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When can having a lot of superficial diversity help with group decision making?

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Abstract
We examined how surface-level diversity (based on race) and deep-level similarities influenced three-person decision-making groups on a hidden-profile task. Surface-level homogeneous groups perceived their information to be less unique and spent less time on the task than surface-level diverse groups. When the groups were given the opportunity to learn about their deep-level similarities prior to the task, group members felt more similar to one another and reported greater perceived attraction, but this was more true for surface-level homogeneous than surface-level diverse groups. Surface-level homogeneous groups performed slightly better after discovering deep-level similarities, but discovering deep-level similarities was not helpful for surface-level diverse groups, who otherwise outperformed surface-level homogeneous groups. We discuss the implications of this research for managing diversity in the workplace.

KEYWORDS diversity, information sharing task, similarity-attraction, social categorization

Introduction

A PRIMARY reason organizations use groups is to garner the benefits of the unique knowledge and information that group members might bring to the table (e.g. Schneider & Northcraft, 1999). For nearly twenty years the sharing and integration of unique information in small group discussions has been the subject of much experimental (e.g. Stasser & Stewart, 1992; Stasser & Titus, 1985, 1987; Stasser, Vaughan, &Stewart, 2000; Stewart & Stasser, 1995; Winquist& Larson, 1998; Wittenbaum, 2000) and some field research (e.g. Larson, Christensen, Abbott, & Franz, 1996, 1998). Reflecting the reality that all individuals bring a unique con- stellation of perspectives and experiences to small group discussions, this research examines *hidden profile* decision situations in which sub- optimal decisions are likely to be made if uniqueinformation is not shared and integrated intothe group discussion (Stasser & Titus, 1985; for reviews see Wittenbaum, Hollingshead, & Botero, 2004; Wittenbaum & Stasser, 1996). In such situations, organizations and teams that can create environments where members are willing to share and discuss unique information may gain considerable competitive advantage.

In this article, we seek to understand more about how surface-level (i.e. race/ethnicity) and deep-level (i.e. experiences, preferences, and values) diversity affects the ability of groups to benefit from their unique information. We move beyond the typical social categorizationperspective on diversity and highlight a by- product of the social categorization process— assumptions of in-group similarity—which has been overlooked by many researchers in this tradition (cf. Williams & O'Reilly, 1998). We extend the argument that surface-level diversity triggers expectations that informational differ- ences may be present in groups, and *legitimates* the expression of unique information (Phillips, 2003; Phillips & Loyd, 2006; Van Knippenberg, De Dreu, & Homan, 2004; Van Knippenberg & Haslam, 2003). Moreover, by highlighting deep-level similarities in an effort to increaselevels of attraction and diminish social categorization effects, we argue that managers may undermine the benefits of having surface- level diversity present in groups that must share unique information for effective performance. We provide some empirical evidence, while integrating research on collective information sampling in groups with that on the effects of group diversity.

Collective information sampling ingroups

Research on information sharing in groups hasfound that sharing and integrating unique (i.e. known by a single member) as opposed to commonly held (i.e. known to all members) information into group decisions is easier said than done (for reviews see Stasser, 1999; Witten-baum & Stasser, 1996; Wittenbaum et al., 2004).One reason why unique information is men- tioned and repeated less than commonly held information is because group members gener- ally assume that the information they possess is the same as that possessed by others (unless contrary information is available) (Stasser, Stewart, & Wittenbaum, 1995). The assumption is that there is no unique information, and that unmentioned information is information that other group members have deemed not ofsufficient importance to discuss. When unique information does arise in groups, individuals are likely to assume that because the infor- mation is not widely held among the group members, it is less important than commonly held information, and therefore may fail to repeat that unique information during discussion.

Moreover, people may feel uncomfort- able expressing and focusing on unique information, because it is often inconsistent with their perceived expectations that their information should be similar to that of other group members (Gruenfeld, Mannix, Williams,& Neale, 1996; Phillips, Mannix, Neale, & Gruenfeld, 2004). Sharing unique information also leads to a lack of social validation from others, causing individuals to feel less accepted than when they share commonly held infor- mation (Wittenbaum & Bowman, 2004).

Despite the information sharing barriers in groups, the discussion of unique information has been shown to increase when group members have greater reason to believe that unique information is going to be present. For instance, when expertise is labeled, or if people are explicitly forewarned that unique infor- mation is present, groups are better able to share and integrate the unique information into the discussion (Franz & Larson, 2002; Schittekatte & Van Hiel, 1996; Stasser et al., 1995; Stewart & Stasser, 1995). To this end, Postmes, Spears and Cihangir (2001) have shown that unique information is more likely to be shared when groups have developed a normof criticality instead of consensus. In such critical norm groups, the sharing of unique information is consistent with the group norms and the same overvaluing of shared infor- mation is less likely to occur. Thus, for groups to use their unique information effectively, the sharing of such information has to be perceived as a legitimate part of the groups' norms and identity (Jetten, Postmes, & McAuliffe, 2002; Postmes, Haslam, & Swaab, 2005; Van Knippen- berg et al., 2004).

We posit that surface-level diversity may also serve this legitimation purpose in groups by making it more acceptable to discuss and value unique information that must be shared for effective performance. Recent research has dis- tinguished between diversity in *surface-level characteristics*, which are immediately salient in groups (like race and gender), versus diversity in *deep-level* characteristics (like attitudes, opinions, information, and values), which become known only over time through verbal and nonverbal communication (Harrison, Price, & Bell, 1998; Harrison, Price, Gavin, & Florey, 2002; Jackson, May, & Whitney, 1995). We expect surface-level differences to serve as asignal to group members that unique infor- mation may be present, leading them to be more aware of and willing to share unique information with the group. This argument isconsistent with recent research on composition beliefs, which has shown that individuals believe diverse groups are likely to outperform homogeneous ones when unique ideas are needed, whereas homogeneous groups are likely to outperform diverse ones when com- monality of ideas is needed (van Knippenberg & Haslam, 2003). Also see the work on the mechanical and organic solidarity discussed by Postmes et al. (2005) supporting the notion that multiple sources of identity simultaneously exist in groups.

Our argument is based on the fact that a primary consequence of categorization pro- cesses is that people assume that they hold more similar deep-level perspectives with indi- viduals who share their surface-level character- istics than with people who do not, on topics both relevant and irrelevant to the salient surface-level distinction (e.g. Allen & Wilder,1975, 1979; Chen & Kenrick, 2002; Diehl, 1988;Holtz & Miller, 1985; Phillips, 2003; Phillips &Loyd, 2006; Tajfel, 1969; Wilder, 1984). Forinstance, Allen and Wilder (1979) divided students into two groups, allegedly on the basisof their preferences for oil paintings, and foundgreater assumed deep-level similarity betweenself and similar others than between self and dis-similar others on opinions about art (category relevant) and politics (category irrelevant). Recent research by Phillips and Loyd (2006)found this same pattern of assumed deep-levelsimilarity in decision-making settings whenexamining the relationship between salient task-relevant (e.g. functional background) (alsosee Phillips, 2003) and irrelevant (e.g. campusgeography) social categories and task opinions.Especially at the beginning of a group's exist- ence, when surface-level characteristics aremost salient (Harrison et al., 1998, 2002), indi- viduals are likely to use the presence of these characteristics to predict who shares deep-levelperspectives with whom. In surface-level homo-geneous groups, group members are likely toassume that they all possess the same infor-mation about the task, whereas in surface-level diverse groups members are likely to expectthere to be differences in information (Antonio et al., 2004; Phillips, 2003; Phillips & Loyd,2006; Phillips et al., 2004). Thus, surface-level diversity triggers expectations that deep-leveldiversity will be present in groups, and serves tolegitimize the surfacing of unique information. Significantly, this legitimation of unique infor-mation may apply not only to those who are(surface-level) 'different' in the group, but also to group members who are similar to mostothers. Phillips and Loyd (2006) found that dis- senting members of the social majority voiced themselves more persistently and confidentlywhen there was diversity present than whenthere was not. They concluded that the merepresence of diversity encouraged those dissent- ing group members to voice their disparateperspective when they might otherwise haveremained silent and conformed to the opinion of their in-group (e.g. Abrams, Wetherell, Cochrane, Hogg, & Turner, 1990; Asch, 1952). For these reasons, surface-level homoge- neous groups should be less aware of theunique information they possess. As such, over the course of the group discussion they will be less likely to discuss unique information about the task than will surface-level diverse groups. This will result in the surface-level homogenous groups spending less time discussing the task than their diverse counterparts. Moreover, spending less time discussing the task willfurther hinder the discovery of unique infor- mation (Larson et al., 1996, 1998) leading to a confirmation of the group members' expec- tations that they all have the same information. In contrast, in groups where members possess unique information, surface-level diverse groups are more likely to discover and discuss unique information than surface-level hom- ogeneous groups. Surface-level

diverse groups assume that unique information is more likely to be there, and the presence of informational differences will be more consistent with their expectations. Likewise, if group members are aware that they might possess unique infor- mation, they should be inclined to spend more time discussing the task in an effort to discover and integrate that information. Thus we hypothesize that,
Hypothesis 1: Surface-level homogeneous groups will be less aware of their unique information, and will spend less time discussing the task than will surface-level diverse groups.

Highlighting deep-level similarities
Although surface-level diversity may be ben- eficial to teams or work groups that must share unique information for effective performance, diversity researchers have often found that diversity has a negative impact on communi- cation and cohesion, and promotes high levels of detrimental group conflict (Ely & Thomas, 2001; Jackson, Joshi & Erhardt, 2003; Jehn, Northcraft, & Neale, 1999; Pelled, Eisenhardt, & Xin, 1999; for extensive reviews see also Milliken & Martins, 1996; Williams & O'Reilly, 1998). Over the past ten years, diversity researchers have focused on how to minimize the detrimental effects of social categorization on workgroups, with some suggesting that increasing the level of perceived deep-level similarity among group members should help them feel more socially validated and accepted by the other members of the group (e.g. Gaertner et al., 2000). Some social categoriz- ation researchers have advocated this perspec- tive, suggesting that interventions designed to minimize the salience of social categories and instead 'de-categorize' or 're-categorize' group members by highlighting the similarities that exist across seemingly different individuals can be beneficial to group functioning (e.g. Gaertner et al., 2000; Northcraft & Martin, 1982). For instance, Northcraft and Martin (1982) argued that, '. . . the liking, acceptance, and perceived competence of tokens and solos can be enhanced by making salient their similarities to majority group members in background, attitudes, and interests' (p. 114). Further, in a study of corporate outside directors of Fortune/Forbes 500 companies, Westphal and Milton (2000) found that minority board members (categorized on the basis of their functional background, industry background, education, race, or gender) were more influen- tial on their focal boards when they had direct or indirect social ties, often through their common experiences with (focal board) majority members on other corporate boards.

This perspective is built on the well- established body of findings that similarity attracts (Byrne, 1971). Individuals generally are more attracted to and feel more comfortable interacting with others whom they perceive to be similar. For both surface-level homogeneous and surface-level diverse groups, an interven- tion designed to help group members discover their deep-level similarities should lead to greater feelings of attraction. Learning that one shares deep-level similarities with a fellow group member should also promote recategorization, increasing the likelihood that out-group members (i.e. those who have surface-level dis- similarities from other group members) will actually be seen as part of the in-group (e.g. Gaertner, Mann, Murrell, & Dovidio, 1989; Kramer & Brewer, 1984). The potential negative effects of social categorization may,
subsequently, be reduced. As a result, we suggest that:
Hypothesis 2A: Members of groups who learn about deep-level similarities should perceive greater attraction from other group members than those who do not learn about deep-level similarities.

However, recent research has suggested that increasing this perceived similarity and attrac- tion among the group members may come at a cost to the group's ability to benefit from the surface-level differences we have discussed here (Hornsey & Jetten, 2004; Jetten et al., 2002; Postmes et al., 2001; van Knippenberg et al., 2004). For instance, Postmes et al. (2002) found that a focus on agreement and common- alities created norms of consensus that in turn undermined the sharing of unique information in groups. The effectiveness of recategorization or promoting the perception of others as similar to oneself as a means to diminish the detrimental effects of surface-level diversity has also been called into question by researchers of self-verification (e.g. Polzer, Milton, & Swann, 2002; Swann, Milton, & Polzer, 2000). These researchers argue that promoting the percep- tion (or recategorization) of all group members as similar, may also discourage individuals from thinking and acting in ways associated with their unique category memberships (Gaertner et al., 1989). Yet, it is precisely these unique ways of thinking and acting that constitute the potential positive contribution of a diverse workgroup (Polzer et al., 2002, p. 297). Thus, highlighting deep-level similarities (especially in surface-level diverse groups), while leading to greater feelings of attraction toward the other group members, may undermine the groups' awareness of and willingness to embrace unique information.
In sum, the process of highlighting deep- level similarities may undermine the signaling effect of surface-level diversity that legitimates expressing and discussing unique information by *all* group members. In other words, learning about deep-level similarities in surface-level diverse groups may interfere with the legitima- tion of difference and disagreement that surface-level diversity promotes. For example, if a work group who thinks they are diverse based on the surface-level characteristic of race finds that they all share the same attitudes, feelings, and experiences about the organization, they may be reluctant to disagree with each other going forward with the task. They may feel that they really are not all that different from each other after all. Thus, for surface-level diverse groups, although the realization of deep-level similarities may increase attraction toward the group, it may

simultaneously increase pressures to conform to the group and undermine the discussion of unique information (Abrams et al., 1990).

For surface-level homogeneous groups high- lighting similarities will also increase attraction, and may further interfere with the sharing of unique information since doing so poses a threat to feelings of acceptance and validation (Wittenbaum & Bowman, 2004; Wittenbaum, Hubbell, & Zuckerman, 1999). Thus, we believe that for surface-level homogeneous groups there will be somewhat of a 'floor' effect—the lack of surface-level differences will hinder the expectation of informational differences and the discussion of unique information, and then the highlighting of deep-level similarities will further hinder this process. Thus, we hypothe- size that:

Hypothesis 2B: Highlighting deep-level similarities will lead to less awareness of unique information and less discussion time.

Hypothesis 2C: The effect of highlighting deep-level similarities on awareness of unique information and discussion time will be more pronounced for surface-level diverse groups than for surface-level homogeneous groups.

In terms of group performance, highlighting deep-level similarities should be detrimental because it undermines the legitimacy of dis- cussing needed unique information. Although attraction may increase in groups as a result of learning about deep-level similarities, these deep-level similarities will be inconsistent with any expectation of unique information being present and thus are likely to hurt group per- formance, especially for surface-level diverse groups (e.g. Watson, Kumar, & Michaelsen, 1993). As such, we would argue that: Hypothesis 3A: Surface-level diverse groups will outperform surface-level homogeneous groups.

Hypothesis 3B: Groups that highlight deep-level similarities will perform worse than groups that do not.

Hypothesis 3C: The performance of surface-level diverse groups that highlight deep-level similarities will be more negatively affected than the perform- ance of surface-level homogeneous groups that highlight deep-level similarities.

To test the hypotheses, groups received an intervention asking them to discover deep-level similarities among group members. Exploring the effects of this intervention should allow for a better understanding of how different groups (i.e. those that are surface-level diverse or homo-geneous) are affected by finding that they have deep-level similarities prior to engaging in a task where unique information must be shared.

Method

Participants and overview

A total of 216 undergraduate business students at a midwestern business school participated in this research. The median age of the partici- pants was 21 years, and approximately 42% of the sample was female. The students partici- pated in a class exercise designed to provide insight into group decision-making. Partici- pants were given extra course credit for their participation, and a few of the best performing groups on the prediscussion task were randomly selected and entered into a raffle to receive cer- tificates for free meals at local restaurants.

Participants first made individual assessments about who they believed committed a murder (see Stasser & Stewart, 1992 for materials) based on the investigating detective's reports, and then discussed the case in three-person groups. Groups were either all male (42) or all female (30); the gender composition of the group is included as a covariate in all analyses presented. Eighty-two percent of the partici- pants were white, 14% Asian, and the remain- der African American or Hispanic. We used a 2 (surface-level homogeneous vs. surface-level diverse) × 2 (deep-level similarities highlighted vs. control) between-subjects design and all analyses were conducted at the group level. There were a total of 31 surface-level homoge- neous (i.e. three Caucasian group members) and 41 surface-level diverse groups (i.e. two Caucasian and one Asian, African American, or Hispanic). Forty groups were in the deep-level similarities condition and 32 were in the control condition. Participants were thoroughly debriefed about the purpose of the study after participation.

Materials

Every participant was given a packet of evidence from an apparent homicide investigation. The evidence consisted of interviews and a variety of supporting materials, including a list of suspects, a map, a personal note, and a newspa- per article. All of these materials were adapted from Stasser and Stewart's (1992) study. Within each group, every member received the list of suspects, transcripts of initial interviews with each of the four key suspects, the newspaper article, and maps of the crime scene and sur- rounding area. The materials contained 42 clues in all, 12 of which were critical for solving the case. All participants received 30 commonly shared clues; 12 critical clues were distributed among the three group members such that each group member held some unique infor- mation pertinent to identifying the guilty suspect. These clues were embedded in follow- up interviews with the key suspects, and inter- views with some additional witnesses. In all of the groups, a hidden profile existed because the best solution was more likely to be found if the unique information represented by the 12 unshared critical clues was shared.

Procedure

When participants arrived at the laboratory orin the classroom, they were randomly assigned to three-person groups based on their visibleracial characteristics, with the constraint that allthree members had to be of the same gender. In some groups the three group members appeared to all be Caucasian (surface-level homogeneous groups), and in other groupstwo of the members appeared Caucasian and
one was of a different race (Asian, African American, or Hispanic). At the end of partici- pation, group members provided their self-identified race on the post-task questionnaire, and the experimenters' group assignments were validated against the information provided by the students.

During the study, participants were first given approximately 20 minutes to read and review materials in order to determine which of four suspects committed a murder (materials drawn from Stasser & Stewart, 1992 and also used by Gruenfeld et al., 1996; Liljenquist, Galinsky, & Kray, 2004; Phillips et al., 2004). Individuals were instructed to take notes on the case while reading the materials, because they would not be allowed to keep the case materials duringthe group discussion portion of the exercise. Participants made an individual assessment of who they believed was more likely to have com- mitted the murder. They were asked to indicate how confident they were that each of the four suspects did or did not commit the murder. Subjects were also asked to provide a brief, written justification for their decision.

Participants were then gathered into their assigned three-person groups, and were instructed that they had 5 minutes to complete a short exercise before beginning group dis- cussion. Groups were separated so that they could not overhear the deliberations of othergroups. Half of the groups were randomly assigned to identify their similarities with the following instructions:

Working together with the other two members of your group, you have 5 minutes to discover as many things as possible that the three of you have in common. You may include anything that you have in common: friends, experiences, hobbies, books or movies that you liked, places to which you have all traveled, places where you all have lived or visited—*anything* that the three of you have in common. Put as many items on your list as possible.

In conclusion, as organizations attempt to cope with the changing demography of the work force there is a natural tendency to believethat what enhances the performance of surface- level homogeneous groups may also enhance
the performance of surface-level diverse groups. The current research suggests that enhancing the performance of workgroups is more complex than that. Our research found that attempting to diminish the salience of potentially disruptive categorical boundaries by asking members of racially diverse groups to focus on their similarities was detrimental for group performance. Diversity can be beneficial for groups, not merely because individuals belonging to different subgroups are likely tohave access to differing information, but also because the presence of salient differences may legitimate the introduction and consideration of unique information in the group's decision- making process. Both the positive and negative effects of surface-level and deep-level diversity in the workplace are yet to be fully understood. This work is another step toward understandingthe effects of diversity on groups where sharing unique information is crucial to performance.

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