WHEN TWO HEADS ARE WORSE THAN ONE: IMPACT OF GROUP STYLE AND INFORMATION TYPE ON PERFORMANCE EVALUATION

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ABSTRACT
Groups are a common decision making tool of the modern organization. Much of the literature has suggested that groups are often prone to worse performance at decision making than individuals, while some has suggested that they may enhance decision quality over and above individuals. The quality of this difference is often thought to be underpinned by aspects of the group and its decision process (e.g., leadership, affiliation of members, time constraints). The current study investigates the role of group interaction style in the use of decision making information and the representation of individual group members in the group’s decision as a consequence. Groups with an aggressive/defensive style of interaction, as measured by the GSI, were found to rely more heavily on stereotype information when conducting a performance rating than individual group members. Performance relevant outcome information had a diminishing impact on the rating as groups become more Aggressive/Defensive.

INTRODUCTION
Groups are a staple of modern organizational life, from the long extant work units of departments to committees, more contemporary self-managed teams to quality circles. Groups are utilized for their presupposed benefits over individuals executing the same tasks. However, the research literature on the performance of groups in comparison with individuals is a mixed bag of support and disconfirmation of these presuppositions.

Findings dating back to Shaw’s (1932) original postulation of the group superiority effect support the belief that as group sizes increase, groups perform better and better at decision making (Tuckman & Lorge, 1962). However, dating back even to these seminal studies was a suspicion that little of the benefit of groups had to do with their process, rather that it was the increased number of individuals’ expertise within those groups that probabilistically enhanced their performance (i.e., the more members a group has, the more chances it has of possessing the correct solution; Lorge & Solomon, 1955).
Contemporary research findings are no more cohesive. Some findings suggest that groups still hold the promise of collective wisdom (e.g., Mannes, 2009) and that groups can make better decisions under certain conditions (Branson, Sung, 2004; Fraiden, 2004; Kerr, MacCoun, & Kramer, 1996a; Schulz-Hardt, Jochims, Frey, 2002; Stasser, Vaughan, Stewart, 2000). Still many other findings suggest that groups are rife with biases (Mojzisch, Grouneva, & Schulz-Hardt, In Press), prone to ignore expertise (Stasser, 1988; Stasser & Davis, 1981; Stasser, Taylor, & Hanna, 1989) and prone to quashing the dissenting opinions that might otherwise improve their decisions (Janis, 1982). Even literature reviews of the relevant findings are focused on parsing conditions that favor group decisions and those that favor individual decisions rather than suggesting a unified perspective (e.g., Kerr, MacCoun, & Kramer 1996b).

In the search for those factors that may enhance groups’ performance in decision making, group interaction style is an increasingly important factor of study (Branson, Clausen, & Sung, 2008; Cooke & Szumal, 1994). A group’s style of decision making can promote discussion and sharing of information in the case of groups that constructively welcome dissenting opinion to produce better decisions (Shulz-Hardt, Jochims & Frey, 2002), or can deter such discussion in the case of groups that defensively reject such discussion and dissent (Janis, 1982). Cooke and Szumal (1994) have developed a scale to measure and categorize differences in group interaction style relevant to decision making, entitled the Group Style Inventory (GSI).

The GSI identifies group interaction styles based upon member perception and categorizes them into three main styles: Constructive, Passive/Defensive, and Aggressive/Defensive. Constructive groups tend toward fuller discussion and consensus decision making (Branson, Clausen, & Sung, 2008), a style of decision making that has been found to benefit the consideration of minority and dissenting opinion resulting in more accurate decisions (DeDreu, Nijstad & van Knippenberg, 2008). On the other hand, those groups that are Passive/Defensive tend toward discussion that focuses on shared perceptions and agreement (Branson, Clausen, & Sung, 2008), features that are known to lead to poor group decision outcomes (Janis, 1982; Shulz-Hardt, Jochims, and Frey, 2002; Stasser, 1988). Groups that are Aggressive/Defensive tend toward competition, interruptions, and overt criticism (Cooke & Lafferty, 2003), features on which the literature is mixed in its expectation for group performance. Some researchers suggest that dissent is highly beneficial to group decision making (Janis, 1982; Shulz-Hardt, Jochims & Frey, 2002), and some suggest that this aggressive style of interaction by leadership in groups would likely reduce open revelation and discussion of member dissent (Janis, 1982) thus eliminating its potential benefit.

**CURRENT RESEARCH**

Groups have been shown to use more outcome information (in the form of accounting data) in a performance evaluation than individuals (Branson, Bin &
Sung, 2004), a desirable outcome likely to produce more accurate evaluations than other less objective sources of information. The current research examines the effect of group interaction style, as measured by the GSI, on a performance evaluation comparing the decision results and information usage between individuals and groups.

The current research is based on a course embedded case analysis in a senior level Managerial Accounting class. Participants were asked to study the case, which included a behavioral description, a subjective stereotype, of eight hypothetical managers. Accounting data on the financial performance of each organizational unit was also provided. Participants were asked to conduct a performance evaluation of each of the eight hypothetical managers based on whatever information they thought appropriate and then determine how much bonus to give to each manager. Each participant was also assigned to a group, wherein the collective assignment was to evaluate each manager as a group and decide as a group how much bonus to allocate to each manager based on that evaluation. Each participant documented their individual evaluation and allocated bonus before they met as a team to make the group evaluations and bonus allocations. After the group evaluations and bonus allocations were rendered, participants completed the GSI in reference to their decision making group.

It is hypothesized that: 1) Groups who demonstrate Constructive group style will outperform individuals in that they will be less reliant upon subjective stereotype information and incorporate more performance outcome information in their evaluations and bonus allocations, 2) Passive/Defensive style groups will underperform individuals in that they will be more reliant upon subjective stereotype information and less reliant upon the performance outcome information in their evaluation and bonus allocations, and 3) Aggressive/Defensive style groups will underperform individuals in that they will be more reliant upon subjective stereotype information and less reliant upon performance outcome information in their evaluations and bonus allocations. This third hypothesis is based on the tendency of Aggressive/Defensive group style to promote conflict and confrontation, conditions that create a stressful and distracting environment (Cooke & Lafferty, 2003). Individuals under such conditions of stress and cognitive distraction tend to fall back on heuristic cues such as stereotype information in making decisions (Branson and Sung, 2004; Gilbert & Hixon, 1991; Gilbert, Pelham & Krull, 1989; Shiffrin and Schnieder, 1977).

**DEMOGRAPHICS OF PARTICIPANTS**

Ninety-four undergraduate students (thirty groups) in an upper division managerial accounting course in a small Midwestern public university participated in the present study. The mean age of participants was 29.5 years, and their mean work experience was 10 years. Sixty-two percent of the
participants were female. Of the 30 groups, 26 were comprised of 3 members and 4 were comprised 4 members.

RESULTS
In order to compare the individual and group decisions, a difference score was calculated between each individual’s allocated bonus and the bonus allocation from their group. These difference scores were then put through separate stepwise linear regressions using covariates of stereotype congruency with a positive manager prototype (for which a separate pilot study was conducted; Stereotype Fit), the accounting data comparing the managers’ performance with previous years’ performance (Consistency), and accounting data aggregating the managers’ performance in multiple key business areas (Consensus). Best fit models were calculated for each GSI classification, as well as separated by median split of GSI scores for that classification (e.g., “+” for the Constructive classification indicates groups that exhibited Constructive group interaction style, “-” indicates groups that did not exhibit Constructive style). The best fit models separated by median splits were then compared in slope by sum-of-squared deviations to models fit across collapsed levels of that GSI classification. In this way, the differential effects of a group exhibiting more (positively) or less (negatively) of each type of group interaction style was indicated by greater $F$ scores, suggesting that the different slope functions were underpinned by different processes.

As can be seen in Table 1 (below), the only significant effect was found for Stereotype Fit information in the Aggressive/Defensive category. This confirms part 3 of our hypothesis that groups exhibiting an Aggressive/Defensive style of interaction were prone to use the subjective stereotype information more heavily in their ratings than the individuals in that group, as can be easily seen in Figure 1. This suggests that a difference generated by group process altered individual rating decisions to be more responsive to Stereotype Fit when the group rendered its decision.

Table 1. Fit of Group vs. Individual Bonus Allocation by Data and Group Style

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Factor</th>
<th>F Statistics</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stereotype Fit</td>
<td>Constructive</td>
<td>0.78</td>
<td>0.3779</td>
</tr>
<tr>
<td></td>
<td>Passive</td>
<td>1.33</td>
<td>0.2491</td>
</tr>
<tr>
<td></td>
<td>Aggressive</td>
<td>4.02</td>
<td>0.0452*</td>
</tr>
<tr>
<td>Consistency</td>
<td>Constructive</td>
<td>1.43</td>
<td>0.2319</td>
</tr>
<tr>
<td></td>
<td>Passive</td>
<td>3.79</td>
<td>0.0518</td>
</tr>
<tr>
<td></td>
<td>Aggressive</td>
<td>0.01</td>
<td>0.9362</td>
</tr>
<tr>
<td>Consensus</td>
<td>Constructive</td>
<td>0.00</td>
<td>0.9697</td>
</tr>
<tr>
<td></td>
<td>Passive</td>
<td>0.04</td>
<td>0.8471</td>
</tr>
<tr>
<td></td>
<td>Aggressive</td>
<td>0.30</td>
<td>0.5871</td>
</tr>
</tbody>
</table>

Dependent Variable: Difference = Team Bonus – Individual Bonus.
Groups with more Aggressive/Defensive interaction style were more influenced in their bonus allocations (ratings) by the Stereotype Fit than individual members of that group. Groups low in Aggressive/Defensive style exhibited flat response to this covariate of Stereotype Fit, indicating no difference in stereotype fit information for their ratings compared to the individuals that comprised them. In other words, individuals' decisions were changed in Aggressive/Defensive groups to more heavily rely on the Stereotype Fit information than when they made individual ratings alone.

Constructive and Passive/Defensive interaction style groups did not differ significantly from their constituency in the use of different kinds of decision making information, nor the decisions rendered in bonus allocation.
Branson, Steele and Sung

CONCLUSIONS

The finding that Aggressive/Defensive groups tend to rely more heavily upon stereotype relevant information fits well with findings from the social psychological literature on stereotyping, that individuals will use stereotypes under circumstances of cognitive distraction or lack of motivation as a simplifying heuristic or even automatic process (Gilbert & Hixon, 1991; Bargh, 1990; Bargh, 1992).

Although it is inadvisable to conclude the positive from a lack of evidence for the negative, it is heartening that it seems both highly constructive and member oriented groups (Constructive) as well as those that are more concerned with protecting group members' affiliation with one another (Passive/Defensive; Cooke & Lafferty, 2003) produce decisions that do not significantly differ on average from their constituent members. It is possible that the fixation on agreement presumed to exist in such groups is not as onerous as is sometimes thought (e.g., Janis, 1982) at least in the context of performance evaluations and ratings with multiple forms of information.

The difference between groups that are and are not Aggressive/Defensive might be due to the cognitively distracting nature of an angry group and the social process inherent in one, as would align with literature on automatic processes (e.g., Gilbert, Pelham & Krull, 1988). Another possible explanation is the tendency of decision makers to fall back onto heuristic or simplified decision processes when confronted with short timeframes for decision making or high pressure decision situations (Chaiken, 1980; Epstein, 2003; Petty & Wegner, 1999; Tversky & Kahneman, 1974). It is not unimaginable that individuals in an Aggressive/Defensive group would be prone to seek exit from that group, and that if exit was contingent upon rendering a decision they might look for expedient ways to make that decision. More investigation into these possible underpinnings could provide methods to alleviate this deleterious function of Aggressive/Defensive groups' reliance upon stereotype information in performance evaluation. Prior research indicates that the purpose of the evaluation has a systematic impact on the rating. Ratings for retention, promotion, or bonus allocation systematically differ based on the type of evaluation (Feldman, 1981; Heneman, Wexley, & Moore, 1987), holding other factors constant. In the present research, the performance rating was the bonus allocated to each manager, so ratings for promotion or retention may have different results.

Even without a finer understanding of the mechanisms that lead groups to favor less accurate information in a performance evaluation decision, we can see the important implication of this finding for decision making groups of all kin. If a decision making group is leaning toward aggressive or competitive discussion of ideas, it is more likely to misrepresent the underlying interests of group members.
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and arrive at a poorer decision by comparison. Much of the extant literature on groups' foibles in decision making suggest methods by which leaders, facilitators, or even group members may improve the quality of group decisions by actively guiding the group process to consider different kinds of information (Henningsen & Henningsen, 2007; Schulz-Hardt, Jochim, Frey, 2002). The findings of the current research would suggest that leaders and group members maintain an awareness that Aggressive/Defensive interaction processes may lead to poor decisions, and attempt to steer groups toward more Constructive interaction styles, under which circumstance groups did not differ significantly from their constituent individual members in the decisions they made nor the evidence they considered.

Groups are a consistent element of modern organizational life and decision making, and they do not appear to be going away anytime soon. They have been shown to be both blessings and curses in their ability or inability to render accurate decisions that represent their memberships. The more we take an active eye and hand in attending to and guiding groups' interaction processes toward those styles and practices that are known to result in higher quality decisions, the better off we will all be.

REFERENCES


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