1.75
	interestingtodiscuss	21	4.86	2.12

Design

Two conditions were present in this experiment, friends vs. strangers. A different set of information was distributed to each participant within a group, thus dividing the shared and unshared pieces of information. I will refer to the sheets of information as information set 1, information set 2, and information set 3. The breakdown of shared and unshared pieces of information follows. There were 33 pieces of shared information in the first two paragraphs of the murder mystery; all three information sets contained both paragraphs. Within the remaining paragraphs there were 18 pieces of shared information between all three conditions. Information set 1 contained no unshared information, set 2 contained five pieces of unshared information, and information set 3 contained two pieces of unshared information. Information sets 1 and 2 shared four pieces of

information, and sets 1 and 3 also shared four pieces of information. Finally, information sets 2 and 3 shared three pieces of information.

Participants

Participants in the friend condition ($N=75$) were students from the University of Delaware that were selected through requests made in upperclassman residence halls. The incentive offered to residents consisted of free pizza, water ice, and a chance to win a 50\$ Visa gift card. Under the general assumption that they were assisting with a study on group decision making, residents were asked to arrive at the lounge with two friends. It was my opinion that students were more likely to be “friends” (per my definition) with their roommate, a floor mate, or someone living near them in one of the residence halls. Therefore, by allowing the participants to self-select their friends I hoped to override the difficulty that would stem from constructing the friends groups by asking students within a classroom to pair up with friends they had in a particular class.

Participants for the stranger condition ($N=63$) were students attending Cecil College in North East, Maryland. Students from a public speaking class and philosophy classes were offered extra credit in exchange for their participation. Students gathered in a large lecture hall then under my instruction were asked to form groups of three with individuals that they did not know at all. The importance of working with total strangers was heavily emphasized.

Given the sample size of 138 and a significance level of .05, post-hoc power analyses using the program G*power (Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A., 2007) were executed for independent samples t tests. A small real world effect size (.20) produced the power of .32. When the effect size was increased to a medium level

(.50) power was .90 and a large level (.80) resulting power was .99. For goodness-of-fit analysis, post-hoc test ($N=138$, $df=1$) a small effect size (.10) produced the power of .22. When the effect size was increased to a medium level (.30) power was .94, and at a large effect size (.50) power was .99.

Procedure

Participants in the friend condition convened in the common lounge areas in residence halls. An informed consent form (see Appendix B) was distributed while I gave a brief overview of the study stating that the point of the study was to examine how small groups work together to solve a problem. The descriptions related to the chosen scenario were given to each participant and they were to read and review independently for five minutes. As mentioned previously, within each group, each participant had a different set of facts related to the murder mystery.

Next, on a piece of paper each participant indicated their choice of the guilty suspect. After each participant had made an individual decision, they could discuss with the other two members of their group. Groups were instructed that they had a maximum of 30 minutes to reach a decision; the decision had to be unanimous. Groups could conclude their discussion prior to 30 minutes if they had reached a decision. At the end of discussion, group members made one final individual decision as to who they thought the guilty suspect was. Upon completion of this step questionnaires were distributed containing items relevant to the research questions and hypotheses. Participants were asked to complete them individually. To review the questionnaire see Appendix D. Finally, a debriefing sheet (see Appendix E) describing the educational objectives of the study was given out as I thanked participants for their time.

Participants in the stranger condition convened in a large lecture hall at Cecil College. The meeting place, and compensation were the only differences from the friend condition; the strangers proceeded through the study following the same exact steps. The informed consent form distributed to stranger participants was slightly different, and can be found in Appendix C.

Scale construction

After completing their second and final individual decision each participant completed a questionnaire answering 52 items on a Likert scale of 1-7. The questionnaire items were written to evaluate a specific hypothesis or research question. The first hypothesis called together items that attempted to measure how comfortable participants felt working as a group. Originally, five items were a part of this scale and produced a Cronbach's alpha of .462. However, a stronger Cronbach's of .600 resulted after deleting one item. The second hypothesis measured perceived cohesiveness. With four items constructing the scale the Cronbach's alpha was .785. While this was strong, the reliability between the items became even stronger (.844) after deleting one questionnaire item. My third and final hypothesis measured participants' interests in the opinions of others. Hypothesis number three produced an eight item scale that had between them a Cronbach's alpha of .850.

My first research question wondered who would feel more comfortable disagreeing with each other, friends or strangers. Again, this was a larger scale with nine items and a decent Cronbach's of .860. The next scale was constructed from questionnaire items that asked participants if they felt pressure to conform to their group. On this scale the Cronbach's was a little weaker, only .283 with five items. However,

after deleting one questionnaire item reliability increased to .434. Research question three speculated if friends or strangers would care more about getting the correct answer. The original scale for this research question consisted of only four questionnaire items and produced a decent Cronbach's of .706. I was able to slightly increase the reliability to .726 by deleting one item. Moving on to the fourth research question which asked if groups of friends or groups of strangers would care more about getting information relevant to the murder mystery, the scale consisted of five items. No items had to be deleted and the resulting Cronbach's was .796. Next, the items that asked participants about their perceptions of unshared information surfacing were collected to make a scale for research question number five. Originally, six items were on the scale with a strong Cronbach's alpha of .830. The alpha was increased to .906 after deleting one item. Finally, the sixth research question asked in which group, friends or strangers, unshared information would be perceived as being repeated more often. After deleting one item from the scale, and taking the total number of items from five to four, Cronbach's alpha increased from .614 to the final strength of .747. Finally, to uncover what group condition, friends or strangers, were more successful with the hidden profile, a cross tabulation was performed. The results of that test, along with a more in-depth discussion of the results will be discussed during the next chapter. It is to that chapter that we now turn.

Chapter 3

RESULTS

Hypothesis 1 posited that a group of friends will feel more comfortable working together than a group of strangers. Independent-samples *t* test analysis indicated that friend participants ($M=6.00, SD=1.10$) and stranger participants ($M=6.07, SD=1.02$) did not differ significantly at the $p<.05$ level, $t(132) = -.414, p = .680$. No support for Hypothesis 1 was found.

Hypothesis 2 claimed that a group of friends will be more cohesive than a group of strangers. Analysis indicated that friend participants ($M=1.69, SD=1.09$) and stranger participants ($M=2.03, SD=1.02$) had means that were approaching significance $t(133) = -1.83, p = .068$. Results therefore uncovered some support for Hypothesis 2.

Due to the conditions and characteristics of friendship that I detailed earlier, for my third hypothesis I believed friends would be more interested than strangers in the opinions of one another. However, analysis only provided a small amount of support for Hypothesis 3. The friend participants ($M=6.32, SD=.74$) when compared to the stranger participants ($M=6.06, SD=.98$) began to approach significance $t(132) = 1.72, p = .086$. Levene's test for Equality of Variances also approached significance ($p=.053$), indicating that data relevant to this hypothesis came close to violating the assumption of equal within-group variances for the two conditions.

Moving on to the research questions, for the first I speculated as to who would feel more comfortable disagreeing with each other, friends or strangers. Results show that the means did not differ significantly $t(131) = -.201, p = .841$. Therefore, both types of groups felt equally comfortable disagreeing within their respective groups; friends, $M = 5.03, SD = 1.03$; and strangers, $M = 5.06, SD = .89$.

My second research question wondered who amongst friends and strangers would feel more pressure to conform to their group. In fact, neither group emerged as causing more pressure. When friends ($M = 3.53, SD = 1.14$) were compared to strangers ($M = 3.35, SD = 1.15$) the resulting significance level was $p = .358, t(132) = .922$.

For the third research question I shifted examination to the level of intention on behalf of the participants. Specifically, I wanted to know who would care more about doing the task well, about selecting the right answer (suspect)-friends or strangers. Analysis showed almost no difference at all between the conditions at the $p < .05$ level $t(134) = -.146, p = .884$; both had the same level of care for the task; friends, $M = 5.79, SD = 1.16$; strangers, $M = 5.81, SD = 1.09$.

The fourth research question analyzed if friends or strangers would care more about getting information from group members that was relevant to the problem, in this case, the murder mystery. The means did not differ significantly $t(133) = .974, p = .332$; the result of evaluating friends ($M = 6.25, SD = .85$) against strangers ($M = 6.10, SD = .88$).

The fifth and sixth research questions dove into the perceptions on behalf of the participants regarding unshared information. The fifth research question dealt specifically with the perception of unshared information surfacing, and in which condition, friends or strangers, this would be perceived as happening more often. In fact, results began to

approach significance $t(136)=1.65, p=.099$; friends, $M=5.40, SD=1.56$; and strangers, $M=4.98, SD=1.31$.

Next, the sixth research question built on the previous question by wondering in which condition unshared information would be perceived as more often repeated. It was here that the only significant result was found. Analysis indicated that friend participants ($M=5.67, SD=.98$) and the stranger participants ($M=5.10, SD=1.08$) led to the significant result of $p=.001, t(136)=3.25, \omega^2= .1406$.

The final research question speculated as to which group, friends or strangers, would choose the superior, or correct answer more often. Because I used a murder mystery scenario choosing the correct answer correlates to choosing the guilty suspect. In the murder mystery Mark was the guilty suspect and thus hidden within the hidden profile scenario. Bart was identified as the guilty suspect most often. Selecting Bart thus constituted an incorrect answer.

A crosstabulation was performed and results show that friends chose the incorrect suspect, Bart, 16 times, or 64% of the time. Moreover, friend groups selected the correct suspect, Mark, only twice, or 8% of the time. On the other hand, stranger participants chose the incorrect suspect Bart 11 times, or 52.4% of the time while they answered with the correct suspect, Mark, only once or 4.8% of the time. A chi-square analysis was also performed comparing the proportion of choices among all of the suspects in the scenario. The frequencies were not significantly different, $\chi^2(5, N=46) = 5.28, p = .382$.

Chapter 4

DISCUSSION

Addressed in this chapter will be a summary of the study's findings as well as connections to the numerous issues raised in Chapter 1. Limitations that stemmed from the present study and suggestions for future research will also be reviewed.

The primary goal of this study was to examine whether the distinction between friends and strangers would affect engagement in a hidden profile study. The possibility for a difference between the conditions stems from the potential connection I saw between the type of relationship and the type of influence. Informational influence can be defined as being persuaded by the content of the information presented in arguments occurring during group discussion. The expectation that friends would be more comfortable engaging in disagreement with one another than strangers implies that informational influence was more likely to occur among friends. Friend participants would focus on the content of the arguments, and feel more comfortable sharing and returning to the various arguments, thus creating a larger pool of overall knowledge. Alternatively, when a distinction between a minority and majority is created within groups, normative influence occurs when individuals within the minority are actually persuaded to conform to the majority point of view simply due to the belief that the majority point of view is correct because it is accepted by the larger group. Normative influence has been the dominant type of influence amongst strangers as they have

progressed through hidden profile studies in the past. It was due to the nature of the relationship friendship, and the subsequent greater level of comfort between friends, that those specific participants would be less hesitant to disagree with one another, and thus would be less likely to succumb to normative influence.

A second purpose of this study was to establish the contrast between self-defined groups of “friends” from groups of “familiar” individuals. Per my definition, friend participants self-selected individuals with whom they have entered into a voluntary relationship in which they felt they shared a certain level of intimacy. By using participants that lived in the residence halls, instead of from within the classroom, another unique angle is added to the study.

How did the recently discussed focus of normative and informational influence actualize in this study? Of the 46 groups (25 friend and 21 stranger) that engaged in the hidden profile scenario, results pointed to the fact that, on the whole, both conditions fell victim to the hidden profile. Within the friend groups the correct suspect was chosen twice, while the stranger groups chose correctly only once. Turning to participant reactions to their experience, a significant difference at $p < .05$ between the friend and stranger groups was found on only one of nine dependent variables, offering the conclusion that all participants carried roughly the same perception about the experiment and their respective group members.

In the only significant difference in the study, participants in the friend groups perceived unshared information as being repeated more often than the participants in the stranger groups. There were however three additional variables that approached significance: group cohesiveness, interest in one another’s opinions, and the collective

surfacing of unshared information. For example, the second hypothesis proposed that a group of friends would feel more cohesive than a group of strangers. However, the small amount of support that was found for this hypothesis was not in the expected direction; it was the perception of friends that they felt slightly less cohesive. Even so, when compared with strangers, friends were more interested in the opinions of other group members and, possibly due to being more interested in what other group members thought, perceived unshared information to surface more often. Perhaps, the friend participants did not equate an interest in the opinions of another group member, and sharing uniquely-held information, with being cohesive. While it is possible that these behaviors, potentially a result of the characteristics of friendship, could have led to uncovering the hidden profile (especially since unshared information was seen as surfacing more with friends), we know from data analysis that this was not the case.

As mentioned previously, there was one significant difference between the conditions. The variable, the perceived repetition of unshared information, and its importance will be discussed in greater detail throughout the next section.

The Distinction between Friend and Stranger

I stated previously that the first purpose of my study was to examine the possibility that a distinction between being friends as opposed to being strangers could affect either group's engagement in a hidden profile scenario. Results from the present study point to no distinguishable differences between the groups. Individuals involved in both types of relationships—a friendship or working relationship with a stranger—performed equally poorly on the murder mystery. Extant research has illustrated that, although important decisions are left to groups because groups are supposedly more productive,

often they are not. Groups should allegedly consider more information since between the members information is stemming from a diverse set of sources. However, due to the way information is shared, or more to the point, not shared, groups are usually no more accurate than individuals in hidden profile tasks. Even though the performance of groups and individuals were not compared, the results from this study begin to fall in line with existing research, because every group except three chose the incorrect suspect and fell into the hidden profile. Therefore, it can be assumed that the friend and stranger groups within this study did not share all information from all sources. Or, if group members did share all of their information, it was not used productively.

Included in the definition of friendship that I proposed was the fact that such a relationship would be characterized by a “sufficiently deep level of comfort and openness for disagreement among the individuals”. The voluntary component to this relationship cultivates that deep level of comfort and openness; individuals are comfortable enough with one another that disagreement is not shied away from. The crux of a friendship rests on the fact that individuals enter into it voluntarily; the relationship is intentional. I placed value on these features of the friendship because it was my hypothesis that the possibility for influence among friends resulted because of them. However, results from the study point to the fact that friends were no more successful than strangers. Regardless of the characteristics of their relationship, by falling victim to the hidden profile, friends were unsuccessful in influencing each other to choose the correct suspect.

However, selection of the incorrect suspect does not mean that influence did not occur. The fact that almost every group fell for the hidden profile implies that informational influence did not occur. This is consistent with the research in existence

which illustrates that, as shared information tends to dominate the discussion, groups are susceptible to normative influence. Because all but two of the friend groups fell victim to the hidden profile, the existence of their friendship did not protect the group from normative influence. The results of this study may be similar to the research by Peterson and Thompson (1997) in which teams of friends did not perform better than strangers in real-estate negotiations due to “relationship concerns”. It is possible that similar concerns held by friends in this study also obstructed their ability to explore all potential information and make use of it.

However, a plethora of the friend groups were truly engaged in the study. Frequently, members of the friend groups were observed debating the scenario, engaging in healthy conflict and exchanging ideas. In those specific groups the characteristics of friendship cultivated open lines of dialogue. In fact, from analysis of the data we know that unshared information was perceived as surfacing and being repeated more often in friend groups. Results also point to the fact that friend participants were more interested in one another’s opinions. Although at first glance it was promising that friends would be successful, they still, despite their positive perceptions, failed in the hidden profile scenario. Despite the observation of thorough discussions in the friend groups, the discussions were not enough to guard against normative influence. Further, with perceived pressure to conform to the group averaging at the scale midpoint, it can be assumed that friends were in general not bullying one another into making a decision. Perhaps the performance of a content analysis of the discussion among group members would be able to clarify and justify the conflicting evidence that exists. Additional gains from a content analysis are discussed later in this chapter.

The Distinction between Friend and Familiar

The second goal of this study was to distinguish friendship from the category “familiar” which, up until this point, had been the only classification for participants other than strangers. In Gruenfeld et al. (1996), the latter category was actualized through participants identifying peers from a class roster with whom they felt “familiar”. In contrast, in this study, “friend” participants voluntarily selected those with whom they would work from anywhere; they were not limited to selecting from a class roster. Since the majority of them were most likely their roommates or hall-mates, it was expected that participants would potentially feel more comfortable with each other.

Revisiting the Gruenfeld et al. (1996) study, the familiar groups performed better than the stranger groups in the hidden profile task. In the present study, friends and strangers had relatively the same outcome. It was my position that friends would guard against a hidden profile more effectively than familiars and strangers. However, this was not the case. When both studies are placed side by side, it appears that familiars may do better than both friends and strangers. Considering that I wanted to build on the work of Gruenfeld et al. (1996), this possibility deserves brief speculation.

In Gruenfeld et al. (1996), “familiar” individuals were defined as those whom participants indicated as knowing very well, with the expectation that familiar groups would outperform stranger groups due to their “greater willingness to address conflict, and pool unique information, when necessary, to reach high outcomes” (p. 10). Similarly, I constructed my “friend” groups under the assumption that participants also would have known those they brought with them to the experiment “very well”. However, my strategy might have introduced compounding factors that infringed upon the groups’

success. For example, perhaps the friend participants were too close to one other that they did not feel as if they could completely challenge their peers; their concern for the continuation of the relationship came into play. And perhaps they were enjoying working together so much that they lost sight of the goal of the task. On the other hand, familiar individuals might have known each other just well enough to allow for concise focus on the scenario. Perhaps this comparison offers support to the side opposite from that which I began this study, that it may be more productive to engage in a group with individuals with whom you have a less personal relationship. It will only be through additional testing that we might be able to more fully understand the complexity of the relationship referred to as a “friendship” and how such a relationship impacts the information sharing process. By adding this third relationship distinction, future research in this area will be enhanced; researchers can compare and contrast the three groups (strangers, friends, familiars) according to what fits best with his or her theory.

Limitations

This study accrued a few limitations. First, during preparation for the study each set of information was printed on different color paper. While this was incredibly helpful in confirming visually that each group member had the proper items of information, it is possible that it tipped off some participants to the possibility of having different information on each piece of paper. On occasion, upon seeing the different colored paper group members would say “wait, do we have different information?” Second, because it was necessary to wait until all participants (both friends and strangers) had completed the study before revealing the correct suspect, participants needed to be informed of this procedural step at some point during the study. Unfortunately, the point at which this

information was shared was not consistent. Sometimes it was communicated to participants before they began discussing the murder mystery with their groups, and other times it wasn't communicated until groups were finished and wanted to know the correct answer. When this procedural step was shared before the participants convened with their groups, it is possible that once they realized that they would not find out the correct answer that night and that they would have to wait, their interest in the task decreased. During the construction of scales from the questionnaire items some scales turned out a relatively low Cronbach's alpha thus presenting another limitation. As one, or more than one items were deleted from the scales reliability tended to increase, though on some scales it was still somewhat low.

Next, a limitation of the study arises from the formation of the stranger groups. The students at Cecil College participated in exchange for extra credit and convened in a large lecture hall. Then, during the introduction and overview of the study, it was heavily emphasized that they must work with strangers, people that they literally did not know. However, the formation of the stranger groups was left to the participants; they formed on their word that they were working with individuals they did not know. While I observed them moving around the room, from one side to another, I cannot be sure every group consisted of individuals that did not know each other.

An additional limitation stems from the amount of information that participants had to review in the short time frame of five minutes. Participants had to read a full page and a half, single spaced, of detail-heavy information and then make their first judgment about who they thought was the guilty suspect. Because there was so much information and not enough time to really review it, participants may have made an uninformed

decision. By making an uninformed decision to begin with, this may have set them up for an uninformed discussion as they began with their groups. Without specifying the duration of the friendship between the participants another limitation was created. For example, some participants may have brought individuals that they were friends with for a few weeks, or months, while other participants may have brought individuals that they have been friends with for years. Different durations of the relationship, and thus different conditions of the friendship, may have influenced participants' willingness, and ability, to proceed through the hidden profile and information sharing process.

Finally, and perhaps one of the largest limitations of the study stems from the possibility that the distinction between friend and strangers was not the only difference between the two conditions. By drawing the friend groups from a mid-size 4-year University, and the stranger groups from a community college, another explanation for the results that were found may lie in the difference of socio-economic status, or educational aspirations between the participants. The best comparison would have come from drawing participants at either a University or a community college for *both* conditions, as opposed to one condition at each type of institution. However, due to time constraints the study was conducted in the latter fashion.

Future research

Future research might take this study one step further by conducting a content analysis of the discussion occurring among group members. It was surprising to find that, despite the fact that a majority of the groups spent almost the entire allotted discussion time of 30 minutes working on the problem, the correct suspect was only selected a total of three times. A content analysis would uncover exactly what the participants were

discussing and what rationale led to the selection of the incorrect suspect. When unshared information surfaced, a content analysis would reveal what participants did with that information; whether or not it was ignored, highlighted, or brought up again at a later time. Results point to the fact that both conditions fell to the hidden profile and we are left wondering what role unshared information played during the discussions. By examining the nature of the statements that were uttered, indications of normative or informational influence could be discovered. Also, by examining what happened with unshared information surfaced, whether or not it was ignored, insight into the friendship could be provided. If the time used for the discussion portion of the study was measured it would be another interesting comparison point between friends and strangers.

Replication of this study would benefit from the addition of different variables such as gender, or, if performed in the higher education realm, classification of the participant (i.e., freshman, sophomore etc.). At the conclusion of the group discussion future research might benefit from administering a few questions that asked participants how they felt about the friendship that they had with another participant(s). For example, questions pertaining to the strength or status of their relationship, whether or not they had argued recently, and as previously mentioned, the duration of the relationship, would give the researcher more specific information about the group. It is possible that data analysis applying more narrow categorizations of participants might lead to insights missing from the more general and broad comparison of the present study.

Future research might also alter the scenario allowing participants to actually win something tangible as a result of participating. It would be interesting to examine whether or not access to some prize, such as money, would influence participants' sharing of

information. Similarly, as I wanted a high level of interest from my participants, I used the scenario rated the most interesting on the pre-test. As a result, participants did seem very interested and attentive during the task. However, it would be interesting if future research utilized one of the scenarios that was rated as less interesting. Perhaps the use of a less interesting scenario might produce results that were more in line with my expectations; that friends would be more motivated to work on the task because they are more comfortable with each other and enjoy spending time working together as a group regardless of their interest in the task.

Conclusion

In sum, I found the results of this study surprising. While it could not claim with any certainty that the conditions and characteristics of a friendship would prevent individuals from falling victim to a hidden profile, in my gut that is what I believed. I was also surprised, yet pleased, with the amount of fun participants had solving the murder mystery. In fact, the scenario was most likely the driving force behind many participants' involvement in the study, and consequently, the reason why many used up the entire time allotted for discussion. I even observed a group of psychology majors become so invested in the murder mystery that they tried to get into the psyche of each character, determining how each potential suspect would have acted according to the fictional situation and their personality (gleaned from each information set), and why.

At the beginning of this report I posed questions related to the process of sharing information with others, and whether or not a relationship has the potential to influence that process. I wondered how the presence of a friendship might contribute to, or detract from, the sharing of information. Moreover, I questioned how groups of friends would

progress through a common experiment that focused on social influence. Even though I did not find any substantial differences between the engagement of friends and strangers in a hidden profile, I hope that by offering a new relationship distinction, namely “friends”, and then using participants that met such criteria, I have furthered the on-going conversation about social influence within the bounds of an interpersonal relationship.

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APPENDIX A

Scenario Pre-test

Imagine you are in a group. You are presented with three scenarios to talk about and/or solve. Please read each of the three scenarios and answer the questions at the end of each.

On the line below please write your name so you receive extra credit for your participation.

Hiring a faculty member

An academic department at a large university is in the process of hiring a new faculty member. The department is looking for a person who is an excellent teacher while being able to teach a diverse set of courses, has a record of producing a large quantity of quality research, and is willing to engage in various service activities, both inside and outside the university. The ideal candidate should also have strong educational preparation and considerable college teaching experience.

The department is, however, operating under some constraints. There are strong pressures from the Dean, higher administration, and the state government to hire both women and minority faculty. Furthermore, because of budget constraints this year the department will be unable to offer a large salary. Finally, the department has had trouble lately hiring and retaining faculty members. Thus, they would prefer to make an offer to someone likely to take the job, and likely to stay with the department for a substantial period of time.

After a nationwide search the department has narrowed its choice to three candidates, A, B, and C. Descriptions of the three candidates follow. Please read the description carefully. You will be asked to discuss the candidates with others and to reach consensus on a hiring decision.

Please circle the option below that best describes how much you agree with each of the following statements:

I would enjoy spending time on this topic.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

This issue is an important problem to solve.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

This task is interesting to discuss with a group.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

Murder Mystery

The body of a man was found. Due to the evidence of poisoning, the case has been ruled a homicide. As a member of the investigative team you have been charged with reviewing the case and each of the three suspects. After reading the facts connected to each suspect, discuss with the other members of the investigative team to reach a consensus on who committed the crime.

The murder victim is Howard Smith, a self-made billionaire in the overnight shipping business. His wife died recently in a skiing accident, and he had no children. When his wife died, he changed his will to divide his entire estate among his six nieces and nephews. However, he soon became dissatisfied with most of his beneficiaries, and had decided to change his will again leaving everything to his favorite niece, Hilary. Supposedly, only Howard's lawyer, Wanda Williams, and his butler, William, knew of his plans. Before changes in the will could be made, Howard was poisoned and died. Someone had substituted an obscure tropical poison in Howard's high blood pressure medicine capsules. Wanda and Howard were to have met before Howard's death, but Wanda had postponed the meeting because she was busy with a big court case.

Please circle the option below that best describes how much you agree with each of the following statements:

I would enjoy spending time on this topic.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

This issue is an important problem to solve.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

This task is interesting to discuss with a group.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

Hiring a Sales Manager

A mid-size retail store is looking to fill the position of sales manager. The ideal candidate should have strong organization skills and experience working in sales. The store is also looking for someone who can approach conflict both with employees and customers, and is reliable. As a member of the search committee, you have been asked to review the resumes of the following three applicants.

There are, however, some constraints under which the retail store operates. For example, the work environment is fast paced, so creativity and attention to detail would be helpful. Additionally, because a percentage of the customers do not speak English, experience with foreign languages and travel abroad would be preferred. Finally, the store has had trouble lately hiring and retaining managers. Thus, they would prefer to make an offer to someone likely to take the job, and likely to stay with the store for a substantial period of time.

After a nationwide search the retail store has narrowed its choice to three candidates. Descriptions of the candidates' qualifications follow. You are charged with reading each description and then discussing the candidates with the other members of the committee to reach a consensus on a hiring decision.

Please circle the option below that best describes how much you agree with each of the following statements:

I would enjoy spending time on this topic.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

This issue is an important problem to solve.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

This task is interesting to discuss with a group.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

Finally, please rank each scenario according to how interesting you find them and how much you would want to discuss them in a group, with “1” being the most interesting and “3” the least.

_____ Hiring a Sales Manager

_____ Murder Mystery

_____ Hiring a Faculty Member

APPENDIX B

Informed Consent Form (University of Delaware)

INFORMED CONSENT FORM

Solving a Murder Mystery

Purpose of Research

This study is for research purposes. The purpose is to observe how groups of three individuals work together to solve a problem. You qualify to participate in this study because you are resident of the Independence Complex and are at least 18 years of age. The length of your participation should last no longer than one hour. There will be approximately 120 participants in this study.

Procedures

During this study you will solve a murder mystery in a group with the two friends who came with you. After the activity you will be asked to fill out a questionnaire about your experiences during the activity.

Confidentiality

During the study, and after, your confidentiality will be maintained. Although attendance will be taken upon your arrival, it is only for the purpose of assuring that we have enough participants to form the groups. Your name will not be associated with any specific data and you will not be asked to write your name on the questionnaire.

Conditions of Subject Participation

Participation in this study is completely voluntary. At any time participants can ask questions or end their participation without penalty. Additionally, before the end of the Spring 2008 semester you may ask that the data you have supplied be removed from further analysis. During the study, and after, your confidentiality will be maintained.

Risks and Benefits

There are only small personal risks from participating in this study. Due to the nature of the study, "Solving a Murder Mystery", some interpersonal conflict may occur. One possible benefit of participation is that the game itself provides an opportunity to experience and learn something about group interaction.

Compensation

You will be compensated with free pizza and water ice and will be entered into a drawing for a 50\$ Visa gift card in exchange for your participation.

Contacts

For further information about the rights of individuals who agree to participate in research, contact:

Chair, Human Subjects Review Board
209 Hullihen Hall
302-831-2136

For more information, or to address questions about this study please contact:

Rebecca Krylow
Department of Communication
beccab@udel.edu

I have read and understood this informed consent form, am 18 years of age and older, and wish to participate in the study about solving a murder mystery.

Signature of Participant _____

Printed Name of Participant _____

Date _____

APPENDIX C

Informed Consent Form (Cecil College)

INFORMED CONSENT FORM

Solving a Murder Mystery

Purpose of Research

This study is for research purposes. The purpose is to observe how groups of three individuals work together to solve a problem. You qualify to participate in this study because you are a student at Cecil College and are at least 18 years of age. The length of your participation should last no longer than one hour. There will be approximately 120 participants in this study.

Procedures

During this study you will solve a murder mystery as part of a group of three individuals. You should not have a prior relationship with the people you are working with; they should be strangers. After the activity you will be asked to fill out a questionnaire about your experiences during the activity.

Confidentiality

During the study, and after, your confidentiality will be maintained. Although attendance will be taken upon your arrival, it is only for the purpose of assuring that we have enough participants to form the groups. Your name will not be associated with any specific data and you will not be asked to write your name on the questionnaire.

Conditions of Subject Participation

Participation in this study is completely voluntary. At any time participants can ask questions or end their participation without penalty. Additionally, before the end of the Spring 2008 semester you may ask that the data you have supplied be removed from further analysis. During the study, and after, your confidentiality will be maintained.

Risks and Benefits

There are only small personal risks from participating in this study. Due to the nature of the study, "Solving a Murder Mystery", some interpersonal conflict may occur. One possible benefit of participation is that the game itself provides an opportunity to experience and learn something about group interaction.

Compensation

You may be receiving extra credit in exchange for your participation.

Contacts

For further information about the rights of individuals who agree to participate in research, contact:

Chair, Human Subjects Review Board
209 Hullihen Hall
University of Delaware
302-831-2136

For more information, or to address questions about this study please contact:

Rebecca Krylow
Department of Communication
beccab@udel.edu

I have read and understood this informed consent form, am 18 years of age and older, and wish to participate in the study about solving a murder mystery.

Signature of Participant _____

Printed Name of Participant _____

Date _____

APPENDIX D

Questionnaire

Please answer the following statement according to how much you agree or disagree:

1. I felt relaxed working with the group.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

2. When working on the task, it was crucial to learn how other people felt

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

3. If I did not agree with the group I felt tense.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

4. I cared about having all of the facts need to solve the problem correctly.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

5. I wanted to find out what everyone else knew.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

6. If a difference of opinions occurred I felt anxious.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

7. It was necessary to hear everyone's opinions about the problem.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

8. What other people thought did not concern me.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

9. I felt comfortable even when I noticed disagreement between group members.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

10. My goal was to obtain all of the details from other group members.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

11. During the task I felt the need to agree with the group members.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

12. I was interested in what other group members thought we should do.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

13. During the task I felt at ease.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

14. One of my goals was to find out what other people had to say.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

15. I felt it was vital to have all the information relevant to the task.

Strongly Disagree...Somewhat Disagree...Slightly Disagree...Neutral...Slightly Agree...Somewhat Agree...Strongly Agree

Please answer the following questions:

1. To what extent did you feel comfortable working together?

Very comfortable...Somewhat comfortable...Slightly comfortable...Neutral...Slightly uncomfortable...Somewhat uncomfortable...Very uncomfortable

2. How anxious did you feel if there was disagreement between people?

Very calm...Somewhat calm...Slightly calm...Neutral...Slightly anxious...Somewhat anxious...Very anxious

3. How certain were you of your individual answer?

Very uncertain...Somewhat uncertain...Slightly uncertain...Neutral...Slightly certain...Somewhat certain...Very certain

4. How effectively did everyone work as a unit?

Very effectively...Somewhat effectively...Slightly effectively...Neutral...Slightly ineffectively...Somewhat ineffectively...Very ineffectively

5. If you were given another task to do, would you want to remain with this group?

Very much so...Somewhat so...Slightly so...Neutral...Slightly no...Somewhat no...Not at all

6. How interested were you in other group member's opinions?

Very interested...Somewhat interested...Slightly interested...Neutral...Slightly uninterested...Somewhat uninterested...Not at all interested

7. To what extent did you feel like you had to go along with everyone else?

Not at all...Somewhat free...Slightly free...Neutral...Slightly conformed...Somewhat conformed...Very conformed

8. How comfortable did you feel deviating from the opinions of the group?

Very comfortable...Somewhat comfortable...Slightly comfortable...Neutral...Slightly uncomfortable...Somewhat uncomfortable...Very uncomfortable

9. To what length did you feel like you could bring up information without any hesitation?

Not at all...Somewhat easily...Slightly easily...Neutral...Slightly hesitated...Somewhat hesitated...Very hesitant

10. Did people bring up information that you were unaware of?

Never...Somewhat infrequently...Slightly infrequently...Neutral...Slightly often...Somewhat often...Very often

11. Did you feel at ease if there were opposing viewpoints?

Very uneasy...Somewhat uneasy...Slightly uneasy...Neutral...Slightly at ease...Somewhat at ease...Very at ease

12. How much did you enjoy working with the people in your group?

Very much...Somewhat...Slightly...Neutral...Slightly dislike...Somewhat dislike...Strongly dislike

13. How open were you to hearing what other group members had to say?

Very open...Somewhat open...Slightly open...Neutral...Slightly closed...Somewhat closed...Not at all open

14. How cohesive did you feel as a group?

Very cohesive...Somewhat cohesive...Slightly cohesive...Neutral...Slightly uncohesive...Somewhat un-cohesive...Very un-cohesive

15. If there was dissent between the group how uncomfortable were you?

Very comfortable...Somewhat comfortable...Slightly comfortable...Neutral...Slightly uncomfortable...Somewhat uncomfortable...Very uncomfortable

16. Did you contribute data that only you had?

Never...Somewhat infrequently...Slightly infrequently...Neutral...Slightly often...Somewhat often...Very often

17. How important was doing this task well?

Not important at all...Somewhat un-important...Slightly un-important...Neutral...Slightly important...Somewhat important...Very important

18. Did you hear new information?

Never...Somewhat infrequently...Slightly infrequently...Neutral...Slightly often...Somewhat often...Very often

19. Did you get irritated if you diverged from the groups thinking about an issue?

Not irritated at all...Somewhat comfortable...Slightly comfortable...Neutral...Slightly irritated...Somewhat irritated...Very irritated

20. Were you uncertain of your individual answer?

Very certain...Somewhat certain...Slightly certain...Neutral...Slightly uncertain...Somewhat uncertain...Very uncertain

21. How deeply did you care about selecting the appropriate answer?

Not at all concerned...Somewhat unconcerned...Slightly u-concerned...Neutral...Slightly concerned...Somewhat concerned...Very concerned

22. How interested were you in acquiring information from the other group members so you could do the task well?

Not interested at all...Somewhat un-interested...Slightly un-interested...Neutral...Slightly interested...Somewhat interested...Very interested

23. Was new information shared more than once?

Not at all...Somewhat infrequently...Slightly infrequently...Neutral...Slightly often...Somewhat often...Very often

24. Did you feel calm if people in the group disagreed?

Very anxious...Somewhat anxious...Slightly anxious...Neutral...Slightly calm...Somewhat calm...Very calm

25. How much pressure did you feel to conform to the group?

No pressure at all...Somewhat free...Slightly free...Neutral...Slightly pressured...Somewhat pressured...Very pressured

26. As a group, how hard did you work to select the right answer?

Not hard at all...Somewhat easy-going...Slightly easy-going...Neutral...Slightly hard...Somewhat hard...Very hard

27. Did you return to any pieces of information that were mentioned by only one person?

Never...Somewhat rarely...Slightly rarely...Neutral...Slightly often...Somewhat often...Very often

28. Did you feel at ease working with the group?

Very at ease...Somewhat at ease...Slightly at ease...Neutral...Slightly uneasy...Somewhat uneasy...Very uneasy

29. To what extent were group members open to learning from one another?

Not open at all...Somewhat closed...Slightly closed...Neutral...Slightly open...Somewhat open...Very open

30. How often was information shared with the group that you personally did not have?

Never...Somewhat infrequently...Slightly infrequently...Neutral...Slightly often...Somewhat often...Very often

31. Did new facts surface more than once?

Not at all...Somewhat infrequently...Slightly infrequently...Neutral...Slightly often...Somewhat often...Very often

32. Were you committed to getting information from other people that was applicable to the task?

Not committed at all...Somewhat un-committed...Slightly un-committed...Neutral...Slightly committed...Somewhat committed...Very committed

33. Was your group concerned about picking the correct answer so you could get the problem right?

Not concerned...Somewhat unconcerned...Slightly unconcerned...Neutral...Slightly concerned...Somewhat concerned...Very concerned

34. Did people in your group share information that you did not know?

Never...Somewhat infrequently...Slightly infrequently...Neutral...Slightly often...Somewhat often...Very often

35. How comfortable did you feel returning to information that was discussed previously (either by yourself or another member of the group)?

Very uncomfortable...Somewhat uncomfortable...Slightly uncomfortable...Neutral...Slightly comfortable...Somewhat comfortable...Very comfortable

36. Did group members bring up facts that you did not have?

Never...Somewhat infrequently...Slightly infrequently...Neutral...Slightly often...Somewhat often...Very often

37. How often did group members repeat facts that someone brought up earlier?

Never...Somewhat rarely...Slightly rarely...Neutral...Slightly often...Somewhat often...Very often

APPENDIX E

Debriefing Sheet

Solving a Murder Mystery-Debriefing

During group work some individuals often have more information or facts than the other members of the group. Additionally, each individual might have different information from the other group members. During the task that you just performed, each group member had some of the same pieces of information, as well as some different pieces of information. This type of situation is quite common. I'm sure you could think of a few examples.

We often perform tasks as a group we expect groups to be more productive than individuals. In the murder mystery scenario each individual had some information that no other member of the group had. Your group would have been successful (choosing the right suspect) only if you discussed all of the information that each of you had. What I am really looking at is whether or not all the information surfaces, is repeated, and is ultimately utilized in the final decision. In addition, as you are friends with the other group members, I want to know if the variable of friendship would impact a group's decision-making process. In the past, when research has been conducted using this type of a scenario it has been done so amongst groups of strangers. I want to see if the way in which individuals communicate about these scenarios is different for friends than it is for strangers.

Please feel free to contact me through email (beccab@udel.edu) if you have further questions about the intent, execution, or findings of the study. For additional information here are references to two of the first studies about the type of task that you participated in today-known as a hidden profile scenario.

Stasser, G., & Titus, W. (1985). Pooling of unshared information in group decision making: Biased information sampling during discussion. *Journal of Personality and Social Psychology*, 48, 1467-1478.

Stasser, G., & Titus, W. (1987). Effects of information load and percentage of shared information on the dissemination of unshared information during group discussion. *Journal of Personality and Social Psychology*, 53, 81-93.

Thank you once again for taking the time to participate in tonight's study. Studies such as this cannot be performed without your help. Please do not talk about your experience tonight with anyone that might participate in the future. Doing so would ruin both their experience, as well as my ability to get data for my thesis.